Sociality and Intergenerational Transfer of Older Adults' Nostalgia

Tim Wildschut, Constantine Sedikides, and Sara Robertson

University of Southampton

Word count: 9952

Tim Wildschut, Constantine Sedikides, and Sara Robertson, University of Southampton.

Corresponding author: Tim Wildschut, Centre for Research on Self and Identity, Psychology Department, University of Southampton, Southampton, SO17 1BJ, United Kingdom; Email: R.T.Wildschut@soton.ac.uk; Tel: +44 (0)2380592639.

Abstract

Interest in nostalgia has blossomed, yet its nature in older adulthood and potential for intergenerational transfer to younger adults has remained neglected. In Experiment 1, we focused on the content of older adults' nostalgic (vs. ordinary) recollections and asked whether older adults' nostalgia could be transferred to younger adults. We showed that nostalgia expressed in older adults' narratives was positively associated with nostalgia reported by young-adult readers. In Experiment 2, undergraduates read a nostalgic or ordinary narrative written by an older adult. Then they rated their own nostalgia as well as their perceived social connectedness, self-continuity, and meaning in life. Exposure to older adults' nostalgic (vs. ordinary) narratives promoted concurrent nostalgia among young adults, along with associated psychological benefits (social connectedness, self-continuity, meaning). The findings illustrate the potential for intergenerational transfer of nostalgia through written narratives, and attest to the universality of nostalgic themes across younger and older adults.

Keywords: nostalgia, older adulthood, memory, sociality, interpersonal emotion transfer

Sociality and Intergenerational Transfer of Older Adults' Nostalgia

Nostalgia is defined as "a sentimental longing or wistful affection for the past" (*The New Oxford Dictionary of English,* 1998, p. 1266). The emotion is triggered when meaningful memories about one's past are brought to mind (Hepper, Ritchie, Sedikides, & Wildschut, 2012; Wildschut, Sedikides, Arndt, & Routledge, 2006). Typically, nostalgic recollections are bittersweet (albeit more sweet than bitter), feature interactions between the self and close others in the context of momentous life events (e.g., anniversaries, holidays, graduations), and are imbued with fondness, tenderness, and warmth (Hepper et al., 2012; Holak & Havlena, 1998; Sedikides & Wildschut, 2016a). Nostalgia is prevalent and universal, occurring frequently in both the young and the old (Hepper, Wildschut, Sedikides, Robertson, & Routledge, 2018; Madoglou, Gkinopoulos, Xanthopoulos, & Kalamaras, 2017) and across many cultures (Hepper et al., 2014; Zhou, Wildschut, Sedikides, Shi, & Feng, 2012). Further, nostalgia is a resource, serving social, self-oriented, and existential functions (Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015).

Functions of Nostalgia: Social, Self-Oriented, Existential

Nostalgia fulfills a social function (Sedikides, Wildschut, Juhl, & Cheung, in press). In particular, nostalgic recollections are replete with descriptions of relationships and social interactions (Abeyta, Routledge, Roylance, Wildschut, & Sedikides, 2015; Holak & Havlena, 1992; Wildschut et al., 2006). Moreover, nostalgizing increases social connectedness, defined as a sense of acceptance and belongingness. Specifically, nostalgizing (relative to engaging in ordinary autobiographical recollection) increases feelings of being connected to others, as well as being loved, protected, and supported (Hepper et al., 2012; Wildschut et al., 2006; Zhou, Sedikides, Wildschut, & Gao, 2008).

Nostalgia also fulfills a self-oriented function (Sedikides & Wildschut, 2016b). In particular, it elevates self-esteem (Hepper et al., 2012; Wildschut et al., 2006) and promotes perceptions of youthfulness (Abeyta & Routledge, 2016), optimism (Cheung, Sedikides, & Wildschut, 2016; Cheung et al., 2013), psychological growth (Baldwin & Landau, 2014; Stephan et al., 2015), authenticity (Baldwin, Biernat, & Landau, 2015; Stephan, Wildschut, & Sedikides, 2002), and determination to pursue one's valued goals (Sedikides et al., 2018).

Importantly, nostalgia increases self-continuity (a sense of connection between one's past and one's present; Sedikides et al., 2016; Sedikides, Wildschut, Routledge, & Arndt, 2015), which is positively related to psychological (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001) and physical (Wohl et al., 2018) wellbeing.

Lastly, nostalgia fulfills an existential function (Sedikides & Wildschut, 2017). In particular, it fosters perceptions of life as both meaningful and purposeful (Leunissen, Sedikides, Wildschut, & Cohen, 2018; Routledge et al., 2011; Routledge, Wildschut, Sedikides, Juhl & Arndt, 2012). Of the social, self-oriented, and existential functions, we will focus on social connectedness, self-continuity, and meaning in the current article.

Nostalgia in Older Adulthood

Despite the commonly held assumption that people become more nostalgic as they progress through life (Davis, 1979), the evidence suggests otherwise. Hepper et al. (2018) assessed nostalgia in adults aged 18-91 years, and found that nostalgia peaked in both younger (below age 30) and older (above age 75) adulthood. Consistent with the discontinuity hypothesis (Davis, 1979; Sedikides, Wildschut, Gaertner, Routledge, & Arndt, 2008), these findings suggest that nostalgia is most prevalent among persons undergoing life transitions—younger or older. Younger adults face transitions such as moving away from home for the first time, whereas older adults face transitions such as retiring from full-time employment.

A good deal of research has been concerned with the content and functions of nostalgia in younger adults (Routledge, Wildschut, Sedikides, & Juhl, 2013; Sedikides & Wildschut, 2006b; Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015). However, the nature of nostalgia in older adults has largely been neglected (cf. Hepper et al., 2012; Henkel, Kris, Birney, & Krauss, 2017). Our first objective was to redress this imbalance by investigating the content of nostalgic recollections in older adulthood.

Interpersonal Transfer of Nostalgia

Our second, and more important, objective was to find out whether nostalgia can be transferred interpersonally and, specifically, from older to younger adults. There are three categories of common nostalgia triggers: negative affect (e.g., bad mood or loneliness;

Wildschut et al., 2006), sensory inputs (e.g., music or scents; Reid, Green, Wildschut, & Sedikides, 2015; Routledge et al., 2011), and social interactions (Wildschut, Bruder, Robertson, Van Tilburg, & Sedikides, 2014; Wildschut et al., 2006). Our focus aligns most closely with the third category of these triggers.

An example of the social or communicative function of emotions (Leary, Landel, & Patton, 1996) is interpersonal emotion transfer (IET). This is a process whereby one's emotional state can influence another's, such that both individuals achieve the same or similar emotional end-state (Hatfield, Cacioppo, & Rapson, 1994). Although there is some debate about the optimal explanation for IET effects (i.e., a direct mimicry and facial feedback mechanism vs. an indirect process enacted via changes in appraisals; Parkinson, 2011), there is little debate about their potency. For example, listening to recordings of happy-, neutral-, or sad-toned voices produces corresponding mood ratings in participants (Neumann & Strack, 2000), observers' levels of anxiety or excitement predict participants' levels of anxiety or excitement during everyday decision-making (Parkinson & Simons, 2009), and exposure to films in which an actor describes their happiest or saddest life events yield congruent facial expressions and self-reported emotions in participants (Hsee, Hatfield, Carlson, & Chemtob, 1990).

We examined whether nostalgia is transferrable between older and younger adults. We advanced the boundaries of the IET literature in three ways. First, in contrast to most IET research that has capitalized on interpersonal contact (via face-to-face exchanges, video links, or audio recordings: Neumann & Strack, 2000; Parkinson, Phiri, & Simons, 2012; Parkinson & Simons, 2009), we exposed participants to written narratives. Second, we were concerned with nostalgia, a complex emotion (Hepper et al., 2012; Sedikides & Wildschut, 2006a), rather than a 'basic' emotional state. Third, nostalgic narratives contain idiosyncratic information about the writer's life—information that is largely irrelevant to readers (Abeyta et al., 2015; Wildschut et al., 2006). We addressed whether IET effects are obtained even under such circumstances.

Overview

Across two studies, we examined the content of older adults' nostalgic narratives and their potential to transfer nostalgia, along with its concurrent benefits, to younger adults. In Experiment 1, we investigated the content of nostalgic (vs. ordinary) narratives in older adults using a novel combination of coding methods. We asked whether older adults' narratives produce nostalgic feelings in younger adults who read them (i.e., the coders). In Experiment 2, we focused specifically on the intergenerational transfer of nostalgia by presenting older adults' narratives to young-adult participants. We asked whether nostalgic narratives evoke nostalgia in younger readers, and whether this in turn increases nostalgia's putative benefits (i.e., social connectedness, self-continuity, meaning).

Experiment 1

In Experiment 1, we focused on nostalgia in older adulthood aiming to provide a preliminary demonstration of nostalgia's potential for interpersonal and intergenerational transferability.

Content Analysis

We examined narrative content through a combination of manual coding methods and Linguistic Inquiry and Word Count (LIWC; Pennebaker, Chung, Ireland, Gonzalez, & Booth, 2007), a word-level text analysis program. LIWC accesses psychologically meaningful constructs using language markers. Specifically, it classifies and counts words into categories on the basis of an internal dictionary (Pennebaker & Francis, 1996). The study of linguistic style can yield valuable information, which is missing in more readily observable speech and writing content (Kahn, Tobin, Massey, & Anderson, 2007). For example, use of first-person singular pronouns such as *I, me, my* and *mine* denote greater self-focus and lesser social integration (Rude, Gortner, & Pennebaker, 2004; Stirman & Pennebaker, 2001). Conversely, use of first-person plural pronouns such as *we, us* and *our* is indicative of greater social integration, focus on others, and more favorable health outcomes (Pennebaker & Stone, 2003; Stone & Pennebaker, 2002).

