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**Nostalgia Motivates Pursuit of Important Goals by Increasing Meaning in Life**

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**Abstract**

This research focused on existential and motivational implications of the emotion of nostalgia. Nostalgia (relative to control) increased meaning in life, which, in turn, galvanised intentions to pursue one's most important goal (Experiment 1) and to pursue one's most important, but not least important, goal (Experiment 2). The basic pattern held in two cultures (British and Danish) independently of positive affect. This is first evidence that nostalgia has specific motivational consequences (i.e., pursuit of more, but not less, important goals) and transmits these consequences via meaning in life. Also, this is first evidence that meaning is associated with specific motivational consequences. Discussion considers the relevance of the findings for the emotion and motivation literatures.

*Keywords:* nostalgia; meaning; meaning in life; motivation; goal pursuit; management of goal pursuit

Nostalgia, “a sentimental longing or wistful affection for the past” (*The New Oxford Dictionary of English*, 1998, p. 1266), is a social and self-relevant emotion. Nostalgia is typically triggered when fond recollections, involving momentous events from one’s childhood or close relationships (e.g., family dinners at holidays, vacations or travel with friends, graduations or wedding anniversaries), are brought to mind (Abeyta, Routledge, Roylance, Wildschut, & Sedikides, 2015; Holak & Havlena, 1992; Wildschut, Sedikides, Arndt, & Routledge, 2006). These recollections are often bittersweet, although more sweet (e.g., tender and warm) than bitter (e.g., longful) (Batcho, 2007; Sedikides & Wildschut, 2016a; Sedikides, Wildschut, & Baden, 2004). Nostalgia is experienced frequently (i.e., several times a week; Wildschut et al., 2006) and across cultures (Hepper et al., 2014; Luo, Liu, Cai, Wildschut, & Sedikides, 2016; Sedikides et al., 2016) or ages (Batcho, 1995; Hepper, Wildschut, Sedikides, Robertson, & Routledge, 2017; Zhou, Sedikides, Wildschut, & Gao, 2008).

As mentioned above, nostalgia is a social emotion. This sociality is a pivotal source of meaning in life (hereafter: meaning), the perception of one’s existence as purposeful and significant (i.e., worth living; Frankl, 1959/2006). Momentous life events, the primary fodder of nostalgia, entail cherished time spent with family, friends, and relationship partners. These atypical events encapsulate self-defining and consequential life experiences, which, when reflected upon, serve to impart meaning (Wilson, 2005). Indeed, family, friends, and partners constitute primary sources of meaning (Hicks, Schlegel, & King, 2010; Lambert et al., 2010; Stavrova & Luhmann, 2016). Ordinary life events, on the other hand (e.g., grocery shopping, paying bills, driving to work), are unlikely to be self-defining or consequential, and thus meaningful (Van Tilburg & Igou, 2013). In support of these conjectures, engaging in recollection of a nostalgic (relative to an ordinary) event augments meaning (Hepper et al., 2012; Leunissen, Sedikides, Wildschut, & Cohen, 2016; Reid, Green, Wildschut, & Sedikides, 2015; Routledge et al., 2011; Routledge, Sedikides, Wildschut, & Juhl, 2013;

Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012; Van Tilburg, Igou, & Sedikides, 2013).

Nostalgia is not only a social, but also a self-relevant, emotion. Nostalgia is positively linked to an approach orientation, and, when experimentally induced, enhances it (Stephan et al., 2014). Further, nostalgia is positively associated with inspiration (Stephan et al., 2015), and, when experimentally induced, enhances it (Stephan et al., 2015) along with growth-related perceptions (i.e., self-expansion, curiosity, inclination toward new experiences; Baldwin & Landau, 2015). Moreover, experimentally-induced nostalgia (i.e., reflecting on a nostalgic vs. ordinary event from one's past; Sedikides et al., 2015) elevates the importance of relationship goals, boosts optimism about achieving such goals, and strengthens intentions to approach friends or connect with them (Abeyta, Routledge, & Juhl, 2015). Finally, experimentally-induced nostalgia underpins intentions to strive for one's most important goal (Stephan et al., 2015, Study 6).