LIWC cannot always account for the meaning or context of the entire narrative, because it codes each word independently of all the others (Chung & Pennebaker, 2007). To address this limitation, we also applied a coding scheme to the narratives with the help of

expert coders. We aimed to identify narrative-level content by judging, for example, the extent to which participants expressed companionship. Coders made global ratings of the content and meaning of the narratives while accounting for context and linguistic devices such as colloquial language, sarcasm, and homonyms.

We focused primarily on nostalgia's social content, given its prominence in prior research (Abakoumkin, Wildschut, Sedikides, & Bakarou, 2017; Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015; Sedikides et al., in press) and its putative relevance in older adults. According to socioemotional selectivity theory, limited time is associated with prioritization of close relationships over other goals (Carstensen, Isaacowitz, & Charles, 1999). Nostalgia may be one means through which older adults re-establish proximity with close others (Hepper et al., 2018). We compared older adults' nostalgic recollections to their ordinary autobiographical recollections. The inclusion of an ordinary-recollection control condition is important, because prior large-scale language analyses have demonstrated that older (vs. younger) adults use words that denote greater social focus and lesser self-focus across both emotional and ordinary topics (Pennebaker & Stone, 2003). We hypothesized that older adults' nostalgic (vs. ordinary) recollections would be more imbued with sociality.

Intergenerational Transfer

We examined whether nostalgia could be transferred interpersonally by assessing levels of nostalgia among coders. The IET literature has implemented a range of methods to assess observers' emotional states, including self-report (Hsee et al., 1990; Neumann & Strack, 2000), daily diaries (Parkinson & Simons, 2009), and facial expressions (Hsee et al., 1990). Congruent with prior research that has included assessment of state nostalgia (Hepper et al., 2012; Stephan et al., 2012; Wildschut et al., 2006), we used self-ratings—integrated into the coding scheme—to access this information. Our methodology allowed us to address the potential of nostalgia to be transferred intergenerationally, given that the coders were younger adults. Although some studies have tested the likelihood of emotion transfer between high- and low-status persons (Hsee et al., 1990), most research has been unconcerned with perceived or actual differences between actors and targets. Moreover, no research has examined intergenerational emotion transfer, especially involving nostalgia in older

adulthood. Thus, it is unclear whether the themes of older adults' nostalgic recollections would be sufficiently similar to those of younger adults for emotion transfer to occur. We engaged in a preliminary test of nostalgia's potential to be transferred between older and younger adults. We hypothesized that IET would occur, and that ratings of state nostalgia in the younger adult coders would be higher after reading nostalgic than ordinary narratives.

Method

Participants, design, and power. Participants were a community sample of 40 older adult volunteers (21 women) aged between 50-83 years (M_{age} = 60.05, SD_{age} = 7.82) and residing in Southampton. We excluded one participant, because she did not follow instructions. Participants recalled a nostalgic and an ordinary event in a within-subjects design. Assuming an effect size of d = 0.5 and a two-tailed α = .05, 34 participants would secure power = .80. We recruited a slightly higher number to safeguard against potential exclusions.

Procedure. Participants completed a within-subjects variation of the Event Reflection Task (Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015). We instructed participants to recall and describe a nostalgic and an ordinary autobiographical event (counterbalanced). They completed a filler task (i.e., solving anagrams) between the two event descriptions to reduce the possibility of carryover effects. Instructions for the nostalgic [ordinary] event read:

> Please bring to mind a nostalgic [ordinary] event in your life. Specifically, try to think of a past event that makes you feel most nostalgic [is ordinary]. Please write down four keywords relevant to this nostalgic [ordinary] event (i.e., words that describe this experience). Using the space provided below, for the next few minutes we would like you to write about this nostalgic [ordinary] event. Immerse yourself into this experience. Describe the experience and how it makes you feel. Be as thorough as possible in describing how you are feeling.

Content analysis. Participants generated 78 nostalgic and ordinary narratives with a mean length of 101.44 words (SD_{length} = 42.61). We analyzed these narratives using LIWC and a coding scheme. LIWC works according to an internal dictionary of approximately 4500

words, and counts the percentage of words in each category to produce an output on 80 dimensions. Thus, each narrative received one total word count score and a set of percentage scores for each language dimension. The LIWC dictionary classified 88.07% of words on average within the narratives (SD = 4.98%), slightly exceeding LIWC's average rate of capture (86%; Pennebaker et al., 2007).

In addition, the third author (SR) applied a detailed coding scheme (Table S1, available online as supplemental material) to assess social content that could not be accessed via LIWC (i.e., dimensions requiring contextual understanding rather than word-level analysis). These were social interaction and companionship (0 = *minimal*, 3 = *very much*). In a pilot study (N = 20), we established acceptable Spearman-Brown interrater reliabilities for these coding scheme items (average r = .86, p < .001). Thus, coders trained to use the scheme can effectively and reliably assess the dimensions of interest. We present correlations between the LIWC- and manually-coded dimensions in Table S2, available online as supplemental material.

IET. To investigate transmission of older adults' nostalgia to younger adults, SR and three research assistants independently read each narrative and then immediately rated (1) the level of nostalgia within the narrative, and (2) their own nostalgia in response to reading the narrative (0 = *not at all*, 3 = *very much*; Table S1). Final analyses excluded SR's ratings, because she was aware of the IET hypothesis (inclusion of her ratings did not alter results). The research assistants were unaware of narrative type (nostalgic vs. ordinary) or the IET hypothesis. They had one week to complete their ratings of the 78 narratives and were allowed to do so in multiple sittings.

Results

Word count. We present descriptive statistics and significance tests in Table 1. Participants wrote significantly more about nostalgic than ordinary events. LIWC controls for word count differences by expressing scores as percentages of total word count. Ancillary analyses of manually coded variables revealed that controlling for word count did not alter results.

LIWC social content. Analysis of content relating to social processes (an index of all social content including words relating to close others, social pronouns, and verbs suggestive of human interaction) revealed that nostalgic narratives contained more frequent references to social processes than ordinary narratives. We also analyzed separately social content related to family (e.g., *daughter*, *husband*), friends (e.g., *buddy*, *friend*), and humans (references to people but not specifically close others—e.g., *adult*, *baby*, *boy*). Family-related words featured significantly more frequently in nostalgic than ordinary narratives. However, nostalgic and ordinary narratives did not differ in use of friends-related or humans-related content. We focused next on pronoun use. Nostalgic (vs. ordinary) narratives contained a lower frequency of first-person singular pronouns, suggesting reduced self-focus. Furthermore, nostalgic (vs. ordinary) narratives contained a higher frequency of first-person plural pronouns, suggesting increased emphasis on social interactions.

Coded social content. Next, we turned to manually coded social interaction and companionship within the narratives. We describe examples of high- and low-scoring narratives for each of the coding scheme items in Table S1. Nostalgic (vs. ordinary) narratives featured more frequent references to social interaction and stronger expressions of companionship (Table 1).

IET. Three research assistants rated the extent to which participants expressed nostalgia in their narratives (narrative nostalgia) and the extent to which these narratives made the coders feel nostalgic (transferred nostalgia, our preliminary index of IET). We averaged these ratings across the three coders. There were significant differences on both items. Nostalgic (relative to ordinary) narratives contained greater expressions of nostalgia and, supporting the IET hypothesis, conferred greater nostalgia on the coders.

To further test the IET hypothesis, we examined the correlations between coders' ratings of narrative and transferred nostalgia. To partial out condition effects, we first calculated these correlations separately for nostalgic and ordinary narratives (within-group correlations). Next, we applied a Fisher *z* transformation to these within-group correlations and then pooled them. In a final step, we back-transformed the pooled Fisher *z* values to correlation coefficients (Table 2).

For each coder, we present the correlation between ratings of narrative and transferred nostalgia on the diagonal of Table 2 (within-coder correlations). The average within-coder correlation strongly supported the IET hypothesis: $r(39) = .62, p < .001$. However, these correlations could be inflated by a need for consistency (i.e., coders may feel compelled to align their ratings of narrative and transferred nostalgia) or demand characteristic (i.e., coders could have inferred the IET hypothesis and adjusted their ratings to confirm it). To address these possibilities, we examined between-coder correlations (off-diagonal values in Table 2). The correlations demonstrated that the degree of narrative nostalgia assessed by one coder significantly predicted the intensity of transferred nostalgia in other coders (with one exception). The average between-coder correlation was medium-sized and supported the IET hypothesis: $r(39) = .33, p = .038$. IET occurred, then, during the coding process, as greater written expressions of nostalgia were associated with stronger feelings of nostalgia in those who read them.

Discussion

Sociality. The current experiment provided a novel perspective on older adults' nostalgia by examining language use as both an explicit and implicit measure of memory content. Nostalgia is socially oriented in older adults, containing increased social language, references to close others, and descriptions of social situations. Specifically, nostalgic (vs. ordinary) narratives included more frequent words relating to social processes and family. This pattern is consistent with recent findings that nostalgia particularly increases perceived social support from family (Zou, Lee, Wildschut, & Sedikides, 2018). Nostalgic (relative to ordinary) narratives contained more frequent first-person plural pronouns, more social interaction, and stronger expressions of companionship. Also, nostalgic narratives contained less frequent use of first-person singular pronouns, suggesting less self-focus and more social-focus (Chung & Pennebaker, 2007).

Results showed that, in older adults, nostalgic recollections are highly social. An important question for future research is whether the nostalgic memories of older adults differ in this regard from those of younger adults, whose nostalgic reverie also prominently features close others (Abeyta et al., 2015; Wildschut et al., 2006). A basic tenet of socioemotional

selectivity theory is that, with advancing age, people come to view their life span as limited and increasingly emphasize the importance of social relations and meaning in life (Carstensen et al., 1999). Yet, paradoxically, bereavements and poor health may render older adults vulnerable to social isolation (Victor, Scambler, Bowling, & Bond, 2005). Under these circumstances, nostalgia may play a vital role in establishing at least a symbolic connection with significant others (Mills & Coleman, 1994). We would therefore expect nostalgic recollections of older adults to portray more social relationships than those of younger adults.

IET. Coders reported higher levels of transferred nostalgia after reading nostalgic (vs. ordinary) narratives. Furthermore, the extent to which the narratives expressed nostalgia (narrative nostalgia) and the extent to which these narratives made the coders feel nostalgic (transferred nostalgia) were positively correlated. These findings indicate that nostalgia is communicable to others. This communication facet warrants further investigation, as it implies that nostalgia is transferrable via written narratives. This would align nostalgia with other emotions (e.g., excitement, anxiety, happiness, sadness, anger, inspiration) that can be transferred between persons (Fischer, Rotteveel, Evers, & Manstead, 2004; Hsee et al., 1990; Neumann & Strack, 2000; Parkinson & Simons, 2009; Thrash, Maruskin, Moldovan, Oleynick, & Belzak, 2017; see also Van Tilburg, Bruder, Wildschut, Sedikides, & Göritz, 2018). We examined this possibility further in Experiment 2.

Our follow-up experiment also addressed several limitations of Experiment 1. First, the IET analyses in Experiment 1 involved a small "audience" of three expert coders. This raises the legitimate question whether their responses were representative of younger adults in general. To address this, Experiment 2 examined the intergenerational transfer of nostalgia in a much larger sample of undergraduate students. Second, although coders were unaware of narrative type (nostalgic vs. ordinary) and research hypotheses, we cannot rule out that they were influenced by demand characteristics. For example, in the process of coding both types of narrative, they may have quickly detected a bimodal distribution in nostalgic content and then accentuated this in subsequent ratings. To reduce potential demand effects in Experiment 2, we implemented a between-subjects design. Younger adult participants read a single narrative written by an older adult that either depicted a nostalgic or ordinary

autobiographical experience. Third, coders in Experiment 1 used single items to rate, respectively, narrative and transferred nostalgia. According to classical test theory, multi-item measures are more reliable than single-item ones, all other things being equal (Nunnally & Bernstein, 1994). In Experiment 2, we therefore assessed transferred nostalgia with a validated and reliable 3-item measure (Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015).

Experiment 2

Experiment 1 identified a potential interpersonal (and intergenerational) emotion transfer effect, whereby young-adult coders rated their own levels of nostalgia as greater after they had coded an older adult's nostalgic (vs. ordinary) narrative. In Experiment 2, we engaged in a more detailed examination of this phenomenon. We addressed several issues.

First, we implemented a between-subjects design to test whether nostalgia is elicited through exposure to an unknown other's description of a nostalgic (vs. ordinary) episode. We assessed whether nostalgia is transferrable in a larger sample (vs. a small group of expert coders) using a validated and reliable nostalgia assessment (vs. a single coding scheme item). Expanding upon the intergenerational aspect of Experiment 1, we tested whether nostalgic recollections of older adults confer nostalgia on younger adults. Second, we asked whether transferred nostalgia, in turn, fulfills the functions of social connectedness, self-continuity, and meaning in life.

We presented participants with a sample of narratives written by older adults in Experiment 1 and instructed them to rate their level of nostalgia, as well as social connectedness, self-continuity, meaning, and liking for the author. We hypothesized that participants who read a nostalgic (vs. ordinary) narrative would experience higher levels of nostalgia, which, in turn, would foster social connectedness, self-continuity, and meaning in life.

Method

Participants, design, and power. We tested 370 University of Southampton undergraduates. Given that a key objective was to investigate intergenerational transfer of nostalgia from older to younger adults, we excluded 14 participants who were aged 30 or

over. We excluded four additional participants who did not follow instructions (see below), resulting in a final sample of 352 participants (297 female, 38 men, 17 unidentified) aged between 18-28 years (M_{age} = 20.03, SD_{age} = 1.68). Testing occurred online in exchange for course credit. We presented participants with one of five nostalgic narratives (n = 191) or one of five ordinary narratives (n = 161). Following recommendations by Judd, Westfall, and Kenny (2012), we treated the 10 narratives (five nostalgic, five ordinary) as a random variable. By so doing, we acknowledged that the selected narratives were a sample from a larger population of narratives to which we wished to generalize. In terms of Judd, Westfall, and Kenny's (2017) design typology, we used an NNN_T design: participants were nested within narratives, and both narratives and participants were nested within experimental condition (nostalgic vs. ordinary narrative).

Completion of Experiment 2 predated the availability of Judd et al.'s (2017) software application for calculating power in designs with two nested random variables (http://jakewestfall.org/two_factor_power). We assumed that a relatively large sample size would safeguard power (in a between-subjects design with a single random variable, N = 352 yields power = .997, assuming d = 0.5 and two-tailed α = .05). We now know that this assumption is justified only when the proportion of total variance in the observations attributable to mean differences among narratives (denoted as V_T) is small. We report V_T and observed power in Table 3.

Procedure. We present the 10 narratives used in Experiment 2 in Table S3, available online as supplemental material. We selected randomly these narratives from the original pool of 78 narratives in Experiment 1, once we removed 19 outliers in narrative length (> 1 SD above or below the mean word count). This resulted in 10 narratives (five nostalgic, five ordinary), with a mean word count of 83.80 (SD = 24.04) for nostalgia narratives and 87.40 (SD = 19.32) for ordinary narratives. We instructed participants to "take a few minutes to read and reflect on the memory narrative written below." To emphasize that the narrative they were reading described a real event, we informed them: "this is a genuine description of a past event which was recalled and written by an older adult." We did not give the author's exact age. Once participants had proceeded to the next screen, we prompted them to click to

confirm that they had read the narrative as instructed. Four participants did not do so, and we excluded them from the final sample.

Participants proceeded to the dependent measures. First, they rated three items assessing nostalgia ($\alpha = .99$; e.g. "Right now, I am feeling quite nostalgic;" Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015, Appendix B3). Next, they rated three 4-item sets assessing, respectively, social connectedness ($\alpha = .94$; e.g., "Thinking about the older adult's memory makes me feel connected to loved ones"), self-continuity ($\alpha = .92$; e.g., "… makes me feel connected with my past"), and meaning ($\alpha = .96$; "… makes me feel that life is meaningful"). Items were rated on a 7-point scale (1 = *strongly disagree, 7 = strongly agree*). Lastly, participants rated two items assessing attitudes towards the author of the narrative ($\alpha = .92$; e.g., "After reading their narrative, how much do you like this individual?" 1 = *not at all, 7 = very much*).

Results

IET. We first tested whether older adults' nostalgic (relative to ordinary) narratives would evoke greater nostalgia in the younger readers. Next, we analyzed social connectedness, self-continuity, and meaning to examine whether reading older adults' nostalgic (vs. ordinary) narratives conferred key benefits on younger adults. After this, we analyzed liking towards the authors of the narratives. Could reading about a nostalgic (vs. ordinary) memory foster intergenerational harmony? We cast these analyses in a mixed model, with narratives and participants as random variables (NNN_T design; Judd et al., 2017). We present descriptive statistics and significance tests in Table 3. As hypothesized, participants who read a nostalgic (vs. ordinary) narrative experienced significantly higher levels of nostalgia. Also, reading nostalgic (vs. ordinary) narratives conferred greater social connectedness, self-continuity, and meaning on participants. Finally, participants reported greater liking for authors of nostalgic than ordinary narratives.

Mediational analyses. We hypothesized that reading older adults' nostalgic (vs. ordinary) memories would confer psychological benefits by virtue of their capacity to evoke nostalgia in the younger audience. To test this hypothesis, we conducted mediational analyses via the MCMED macro (available at www.afhayes.com; described in Hayes, 2013), which

can be used to construct a Monte Carlo confidence interval for the indirect or mediated effect in mixed models. Notwithstanding the well-documented limitations of measurement-of-mediation designs (Bullock, Green, & Ha, 2010; Spencer, Zanna, & Fong, 2005), we regard these analyses as informative, because they put our hypothesis at risk (Fiedler, Schott, & Meiser, 2011).

The mediational analyses yielded significant indirect effects of narrative type (nostalgia vs. ordinary) via transferred nostalgia (i.e., the postulated mediator) on social connectedness, self-continuity, meaning, and liking for the author (Table 4). Thus, results were consistent with a model in which reading a nostalgic (vs. ordinary) narrative promotes social connectedness, self-continuity, meaning, and liking for the author via transferred nostalgia. All indirect effects remained significant in ancillary analyses, which controlled for the emotional positivity and social content of the narratives. These ancillary analyses also revealed an additional indirect effect, such that nostalgic (vs. ordinary) narratives instilled meaning by virtue of their social content (see online supplement S4).