In all, experimentally-induced nostalgia augments meaning (Routledge et al., 2013) and strengthens motivation to pursue one's most important goal (Stephan et al., 2015, Study 6). Scholars have speculated about the link between meaning and motivation, and reported tentative evidence for it. For example, some conceptualizations place motivation at the heart of meaning (Emmons, 2003; Klinger, 1977; Ryff, 2012), and others consider meaning a motivational action tendency that strengthens consistency between one's core values and behavior (Frankl, 1959/2006). In preliminary support of the latter notion, meaning is positively correlated with an approach orientation and with curiosity or exploration (Steger, Kashdan Sullivan, & Lorentz, 2008). No research, however, has examined in finer detail the relation between meaning and motivation. Is meaning related positively to pursuit of one's goals? Is it related to pursuit of one's most important, but not least important, goal?

In this article, we set three research objectives. First, we tested the replicability of findings that nostalgia increases meaning and that nostalgia galvanises intentions to pursue one's most important goal (Experiment 1; British participants). Second, and more important,

we examined the specificity of nostalgia's influence on goal pursuit. We hypothesised, for the first time, that nostalgia strengthens intentions to pursue one's most important, but not least important, goal (Experiment 2; Danish participants). Third, and equally important, we hypothesised (also for the first time) and tested a mediational sequence, according to which the effect of nostalgia on intentions to pursue one's most important goal is transmitted by meaning (Experiments 1-2).

Nostalgia typically elevates positive affect (Sedikides et al., 2015). Positive affect is associated with, or augments, meaning (Hicks & King, 2008, 2009; King, Hicks, Krull, & Del Gaiso, 2006). We assessed positive affect, asking whether the putative influence of nostalgia on motivation (i.e., goal pursuit intentions), via meaning, is independent of it.

We tested as many participants as possible within the period allocated for running each experiment, under the stipulation of having at least 30 participants per condition (Leroy, 2011, p. 194). This research was approved by the Ethical Committee of University of Southampton and conducted in full compliance with ethical standards. We archived electronic copies of the anonymised raw data, coding information, and all materials in a secure data repository provided by Centre for Research on Self and Identity, Psychology Department, University of Southampton. The first four authors have access to this repository.

### **Experiment 1**

In a laboratory experiment, we examined the replicability of findings that nostalgia increases meaning (Hepper et al., 2012; Routledge et al., 2011, 2012) and strengthens motivation, namely, intentions to pursue one's most important goal (Stephan et al., 2015, Study 6). Crucially, we tested the hypothesis that nostalgia's influence on motivation is mediated by meaning (controlling for positive affect).

### **Method**

**Participants and design.** Sixty University of Southampton undergraduates (52 females, 8 males) participated for course credit or £3 reimbursement. They ranged in age

from 18-50 years ( $M = 20.38$ ,  $SD = 4.50$ ). We randomly assigned them to the nostalgia ( $n = 30$ ) or control ( $n = 30$ ) condition.

**Procedure and materials.** We induced nostalgia with the Event Reflection Task (Sedikides et al., 2015). In the nostalgia condition, participants were instructed to "... bring to mind a nostalgic event in your life. Specifically, try to think of a past event that makes you feel most nostalgic." In the control condition, they were instructed to "... bring to mind an ordinary event in your life." In both conditions, participants took a few moments to think about the relevant event and how it made them feel. Then they listed four keywords summarizing the event and spent five minutes writing about it.