Discussion

Replicating Experiment 1, the results indicated interpersonal and intergenerational transfer of nostalgia through written texts. Nostalgia shared in this way promoted social connectedness, self-continuity, and meaning in life. Furthermore, reading about nostalgic (vs. ordinary) recollections fostered liking towards the older adult authors of the narratives in younger adult readers. This result is congruent with findings that nostalgia fosters ingroup liking (Cheung, Sedikides, Wildschut, Tausch, & Ayanian, 2017; Wildschut et al., 2014) by showing that exposure to an out-group member's nostalgic memories can also contribute to interpersonal harmony.

Mediational analyses supported the idea that older adults' nostalgic (vs. ordinary) narratives exerted these beneficial effects by virtue of their capacity to evoke nostalgia among the younger readers. Still, ancillary analyses revealed that the high social content of nostalgic (vs. ordinary) narratives also instilled meaning in young readers, independent of transferred nostalgia. Nostalgic memories are particularly likely to be meaningful, as they often revolve around interactions with family, friends, and partners in the context of

momentous life events (e.g., birthday celebrations, graduations, marriage, births) and cultural life scripts (e.g., Thanksgiving meals, Christmas holidays, summer vacations; Berntsen & Rubin, 2004; Abeyta et al., 2015; Holak & Havlena, 1992; Wildschut et al., 2006). People state that social relations, and particularly family, are among the most important contributors to meaning in their lives (Lambert et al., 2010, Studies 1-2). It is possible, then, that the highly social nostalgic (vs. ordinary) narratives of older adults epitomized the value of close others, thus instilling meaning directly (and bypassing transferred nostalgia). This is a potentially fruitful research direction.

Future research seeking to identify further how expressions of nostalgia convey psychological benefits on the audience could examine a wider range of mediators, including the specificity, vividness, uniqueness, and time perspective (i.e., past vs. present focus) of the memories. Doing so would also create an opportunity to address two limitations of the current work. First, Study 2 included mostly women. A number of previous studies suggest that IET effects are stronger among women than men (Dimberg & Lundqvist, 1990; Wild, Erb, & Bartels, 2001). Yet, other studies have not replicated these gender differences among individuals who are high in emotional empathy (Sonnby-Borgström, 2002). Thus, the previously documented female advantage in the context of emotion transfer may be attributable to a corresponding advantage in emotion-recognition ability (Doherty, Orimoto, Singelis, Hatfield, & Hebb, 1995; Hall, 1978; Wright, Riedel, Sechrest, Lane, & Smith, 2018). Future research should strive for samples with balanced gender composition.

A second limitation of Study 2 is that it relied on the measurement-of mediation approach. Future work could supplement this approach with an experiment-causal-chain design (Spencer et al., 2005), in which one would manipulate (rather than measure) the posited mediator and examine its causal effect on psychological resources. In the present research, interpretation of the correlational link between the mediator (transferred nostalgia) and the dependent variables (i.e., social connectedness, self-continuity, meaning, liking for the author) is obscured by the perennial third-variable and reverse-causation problems. For example, because the mediator and dependent variables were assessed exclusively with positively keyed items, individual differences in acquiescence (a third variable) could have

inflated the correlations (Paulhus & Vazire, 2007). Despite these limitations, the

measurement-of mediation approach did put our hypothesis at risk of a contrary result

(Fielder et al., 2011). That is, we proposed that (1) reading older adults' nostalgic (vs.

ordinary) narratives would evoke nostalgia in younger readers, and (2) that transferred

nostalgia would convey psychological benefits. Failure to detect either link would cast doubt

on the proposed model, yet each link held.

General Discussion

Summary of Findings

Our findings highlight the social nature of nostalgia, in terms of its content in older

adults as well as its potential to be transferred interpersonally and intergenerationally.

Younger adults who read an older adult's nostalgic (vs. ordinary) narrative experienced

greater nostalgia. Transferred nostalgia, in turn, was positively associated with perceived

social connectedness, self-continuity, and meaning in life (Sedikides, Wildschut, Routledge,

Arndt, Hepper, et al., 2015), suggesting that frequent exposure to others' nostalgic memories

can produce psychological benefits resembling those of personal nostalgia. Also, reading

about older adults' nostalgic (vs. ordinary) recollections produced greater liking for the older

author. This result adds to a growing literature indicating that nostalgia has the potential to

foster intergroup harmony (Turner, Wildschut, & Sedikides, 2012; Turner, Wildschut,

Sedikides, & Gheorghiu, 2013) and, specifically, reduce ageism (Turner, Wildschut, &

Sedikides, 2017). Indeed, in one of the earliest formal treatises of prejudice, Allport (1954)

alluded to nostalgia's capacity to unite social groups:

> A specific technique for accelerating acquaintance . . . brings together people of
>
> diverse ethnic backgrounds in a 'neighborhood festival.' The leader may start
>
> discussion by asking some member to tell about his memories of autumn, of
>
> holidays, or of food he enjoyed as a child. The report reminds other participants of
>
> equally nostalgic memories, and soon the group is animatedly comparing notes
>
> concerning regional and ethnic customs. The distance of the memories, their warmth
>
> and frequent humor, lead to a vivid sense of commonality . . . and accelerates the

process of acquaintance in a community where formerly only barriers may have existed (p. 454.)

In contrast to prior research, we showed that the beneficial effects of nostalgia can be obtained through exposure to others' nostalgic recollections rather than one's own. It is likely that the universality of nostalgic themes may have helped to emphasize similarities between younger and older adults. That is, the literature suggests several key themes that run through the nostalgic experience. For example, nostalgic recollections refer to interactions with close others during momentous life events (Abeyta et al., 2015; Hepper et al., 2012; Wildschut et al., 2006). Our Experiment 1 findings reinforced that social themes run throughout nostalgic recollections in both older and younger adults. For a younger adult, experiencing nostalgic feelings when reading about an older adult's fond recollections of childhood Christmases with family may well have magnified perceived self-other overlap or inclusion-of-other-in-the-self (IOS; Aron, Aron, & Smollan, 1992), producing greater affinity (LaPrelle, Hoyle, Insko, & Bernthal, 1990; Turner et al., 2017).

Alternatively, the positive association between transferred nostalgia and liking for older adult authors may reflect mood maintenance by the younger readers. People strive to maintain and promote positive affective states (Clark & Isen, 1982). This may motivate younger readers who are feeling nostalgic (a predominantly positive, low-arousal emotion; Sedikides, Wildschut, Routledge, Arndt, et al., 2015; Van Tilburg, Wildschut, & Sedikides, 2017) to act in a way that prolongs and does not spoil their pleasant mood (Sedikides, 1992; Wegener & Petty, 1994). This may mean that, when asked to evaluate the older adult author, younger readers respond generously and express liking.

These two explanations (IOS and mood management) have different implications for the potential of transferred nostalgia to promote intergroup harmony. The IOS explanation entails that, when the group membership of the older adult is salient (Brown & Hewstone, 2005), reading or listening to their nostalgic memories will likely culminate in the inclusion in the self not just of the particular author or narrator but of the entire outgroup, with lasting benefits for intergroup relations. The mood-management explanation, however, entails that any improvements in evaluation of the outgroup are unlikely to persist beyond the duration of

the nostalgic episode and are therefore likely to be short-lived. Future research can shed light on the relative merits of these opposing views.

Implications and Future Directions

Transferred nostalgia may be useful in meeting the needs of individuals with depression. Whereas nostalgia as it is frequently induced (i.e., via the ERT; Sedikides, Wildschut, Routledge, Arndt, Hepper, et al., 2015) confers psychological benefits, such as improving self-esteem in most individuals (Hepper et al., 2012; Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012; Wildschut et al., 2006), it may have less potential in those with depression. Two of the key memory-related issues in individuals with depression are the phenomena of overgeneral memory and a bias towards recall of negative memories (Williams & Scott, 1988). Persons with depression often struggle to remember detail (vs. general negativity) in their autobiographical memories. Thus, the difficulty lies in the induction of nostalgic recollections. Our findings raise the possibility of presenting depressed individuals with others' nostalgic memories from which they can benefit. For example, reading about another individual's nostalgic recollection of a childhood birthday party surrounded by close family members could induce nostalgia, and consequently foster social connectedness and meaning in life in the depressed individual. Yet, it is prudent to consider the possibility that learning about another person's nostalgic memories may exacerbate depression by eliciting upward social comparisons, and increase interpersonal distance rather than reduce it (Tesser, 1988). Whether transferred nostalgia is beneficial or detrimental to individuals with depression is an empirical question for future research.

We wondered what the limits of the IET effect that we identified are. The current findings point toward nostalgia being shared through written texts, but prior research with other, more 'basic' emotional states indicates potential for other modes of transfer (Hsee et al., 1990). Might the same effects be observed during oral sharing of memories under naturalistic circumstances, when individuals may feel more comfortable to confide nostalgia memories they would not otherwise disclose? How would this process operate? The literature suggests two possible mechanisms for IET: behavioral mimicry and social appraisal. The former explanation proposes that one's emotional state directly influences another person's

without their conscious awareness (Hatfield et al., 1994). This influence is transmitted via behavioral mimicry, such as adopting a similar facial expression (Hess & Blairy, 2001), followed by a feedback process that produces the mimicked emotion in the individual (Strack, Martin, & Stepper, 1988; but see Wagenmakers et al., 2016). This explanation cannot adequately account for our current findings, given that participants were not directly exposed to the older adults whose narratives they read, and thus they did not have the opportunity to engage in behavioral mimicry.

An alternative explanation is that IET is based on social appraisal, whereby one's emotional state influences that of another person by causing them to reappraise their environment in an emotion-congruent manner (Manstead & Fischer, 2001). For example, when an observer exaggerates (vs. inhibits) displays of anxiety, participants in a risk-based task behave more conservatively, presumably because they appraise the environment as more risky than otherwise (Parkinson et al., 2012). In the current context, nostalgic events described in the narratives may have led participants to engage in congruent reappraisal of their own past, resulting in nostalgia via autobiographical memory recall (Hsee et al., 1990). This explanation is consistent with evidence that music-evoked nostalgia was strongest after listening to songs with autobiographical associations, suggesting that autobiographical memory was essential in producing nostalgia (Barrett et al., 2010). Future research should examine more thoroughly the contribution of this posited process to interpersonally transferred nostalgia.

Finally, intergenerational tensions exist in both directions (North & Fiske, 2012) and future research should examine the utility of transferred nostalgia for reducing ageism directed against the young by older adults. Research on ageism against the young is scarce, but available evidence indicates, for example, that at least 25% of younger workers report some form of age discrimination in the work place (Loretto, Duncan, & White, 2000) in the form of negative attitudes, denial of promotions, and lower pay (Duncan & Loretto, 2004). Could younger adults' nostalgic memories evoke nostalgia in older adults? And would such transferred nostalgia bestow the same psychological benefits on older adults as it did on younger adults in Study 2, including increased liking for the out-group author? Our present

findings give ample reason to be optimistic that whatever boundaries may exist between age groups in terms of the typical content of their nostalgic memories can be surmounted in the process of sharing.

Coda

Socio-historical perspectives on ageism advocate that technological advances have undermined the traditional storytelling, wisdom-sharing role of older adults (Nelson, 2005; North & Fiske, 2012). Whereas scholars have focused on the significance of these roles for older adults, our findings illustrate how nostalgic storytelling can benefit a younger audience. Older adults' nostalgic memories are socially oriented and evoke nostalgia in younger adults. Furthermore, transferred nostalgia serves key psychological functions, including boosting social connectedness, self-continuity, and meaning in life. Indeed, socially sharing nostalgic memories may bestow psychological resources on one's audience.

References

Abakoumkin, G., Wildschut, T., Sedikides, C., & Bakarou, M. (2017). Nostalgia in response to group-based exclusion: The role of attachment-related avoidance. *European Journal of Social Psychology, 47*, 373–381. doi:10.1002/ejsp.2235

Abeyta, A. A., & Routledge, C. (2016). Fountain of youth: The impact of nostalgia on youthfulness and implications for health. *Self & Identity, 15,* 356-369. doi:10.1080/15298868.2015.1133452

Abeyta, A. A., Routledge, C., Roylance, C., Wildschut, T., & Sedikides, C. (2015). Attachment-related avoidance and the social content of nostalgic memories. *Journal of Social and Personal Relationships, 32,* 406-413. doi:10.1177/0265407514533770

Allport, G. W. (1954). *The nature of prejudice.* Reading, MA: Addison-Wesley.

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63,* 596-612. doi:10.1037/0022-3514.63.4.596

Baldwin, M., Biernat, M., & Landau, M. J. (2015). Remembering the real me: Nostalgia offers a window to the intrinsic self. *Journal of Personality and Social Psychology, 108*, 128-147. doi:10.1037/a0038033

Baldwin, M., & Landau, M. J. (2014). Exploring nostalgia's influence on psychological growth. *Self and Identity, 13*, 162-177 doi:10.1080/15298868.2013.772320

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

Berntsen, D., & Rubin, D. C. (2004). Cultural life scripts structure recall from autobiographical memory. *Memory and Cognition, 32*, 427-442. doi:10.3758.BF03195836.

Brown, R., & Hewstone, H. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology, 37,* 255-343. doi:10.1016/S0065-2601(05)37005-5

Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54,* 165-181. doi:10.1037/0003-066X.54.3.165

Cheung, W. Y., Sedikides, C., & Wildschut, T. (2016). Induced nostalgia increases optimism (via social connectedness and self-esteem) among individuals high, but not low, in trait nostalgia. *Personality and Individual Differences, 90*, 283-288. doi:10.1016/j.paid.20215.11.028

Cheung, W.-Y., Sedikides, C., Wildschut, T., Tausch, N., & Ayanian, A. H. (2017). Collective nostalgia is associated with stronger outgroup-directed anger and participation in ingroup-favoring collective action. *Journal of Social and Political Psychology, 5*, 301-319.

Cheung, W. Y., Wildschut, T., Sedikides, C., Hepper, E. G., Arndt, J., & Vingerhoets, A. J. J. M. (2013). Back to the future: Nostalgia increases optimism. *Personality and Social Psychology Bulletin, 39,* 1484-1496. doi:10.1177/0146167213499187

Chung, C., & Pennebaker, J. (2007). The psychological functions of function words. In K. Fiedler (Ed.), *Social communication* (pp. 343-359). New York NY: Psychology Press.

Clark, M. S., & Isen, A. M. (1982). Toward understanding the relationship between feeling states and social behavior. In A. H. Hastorf & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 73–108). New York, NY: Elsevier Science.

Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia.* New York, NY: The Free Press.

Dimberg, U., & Lundqvist, L. (1990). Gender differences in facial reactions to facial expressions. *Biological Psychology, 30,* 151-159. doi:10.1016/0301-0511(90)90024-Q

Doherty, R. W., Orimoto, L., Singelis, T. M., Hatfield, E., & Hebb, J. (1995). Emotional contagion: Gender and occupational differences. *Psychology of Women Quarterly, 19,* 355–371. doi:10.1111/j.1471-6402.1995.tb00080.x

Duncan, C., & Loretto, W. (2004). Never the right age? Gender and age-based discrimination in employment. *Gender, Work and Organization, 11,* 95–115. doi:10.1111/j.1468-0432.2004.00222.x

Fischer, A. H., Rotteveel, M., Evers, C., & Manstead, A. S. R. (2004). Emotional assimilation: How we are influenced by others' emotions. *Cahiers de Psychologie Cognitive, 22,* 223-245.

Hall, J. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin, 85*, 845–857. doi:10.1037/0033-2909.85.4.845.

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion.* New York, NY: Cambridge University Press.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis. A regression-based approach.* New York, NY: Guilford.

Henkel, L. A., Kris, A., Birney, S., & Krauss, K. (2017). The functions and value of reminiscence for older adults in long-term residential care facilities. *Memory, 25*, 425-435, doi:10.1080/09658211.2016.1182554

Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey's end: Lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion, 12,* 102-119. doi:10.1037/a0025167

Hepper, E. G., Wildschut, T., Sedikides, C., Ritchie, T. D., Yung, Y. F., Hansen, N., …Zhou, X. (2014). Pancultural nostalgia: Prototypical conceptions across cultures. *Emotion*, *14*, 733-747. doi:10.1037/a0036790

Hepper, E. G., Wildschut, T., Sedikides, C., Robertson, S., & Routledge, C. (2018). *Time capsule: nostalgia shields psychological wellbeing from limited time horizons.* Manuscript under review, University of Surrey.

Hess, U., & Blairy, S. (2001). Facial mimicry and emotional contagion to dynamic emotional facial expressions and their influence on decoding accuracy. *International Journal of Psychophysiology, 40,* 129-141. doi:10.1016/S0167-8760(00)00161-6

Holak, S. L., & Havlena, W. J. (1992). Nostalgia: An exploratory study of themes and emotions in the nostalgic experience. *Advances in Consumer Research, 19,* 380-387.

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

Hsee, C. K., Hatfield, E., Carlson, J. G., Chemtob, C. (1990). The effect of power on susceptibility to emotional contagion. *Cognition and Emotion, 4,* 327-340. doi:10.1080/02699939008408081

Judd, C. M., Westfall, J., & Kenny, D. A. (2012). Treating stimuli as a random factor in social psychology: A new and comprehensive solution to a pervasive but largely ignored problem. *Journal of Personality and Social Psychology, 103,* 54-69. doi:10.1037/a0028347

Judd, C. M., Westfall, J., & Kenny, D. A. (2017). Experiments with more than one random factor: Designs, analytic models, and statistical power. *Annual Review of Psychology, 68*, 1-17. doi:10.1146/annurev-psych-122414-033702

Juslin, P. N. (2011). Music and emotion: Seven questions, seven answers. In I. Deliège & J. W. Davidson (Eds.), *Music and the mind: Essays in honour of John Sloboda* (pp. 113-138). New York, NY: Oxford University Press.

Kahn, J. H., Tobin, R. M., Massey, A. E., & Anderson, J. A. (2007). Measuring emotional expression with the Linguistic Inquiry and Word Count. *American Journal of Psychology, 120,* 263-286.

LaPrelle, J., Hoyle, R. H., Insko, C. A., & Bernthal, P. (1990). Interpersonal attraction and descriptions of the traits of others: Ideal similarity, self similarity, and liking. *Journal of Research in Personality, 24,* 216-240.