Subsequently, we assessed positive affect and meaning (1 = *strongly disagree*, 6 = *strongly agree*). All items were preceded by the stem "Thinking about this event makes me feel." The positive affect measure comprised two items (Hepper et al., 2012; Wildschut et al., 2006): "... happy," "... in a good mood" ( $\alpha = .97$ ,  $M = 4.61$ ,  $SD = 1.21$ ). The meaning measure comprised four items (Hepper et al., 2012; Routledge et al., 2011): "...that life is meaningful," "...that life has a purpose," "...there is a greater purpose to life," "...that life is worth living" ( $\alpha = .93$ ,  $M = 4.76$ ,  $SD = 1.04$ ).

Next, we assessed motivation by adapting a procedure developed by Milyavskaya, Ianakieva, Foxen-Craft, Colantuoni, and Koestner (2012) and used by Stephan et al. (2015, Study 6). We instructed participants to list five important goals and identify the most important one.<sup>1</sup> Then, we asked them to reflect on the event they described in the beginning of the experiment and, with this event in mind, respond to five items pertaining to their most important goal (0 = *do not agree at all*, 8 = *agree completely*): "I am motivated to pursue this goal," "I look forward to pursuing this goal," "I feel excited about pursuing this goal," "I want to put more time and effort into pursuing this goal," "I feel capable of pursuing this goal" ( $\alpha = .90$ ,  $M = 6.51$ ,  $SD = 1.18$ ).

Finally, we administered a 3-item manipulation check (Hepper et al., 2012; Wildschut et al., 2006). Participants reflected on how nostalgic they felt after narrating the relevant

event: “At that moment, I was feeling quite nostalgic,” “At that moment, I was having nostalgic feelings,” “I felt nostalgic at that moment” (1 = *strongly disagree*, 6 = *strongly agree*;  $\alpha = .96$ ,  $M = 4.28$ ,  $SD = 1.51$ ).

## Results and Discussion

We conducted a series of one-way Analyses of Variance (ANOVAs) before engaging in mediational analyses.

**Manipulation check.** Participants in the nostalgia condition ( $M = 5.01$ ,  $SD = 0.98$ ) reported feeling more nostalgic than those in the control condition ( $M = 3.56$ ,  $SD = 1.61$ ),  $F(1, 58) = 18.00$ ,  $p < .001$ ,  $\eta_p^2 = .237$ . The manipulation was effective.

**Positive affect.** Nostalgic participants ( $M = 5.28$ ,  $SD = 0.83$ ) reported more positive affect than control ones ( $M = 3.93$ ,  $SD = 1.16$ ),  $F(1, 58) = 27.01$ ,  $p < .001$ ,  $\eta_p^2 = .318$ .

**Meaning.** Nostalgic participants ( $M = 5.05$ ,  $SD = 1.05$ ) reported more meaning than control ones ( $M = 4.48$ ,  $SD = 0.96$ ),  $F(1, 58) = 4.91$ ,  $p = .031$ ,  $\eta_p^2 = .078$ .

**Motivation.** Nostalgic participants ( $M = 6.89$ ,  $SD = 1.04$ ) expressed stronger intentions to pursue their most important goal than control participants ( $M = 6.12$ ,  $SD = 1.19$ ),  $F(1, 56) = 6.88$ ,  $p = .011$ ,  $\eta_p^2 = .109$ .

### Mediational analyses.

**Meaning as a mediator.** Meaning qualified as a potential mediator of nostalgia’s effect on motivation. We used the PROCESS macro (Hayes, 2013, model 4) to test the indirect effect (denoted as *ab*) of nostalgia on motivation to pursue the most important goal via meaning (10,000 bootstrap samples; Figure 1). The direct effect was marginal:  $B = .54$ ,  $SE = .29$ ,  $t(56) = 1.89$ , 95% CI =  $-.033, 1.112$ . The indirect effect via meaning was significant:  $ab = .23$ ,  $SE = .13$ , 95% CI =  $.025, .559$ . The effect size of the indirect effect was medium,  $ab_{ps} = .20$ . Nostalgia boosted motivation by increasing meaning.