Lambert, N. M., Stillman, T. F., Baumeister, R. F., Fincham, F. D., Hicks, J. A., & Graham, S. M. (2010). Family as a salient source of meaning in young adulthood. *Journal of Positive Psychology, 5*, 367-376. doi:10.1080/17439760.2010.516616

Leary, M. R., Landel, J. L., & Patton, K. M. (1996). The motivated expression of embarrassment following a self-presentational predicament. *Journal of Personality, 64,* 619-636. doi:10.1111/j.1467-6494.1996.tb00524.x

Leunissen, J. M., Sedikides, C., Wildschut, T., & Cohen, T. R. (2018). Organizational nostalgia lowers turnover intentions by increasing work meaning: The moderating role of burnout. *Journal of Occupational Health Psychology, 23*, 44-57. doi:10.1037/ocp0000059

Loretto, W., Duncan, C., & White, P. J. (2000). Ageism and employment: Controversies, ambiguities, and younger people's perceptions. *Ageing and Society, 20,* 279–302. doi:10.1017/S0144686X00007741

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7,* 85-104. doi:10.1037/1082-989X.7.1.83

Madoglou, A., Gkinopoulos, T., Xanthopoulos, P., & Kalamaras, D. (2017). Representations of autobiographical nostalgic memories: Generational effect, gender, nostalgia proneness and communication of nostalgic experiences. *Journal of Integrated Social Sciences, 7*, 60-88.

Manstead, A. S. R., & Fischer, A. H. (2001). Social appraisal: The social world as object of and influence on appraisal processes. In K. R. Scherer, A. Schorr, & T. Johnston (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 221-232). New York, NY: Oxford University Press.

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A. H., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27,* 474-485. doi:10.1177/0146167201274008

Mills, M. A., & Coleman, P. G. (1994). Nostalgic memories in dementia: A case study. *International Journal of Aging and Human Development, 38,* 203–219. doi:10.2190/NCAJ-0G0L-VTQ4-V1L8

Nelson, T. D. (2005). Ageism: Prejudice against our feared future self. *Journal of Social Issues, 61,* 207–221. doi:10.1111/j.1540-4560.2005.00402.x

Neumann, R., & Strack, F. (2000). "Mood contagion": The automatic transfer of mood between persons. *Journal of Personality and Social Psychology, 79,* 211-223. doi:10.1037/0022-3514.79.2.211

Newman, M. L., Pennebaker, J. W., Berry, D. S., & Richards, J. M. (2003). Lying words: Predicting deception from linguistic style. *Personality and Social Psychology Bulletin, 29,* 665-675. doi:10.1177/0146167203029005010

North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin, 138*, 982–997. doi:10.1037/a0027843

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.

Parkinson, B. (2011). Interpersonal emotion transfer: Contagion and social appraisal. *Social and Personality Psychology Compass, 5,* 428-439. doi:10.1111/j.1751-9004.2011.00365.x

Parkinson, B., Phiri, N., & Simons, G. (2012). Bursting with anxiety: Adult social referencing in an interpersonal Balloon Analogue Risk Task (BART). *Emotion, 12,* 817-826. doi:10.1037/a0026434

Parkinson, B., & Simons, G. (2009). Affecting others: Social appraisal and emotion contagion in everyday decision making. *Personality and Social Psychology Bulletin, 35,* 1071-1084. doi:10.1177/0146167209336611

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). New York, NY: Guildford.

Pennebaker, J. W., Chung, C. K., Ireland, M., Gonzalez, A., & Booth, R. J. (2007). *The development and psychometric properties of LIWC2007.* Austin, TX: LIWC.net.

Pennebaker, J. W., & Francis, M. E. (1996). Cognitive, emotional and language processes in disclosure. *Cognition and Emotion, 10,* 601-626. doi:10.1080/026999396380079

Pennebaker, J. W., & King, L. A. (1999). Linguistic styles: Language use as an individual difference. *Journal of Personality and Social Psychology, 77,* 1296-1312. doi:10.1037/0022-3514.77.6.1296

Pennebaker, J. W., & Stone, L. D. (2003). Words of wisdom: Language use over the life span. *Journal of Personality and Social Psychology, 85,* 291-301. doi:10.1037/0022-3514.85.2.291

Reid, C. A., Green, J. D., Wildschut, T., & Sedikides, C. (2015). Scent-evoked nostalgia. *Memory, 23*, 157-166.doi:10.1080/09658211.2013.876048

Routledge, C., Arndt, J., Wildschut, T., Sedikides, C., Hart, C. M., 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., Wildschut, T., Sedikides, C., & Juhl, J. (2013). Nostalgia as a resource for psychological health and well-being. *Social and Personality Psychology Compass, 7/11*, 808-818. doi:10.1111/spc3.12070

Routledge, C., Wildschut, T., Sedikides, C., Juhl, J., & Arndt, J. (2012). The power of the past: Nostalgia as a meaning-making resource. *Memory, 20,* 452-460. doi:10.1080/09658211.2012.677452

Rude, S. S., Gortner, E. M., & Pennebaker, J. W. (2004). Language use of depressed and depression-vulnerable college students. *Cognition and Emotion, 18,* 1121-1133. doi:10.1080/02699930441000030

Sedikides, C. (1992). Changes in the valence of the self as a function of mood. *Review of Personality and Social Psychology, 14*, 271-311.

Sedikides, C., Cheung, W.Y., Wildschut, T., Hepper, E. G., Baldursson, E., & Pedersen, B. (2018). Nostalgia motivates pursuit of important goals by increasing meaning in life. *European Journal of Social Psychology, 48*, 209–216. doi:10.1002/ejsp.2318

Sedikides, C., & Wildschut, T. (2016a). Nostalgia: A bittersweet emotion that confers psychological health benefits. In J. Johnson & A. Wood (Eds.), *The Wiley handbook of positive clinical psychology* (pp. 25-136). Hoboken, NJ: Wiley.

Sedikides, C., & Wildschut, T. (2016b). Past forward: Nostalgia as a motivational force. *Trends in Cognitive Sciences, 20*, 319-321. doi:10.1016/j.tics.2016.01.008

Sedikides, C., & Wildschut, T. (2017). Finding meaning in nostalgia. *Review of General Psychology*. Online-first. doi:10.1037/gpr0000109

Sedikides, C., Wildschut, T., Gaertner, L., Routledge, C., & Arndt, J. (2008). Nostalgia as enabler of self-continuity. In F. Sani (Ed.), *Self-continuity: Individual and collective perspectives* (pp. 227-239). New York, NY: Psychology Press.

Sedikides, C., Wildschut, T., Juhl, J., & Cheung, W. Y. (in press). The psychological functions of nostalgia. In F. Grouzet (Ed.), *Oxford handbook of psychology of time travel and temporality*. Oxford, UK: Oxford University Press.

Sedikides, C., Wildschut, T., Routledge, C., & Arndt, J. (2015). Nostalgia counteracts self-discontinuity and restores self-continuity. *European Journal of Social Psychology, 45*, 52-61. doi:10.1002/ejsp.2073

Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, Z. (2015). To nostalgize: Mixing memory with affect and desire. *Advances in Experimental Social Psychology, 51,* 189-273. doi:10.1016/bs.aesp.2014.10.001

Sedikides, C., Wildschut, T., Cheung, W.-Y., Routledge, C., Hepper, E. G., Arndt, J., Vail, K., Zhou, X., Brackstone, K., & Vingerhoets, A. J. J. M. (2016). Nostalgia fosters self-continuity: Uncovering the mechanism (social connectedness) and the consequence (eudaimonic well-being). *Emotion, 16*, 524-539. doi:10.1037/emo0000136

Sonnby-Borgström, M. (2002). Automatic mimicry reactions as related to differences in emotional empathy. *Scandinavian Journal of Psychology, 43,* 433–443. doi:10.1111/1467-9450.00312

Stephan, E., Sedikides, C., & Wildschut, T. (2012). Mental travel into the past: Differentiating recollections of nostalgic, ordinary, and positive events. *European Journal of Social Psychology, 42,* 290-298. doi:10.1002/ejsp.1865

Stephan, E., Sedikides, C., Wildschut, T., Cheung, W. Y., Routledge, C., & Arndt, J. (2015). Nostalgia-evoked inspiration: Mediating mechanisms and motivational implications. *Personality and Social Psychology Bulletin, 41*, 1395-1410. doi:10.1177/0146167215596985

Stern, B. B. (1992). Historical and personal nostalgia in advertising text: The fin de siècle effect. *Journal of Advertising, 21,* 11-22.

Stirman, S. W., & Pennebaker, J. W. (2001). Word use in the poetry of suicidal and non-suicidal poets. *Psychosomatic Medicine, 63,* 517-522.

Stone, L. D., & Pennebaker, J. W. (2002). Trauma in real time: Talking and avoiding online conversations about the death of Princess Diana. *Basic and Applied Social Psychology, 24,* 172-182. doi:10.1207/S15324834BASP2403_1

Strack, F., Martin, L. L., & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology, 45,* 768-777. doi:10.1037/0022-3514.54.5.768

The New Oxford Dictionary of English. (1998). Oxford, England: Oxford University Press.

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. *Advances in Experimental Social Psychology, 21*, 181-227. doi:10.1016/S0065-2601(08)60227-0

Thrash, T. M., Maruskin, L. A., Moldovan, E. G., Oleynick, V. C., & Belzak, W. C. (2017). Writer–reader contagion of inspiration and related states: Conditional process analyses within a cross-classified writer × reader framework. *Journal of Personality and Social Psychology, 113,* 466–491. doi:10.1037/pspp0000094

Turner, R. N., Wildschut, T., & Sedikides, C. (2012). Dropping the weight stigma: Nostalgia improves attitudes toward persons who are overweight. *Journal of Experimental Social Psychology, 48,* 130-137. doi:10.1016/j.jesp.2011.09.007

Turner, R. N., Wildschut, T., & Sedikides, C. (2018). Fighting ageism through nostalgia. *European Journal of Social Psychology, 48*, 196-208. doi:10.1002/ejsp.2317

Turner, R. N., Wildschut, T., Sedikides, C., & Gheorghiu, M. (2013). Combating the mental health stigma with nostalgia. *European Journal of Social Psychology, 43*, 413-422. doi:10.1002/ejsp.1952

Van Tilburg, W. A. P., Bruder, M., Wildschut, T., Sedikides, C., & Göritz, A. S. (2018). An appraisal profile of nostalgia. *Emotion.* Online-first publication. doi:10.1037/emo0000417

Van Tilburg, W. A. P., Wildschut, T., & Sedikides, C. (2017). Nostalgia's place among self-conscious emotions. *Cognition and Emotion*. Online-first publication. doi:10.1080/02699931.2017.1351331

Vess, M., Arndt, J., Routledge, C., Sedikides, C., & Wildschut, T. (2012). Nostalgia as a resource for the self. *Self and Identity, 11,* 273-284. doi:10.1080/15298868.2010.521452

Victor, C. A., Scambler, S. J., Bowling, A., & Bond, J. (2005). The prevalence of, and risk factors for, loneliness in later life: A survey of older people in Great Britain. *Ageing & Society, 25,* 357–375. doi:10.1017/S0144686X04003332

Walker, W. R., Skowronski, J. J., Gibbons, J. A., Vogl, R. J., & Ritchie, T. D. (2009). Why people rehearse their memories: Frequency of use and relations to the intensity of emotions associated with autobiographical memories. *Memory, 17,* 760-773. doi:10.1080/09658210903107846

Wagenmakers, E.-J., Beek, T., Dijkhoff, L., Gronau, Q. F., Acosta, A., Adams, R. B., Jr., … & Zwaan, R. A. (2016). Registered replication report: Strack, Martin, & Stepper (1988). *Perspectives on Psychological Science, 11*, 917-928. doi:10.1177/1745691616674458

Wegener, D. T., & Petty, R. E. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality and Social Psychology, 66,* 1034–1048. doi:10.1037/0022-3514.66.6.1034

Wild, B., Erb, M., & Bartels, M. (2001). Are emotions contagious? Evoked emotions while viewing emotionally expressive faces: Quality, quantity, time course and gender differences. *Psychiatry Research, 102,* 109 –124. doi:10.1016/S0165-1781(01)00225-6

Wildschut, T., Bruder, M., Robertson, S., Van Tilburg, A. P. W., & Sedikides, C. (2014). Collective nostalgia: A group-level emotion that confers unique benefits on the group. *Journal of Personality and Social Psychology, 107*, 844-863. doi:10.1037/a0037760

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

Williams, J. M. G., & Scott, J. (1988). Autobiographical memory in depression. *Psychological Medicine, 18,* 689-695. doi:10.1017/S0033291700008370

Wohl, M. J. A., Kim, H. S., Salmon, M., Santesso, D., Wildschut, T., & Sedikides, C. (2018). Self-discontinuity-induced nostalgia improves the odd of a self-reported quit attempt among people living with addiction. *Journal of Experimental Social Psychology*. Online-first publication. doi:10.1016/j.jesp.2017.11.011

Wright, R., Riedel, R., Sechrest, L., Lane, R. D., & Smith, R. (2018). Sex differences in emotion recognition ability: The mediating role of emotional awareness. *Motivation and Emotion, 42,* 149-160. doi:10.1007/s11031-017-9648-0

Zhou, X., Sedikides, C., Wildschut, T., & Gao, D. (2008). Counteracting loneliness: On the restorative function of nostalgia. *Psychological Science, 19,* 1023-1029. doi:10.1111/j.1467-9280.2008.02194.x

Zhou, X., Wildschut, T., Sedikides, C., Shi, K., & Feng, C. (2012). Nostalgia: The gift that keeps on giving. *Journal of Consumer Research, 39*, 39-50. doi:10.1086/662199

Zou, X., Lee, M., Wildschut, T., & Sedikides, C. (2018). *Nostalgia increases risk-taking.* Manuscript under review, Nanyang Technological University.

Table 1. *Means (Standard Deviations) for the LIWC and Manually Coded Dimensions as a Function of Narrative Type (Nostalgic vs. Ordinary) in Experiment 1.*

| | Narrative type | | | |
Dimension	Nostalgic	Ordinary	*t*(38)	*d*
Word count	107.90 (48.56)	94.97 (35.15)	2.27*	0.36
LIWC social content				
Social processes	9.46 (4.51)	5.28 (4.35)	4.27***	0.68
Family	1.92 (1.90)	0.57 (1.16)	4.33***	0.69
Friends	0.34 (0.63)	0.29 (0.68)	0.30	0.05
Humans	0.94 (1.16)	0.55 (0.94)	1.58	0.25
First person singular	5.20 (4.17)	7.22 (3.76)	-2.97**	-0.48
First person plural	2.40 (2.65)	0.85 (1.73)	4.17***	0.67
Coded social content				
Social interaction	1.33 (1.18)	0.64 (1.04)	3.32**	0.53
Companionship	1.59 (1.09)	0.51 (0.85)	5.15***	0.82
Nostalgia				
Narrative nostalgia	2.21 (0.57)	0.27 (0.45)	18.83***	3.02
Transferred nostalgia	0.92 (0.59)	0.08 (0.21)	9.51***	1.52

Note. Results for coded social content are based on ratings by the third author (SR). Results for narrative and transferred nostalgia are based on the average ratings of three research assistants.

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

Table 2. *Correlations between Ratings of Narrative Nostalgia and Transferred Nostalgia in Experiment 1.*

	Transferred nostalgia		
Narrative Nostalgia	Coder 1	Coder 2	Coder 3
Coder 1	**.51***	.43**	.40*
Coder 2	.32*	**.74***	.11
Coder 3	.41**	.32*	**.58***

Note. Tabled values are pooled within-group correlations ($N = 39$). Within-coder correlations are presented on the diagonal (in boldface). Off-diagonal values are between-coder correlations.

Table 3. *Means (Standard Deviations) and Significance Tests as a Function of Narrative Type (Nostalgic vs. Ordinary) in Experiment 2.*

| Dependent variable | Narrative type | | $F(1, ddf)$ | d | V_T | $1-\beta$ |
	Nostalgic	Ordinary				
Transferred nostalgia	3.93 (1.63)	2.76 (1.51)	38.25***	0.74	.008	1
Social connectedness	4.23 (1.39)	2.96 (1.39)	18.81**	0.92	.076	.977
Self-continuity	4.33 (1.49)	3.14 (1.50)	54.86***	0.80	0	1
Meaning	4.36 (1.54)	3.15 (1.65)	11.91**	0.75	.085	.875
Liking for author	5.43 (0.98)	4.76 (1.14)	7.08*	0.62	.096	.693

Note. We calculated denominator degrees of freedom (ddf) for the tabled *F* values with Satterthwaite's method. We calculated effect size *d* using Judd, Westfall, and Kenny's (2017) formula for the NNN$_T$ design. V_T is the proportion of total variance attributable to mean differences among narratives. $1-\beta$ is the observed power of the statistical test and was calculated using Judd et al.'s online power analysis application located at http://jakewestfall.org/two_factor_power.

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

Table 4. *Indirect Effects of Narrative Type (Nostalgic vs. Ordinary) on Dependent Variables via Nostalgia in Experiment 2.*

Dependent variable	Mediator: Transferred nostalgia	
	ab	95% Monte Carlo CI
Social connectedness	.262*	[.172, .359]
Self-continuity	.300*	[.202, .411]
Meaning	.256*	[.157, .353]
Liking for author	.091*	[.047, .147]

Note. ab = indirect effect. CI = confidence interval.

* 95% Monte Carlo CI does not include 0.

Supplemental Online Material for Wildschut, Sedikides, and Robertson

Table S1. *High- and Low-Scoring Narrative Examples for the Manually Coded Language Dimensions in Experiment 1.*

Dimension	Item	High Scoring Example	Low Scoring Example
Social interaction	Degree of social interaction recalled (*0* = minimal, i.e. none/very little, lacking detail, *3* = very much, i.e. detailed anecdotes)	I enjoy with fond memories the Sunday lunch times when I would meet up with my father and our close friends in the village pub prior to having Sunday lunch at Mum's. We enjoyed a few beers while righting the wrongs of the world and extolling or criticising the virtues of the West Indies cricket team. Part of the tradition was to buy a bottle of Man's brown ale for Mum to have with her lunch. Those were great days and I remember them with great happiness. Oh how sad that those days are gone.	About 10 years ago, I decided to climb Hay Stacks again on my own. I met nobody on the way up or down or on the summit. It was a still day. The mirrored tarns reflected the surrounding rocks and the view of Buttermere and the North Western fells was superb. I sat and gazed for a long time, taking in the beauty and peacefulness of my surroundings. It brought back memories of another, different life and it made me sad as I knew I was never likely to see that view of the top of Hay Stacks again.