**Positive affect as a mediator.** We tested the Figure 1 model with positive affect as an additional mediator (Figure 1, plus a path from nostalgia to motivation via positive affect). The indirect effect of nostalgia on motivation via positive affect was not significant,  $ab =$



.008,  $SE = .16$ , 95%CI =  $-.327/.318$ ,  $ab_{ps} = .01$ . Furthermore, the vital indirect effect from nostalgia to motivation via meaning remained significant,  $ab = .23$ ,  $SE = .13$ , 95%CI =  $.025, .537$ ,  $ab_{ps} = .20$ . We obtained support for a model in which nostalgia's effect on motivation is mediated by meaning, above and beyond positive affect.

## Experiment 2

In an online experiment, we operationalised motivation as intentions to pursue one's most important, but not least important, goal. We tested the hypotheses that nostalgia fortifies motivation, and that this effect is mediated by meaning (independently of positive affect).

### Method

**Participants and design.** Ninety one Danish participants (61 females, 30 males) volunteered in response to a Facebook advertisement. They ranged in age from 18-32 years ( $M = 21.88$ ,  $SD = 2.12$ ; one participant did not disclose her age). We assigned them randomly to the nostalgia ( $n = 49$ ) or control ( $n = 42$ ) condition. Results were not qualified by gender, which we excluded from subsequent analyses. Degrees of freedom vary slightly due to missing values.

**Procedure and materials.** We asked participants to take a moment to think about their goals for the next few weeks or months and then "...list 6 personal goals that are important to you in the next few weeks or months. Make sure you include the ones that you care most about, and most want to accomplish, although others might be ones that you would like to achieve but are less important." Afterwards, we instructed them to identify the most important and least important goal.<sup>2</sup>

Next, we manipulated nostalgia with the Event Reflection Task, and assessed positive affect ( $\alpha = .97$ ,  $M = 5.01$ ,  $SD = 1.27$ ) and meaning ( $\alpha = .86$ ,  $M = 4.67$ ,  $SD = 1.15$ ), as in Experiment 1. We proceeded to assess motivation. We asked participants to reflect on the event they had described, and, with this in mind, respond to the following task. We presented them, in randomised order, with their self-identified most important ( $\alpha = .91$ ,  $M = 4.67$ ,  $SD = 1.20$ ) and least important ( $\alpha = .88$ ,  $M = 3.99$ ,  $SD = 1.15$ ) goal, and instructed them to respond

to the same five questions (for each goal) as in Experiment 1 (1 = *not at all*, 6 = *very much*). Administration of the manipulation check ( $\alpha = .96$ ,  $M = 4.33$ ,  $SD = 1.51$ ) concluded the experimental session.

## Results and Discussion

We carried out a series of one-way ANOVAs, and a two-way ANOVA, before engaging in mediational analyses.

**Manipulation check.** Participants in the nostalgia condition ( $M = 5.00$ ,  $SD = 1.08$ ) reported feeling more nostalgic than their control counterparts ( $M = 3.55$ ,  $SD = 1.57$ ),  $F(1, 89) = 26.95$ ,  $p < .001$ ,  $\eta_p^2 = .232$ . The manipulation was effective.

**Positive affect.** Nostalgic participants ( $M = 5.03$ ,  $SD = 1.17$ ) did not report more positive affect than control ones ( $M = 4.98$ ,  $SD = 1.40$ ),  $F(1, 88) = .04$ ,  $p = .839$ ,  $\eta_p^2 = .001$ .

**Meaning.** Nostalgic participants ( $M = 4.88$ ,  $SD = 1.08$ ) reported marginally higher meaning than control ones ( $M = 4.42$ ,  $SD = 1.19$ ),  $F(1, 89) = 3.68$ ,  $p = .058$ ,  $\eta_p^2 = .040$ .