Table S1. *continued*

| Companionship | Degree of companionship expressed in description as a whole, e.g. appreciation at not being alone, the sharing of things, a sense of belonging, joy at the togetherness in itself (*0* = minimal, *3* = very much, i.e. strongly expressed) | A day spent with my son on his return from two years abroad – a coastal walk on a warm summer day in a beautiful landscape – Devon. I was happy to be having a pleasant time with my son – family relationships with him had not always been free of aggravation. I was pleased that neither of us needed to show any antagonism or arrogance. I felt no fear of being totally open and honest with him. We discussed many subjects in this manner. We were unhurried and sat above a marvellous seacliff in wonderful conditions which we were both able to share before his departure once again to his family and home in Australia. | I recently went to hospital as an inpatient for the first time in my life. It was an experience that put me outside of my comfort zone. I had to put myself in the hands of complete strangers and had little control over what happened. |

Table S1. *continued*

| Narrative nostalgia | To what extent did the author feel nostalgic? (*0* = not at all, *3* = very much) | I was married 60 years ago; our wedding day was very nostalgic, so simple but a very happy occasion. The reception was in my parents' little front room. Money was very short in those days, but we had saved enough to have a honeymoon in a small hotel in Buckinghamshire. Not many people could afford cars in those days, so we had to travel by train to get there. On returning home which was with my parents in Margate we had just one penny left between us, well until our next pay day. My husband made a hole in this penny, and has carried it on his key ring ever since. It is now so thin and shiny, but it has so many nostalgic memories and people love hearing the story. | I looked out of the window, surveyed the back garden and decided reluctantly that as the weather was dry, the grass green but long, that I should mow the lawn. I collected the mower from the garage and set to work. I felt resentful of having to do this chore as I really just wanted to sit in the nice warm conservatory reading my book. I cut the grass, dead headed flowers, watered some dry pots, cleaned the mower and the re-arranged my pots of red dahlias so they would be in full view of the kitchen window. I admired the neater lawn and beautiful flowers and felt pleased with the result but disappointed that now the sun was less hot, the day shorter and soon time for dinner and I still hadn't started my book. |

Table S1. *continued*

| Coder nostalgia | To what extent did the narrative make you feel nostalgic? (*0 =* not at all, *3 =* very much) | A lovely warm glowing and happy feeling when thinking about a weekend about 20 years ago. We had a large marquee in the garden, and on Saturday night had lots of people from our firm for a games night. Great fun, good food, and everyone friendly. Next afternoon, did tea for parents (gold wedding), lots of family and friends mainly older people, after tea they decided to do 'Olde Tyme Dancing' and stayed very late. Children did a little show for them, and everyone laughed, reminisced and went home late but happy. | Going to the supermarket to buy food for a birthday party. The weather was windy and it was also raining and it was difficult to find a car parking space in the supermarket car park without getting wet. This outing should have been straightforward but it was spoilt by the weather. I was worried about the supermarket goods getting wet as I took them back to the car. |

Table S2. *Zero-Order Correlations among the LIWC and Manually Coded Dimensions in Experiment 1.*

	1	2	3	4	5	6	7	8	9
LIWC dimensions									
1. Word count	--								
2. Social processes	.24	--							
3. Family	.12	.58***	--						
4. Friends	-.14	.32*	-.04	--					
5. Humans	.18	.38*	.16	.12	--				
6. First person singular	-.14	-.32*	-.01	-.09	-.03	--			
7. First person plural	.10	.59***	.22	.15	.04	-.37*	--		
Coded dimensions									
8. Social interaction	.35*	.43**	.37*	.12	.17	-.04	-.37*	--	
9. Companionship	.19	.54***	.53***	.33*	.14	-.17	.22	.62***	--

Note. Table S2 presents the pooled within-group correlation between language dimensions across nostalgic and ordinary narratives ($N = 39$). LIWC's global measure of social processes and family-related words were positively associated with manually coded social interaction and companionship. The frequency of friends-related words was also positively associated with manually coded companionship. These findings indicate that the more content-level (vs. function word) dimensions of LIWC matched manual coders' ratings. However, the frequency of words describing humans (e.g., *adult*, *baby*, *boy*) was not associated with social interaction or companionship. These words potentially relate to lesser-known or unknown others. Patterns of pronoun use were not consistently correlated with social interaction or companionship, suggesting that examination of function words such as pronouns may capture an otherwise undetected element of sociality.

* $p < .05$; ** $p < .01$; ***$p < .001$

Table S3. *Stimulus Materials Used in Experiment 2: Five Nostalgic and Five Ordinary Autobiographical Narratives.*

Nostalgic Narratives

1. One of my earliest memories is being taken by my Great Uncle to his allotment near a busy railway junction near Reading. Whilst some work was done on the allotment most of the time was spent outside his shed watching the trains, drinking tea out of enamel mugs and eating cheese sandwiches made for us by my Great Aunt. It was always a sunny day and I really enjoyed hearing stories relating to his service on the London & South Western Railway where he was employed as a fireman. Another memory was the amount of wild life in the area. He would talk knowledgeably about all manner of subjects which, at about the age of eight, I found fascinating.

2. I remember being taken by my father to a beach which was just ten minutes away from our house. There he taught my sisters and myself how to body dive in the waves. It was a very sandy beach and sand collected in our swimming suits as we swam. It was a very happy time spent with my father; who otherwise would have been at work.

3. As a young girl I would pack up some tea things and go on my bike to the park with a friend to have 'tea'. We would take a rug and perhaps a game to play. We enjoyed the freedom of being out and about and found it exciting and daring that we were on our own. We would lie down on the blankets and hear rustling in the bushes (animals scratching around), and hoped that the animals were tame!

4. When I was single, living and working away from home, I would look forward to the enormous holidays. I would travel to my family home and eagerly await spending time with my parents and brother. I would visualise the Christmas decorations, the tree and presents. I couldn't wait to be surrounded by familiar things and the people I loved.

5. I enjoy with fond memories the Sunday lunch times when I would meet up with my father and our close friends in the village pub prior to having Sunday lunch at Mum's. We enjoyed a few beers while righting the wrongs of the world and extolling or criticising the virtues of the West Indies cricket team. Part of the tradition was to buy a bottle of Man's brown ale for Mum to have with her lunch. Those were great days and I remember them with great happiness. Oh how sad that those days are gone.

Table S3. *continued*

Ordinary Narratives

6. As a season ticket holder at St Mary's Stadium, I recently attended a game between my team Southampton and Peterborough United. I was very excited at the prospect that if we won it would take us up in to the top sixth in the league. I went for a couple of pints first, then met up with a mate in the ground to soak up the atmosphere. The ground was buzzing. Then the game started and so did the frustration as chance after chance went begging. After the first goal that changed to celebration. After a heart pounding 90 minutes we won 4-1 and I went home very satisfied indeed.

7. In recent years, I and my husband have been regularly playing golf, and last year we decided to join the club. Since then we have made lots of new friends, and really enjoy the social life. We enter many of the competitions, which involves a lot of team work, and to be able to do this, especially when winning a match at our age, is a great feeling of achievement. It is an ordinary event but with much pleasure and enjoyment.

8. I have always painted nails, it is a job that needs to be done weekly, doesn't take too long but is always worth the time spent. The first task is to remove the varnish, the smell of the remover is very strong, then cut and file the nails – this reshaping makes my nails 'feel' different. Two coats of nail varnish and my hands look different, very much fresher and smarter – I feel better when my nails are freshly painted.

9. Supermarket shopping just before Christmas: Arriving at the supermarket with anticipation of all the nice things I'm going to buy, but decision making involved in choosing what! It is so crowded that it becomes frustrating that I can't reach the shelves. At the end of the shopping I reach the endless queues at the check out desks – mustering as much patience as possible.

10. As people need to eat to survive, someone has to prepare the food. As a housewife, this usually falls to my lot. I have a beautiful kitchen, with every modern convenience to aid me in my task of preparing meals. However, I hate cooking, it is repetitive, boring and provides me with no mental stimulation whatsoever. Also, as a vegetarian, I do not enjoy handling and cooking meat products. The occasion I am recalling involved cooking fish (for my husband), stir-fried vegetables and French fries for us both. I also ate cheese. When cooking I listened to an audio book to relieve the tedium.

S4. *Controlling for Narrative Positivity and Social Content in Experiment 2.*

We wondered whether the nostalgic narratives that participants read in Experiment 2 included more expressions of positive affect and more social content than the ordinary narratives. Are the beneficial effects of reading nostalgic (vs. ordinary) narratives produced simply by their positivity or social content, bypassing transferred nostalgia? We used LIWC (Pennebaker, Chung, Ireland, Gonzalez, & Booth, 2007) for objective indices of narrative positivity and social content, respectively. LIWC calculates the percentage of positive affect words (labeled as POSEMO) and words denoting social processes (labeled as SOCIAL) within written texts.

On average, the five nostalgic narratives ($M = 5.08$, $SD = 3.30$) were nominally more positive than the five ordinary narratives ($M = 4.04$, $SD = 2.61$), $F(1, 8) = 0.31$, $p = .595$. We repeated the mediation analyses reported in Table 4 of the article, controlling for POSEMO. All indirect effects via state nostalgia remained significant (i.e., the 95%CIs did not include zero) and no additional indirect effects via POSEMO emerged.

Next, we turned to the narratives' social content (SOCIAL). On average, the five nostalgic narratives ($M = 10.44$, $SD = 1.45$) included more words denoting social processes than the five ordinary narratives ($M = 5.53$, $SD = 4.22$), $F(1, 8) = 6.06$, $p = .039$. We repeated the mediation analyses, controlling for SOCIAL this time. All indirect effects via state nostalgia remained significant, but results revealed an additional indirect effect of narrative type on meaning via SOCIAL, $ab = .319$, 95%CI = [.037, .689]. The high social content of nostalgic (compared to ordinary) narratives instilled meaning in young readers, independent of transferred nostalgia.