**Motivation.** We conducted a 2 (condition: nostalgia, control)  $\times$  2 (goal importance: most important, least important) mixed-model ANOVA, with repeated measures on the second factor. The goal importance main effect was significant,  $F(1, 86) = 22.46$ ,  $p < .001$ ,  $\eta_p^2 = .207$ . Participants expressed stronger intentions for pursuing their most important ( $M = 4.66$ ,  $SD = 1.20$ ) than their least important ( $M = 3.99$ ,  $SD = 1.16$ ) goal. The condition main effect was not significant,  $F(1, 86) = .55$ ,  $p = .461$ ,  $\eta_p^2 = .006$ .

The critical interaction emerged,  $F(1, 86) = 4.29$ ,  $p = .041$ ,  $\eta_p^2 = .048$  (Figure 2). Nostalgic participants expressed stronger intentions for pursuing their most important ( $M = 4.85$ ,  $SD = 1.17$ ) than their least important ( $M = 3.93$ ,  $SD = 1.13$ ) goal,  $F(1, 86) = 25.52$ ,  $p < .001$ , and control participants tended to express stronger intentions for pursuing their most important ( $M = 4.42$ ,  $SD = 1.21$ ) than their least important ( $M = 4.06$ ,  $SD = 1.20$ ) goal,  $F(1, 86) = 3.26$ ,  $p = .074$ . Alternatively, in regards to the most important goal, nostalgic participants expressed stronger intentions than controls,  $F(1, 86) = 5.58$ ,  $p = .021$ , whereas, in

regards to the least important goal, nostalgic and control participants did not differ in strength of their expressed intentions,  $F(1, 86) = .44, p = .508$ .

### **Mediational analyses.**

**Meaning as a mediator.** Meaning qualified as a potential mediator of nostalgia's effect on intentions to pursue one's most important goal. We relied on the PROCESS macro (Hayes, 2013, model 4) to test the indirect effect (denoted as  $ab$ ) of nostalgia on intentions to pursue one's most important goal via meaning (10,000 bootstrap samples; Figure 1). The direct effect was not significant:  $B = .19, SE = .22, t(88) = 0.84, 95\% CI = -.257, .632$ . However, the indirect effect via meaning was significant:  $ab = .26, SE = .14, 95\% CI = .030, .611$ . The effect size of the indirect effect was medium,  $ab_{ps} = .22$ . Nostalgia strengthened intentions to pursue one's most important goal by increasing meaning.

**Positive affect as a mediator.** Although nostalgia did not influence positive affect, we nevertheless assessed positive affect's mediational role, for consistency purposes. We tested the model with positive affect as an additional mediator (Figure 1, plus a path from nostalgia to motivation via positive affect). The indirect effect of nostalgia on intentions to pursue one's most important goal via positive affect was not significant,  $M_{\text{indirect effect}} = .004, SE = .04, 95\%CI = -.047, .142, ab_{ps} = .01$ . Critically, the indirect effect from nostalgia to intentions to pursue one's most important goal via meaning remained significant,  $ab = .25, SE = .14, 95\%CI = .039, .626, ab_{ps} = .21$ . We obtained support for a model in which the effect of nostalgia on intentions to pursue one's most important goal is mediated by meaning, above and beyond positive affect.

### **General Discussion**

Nostalgia increases meaning, which in turn predicts stronger motivation, that is, intentions to pursue one's most important goal. These findings, replicated in two cultures, have implications for the emotion (i.e., nostalgia), existential (i.e., meaning), and multiple goal-pursuit literatures. This is first evidence that nostalgia (1) has specific motivational consequences (i.e., on intentions to pursue one's of most important, but not least important,

goal), (2) exerts this specific effect through meaning, and (3) does so above and beyond positive affect. Likewise, this is the first time that meaning (independently of positive affect) has been linked to specific levels of motivational engagement.

We manipulated nostalgia with the Event Reflection Task (Sedikides et al., 2015), simulating experimentally the triggering of nostalgia by momentous life events (Wildschut et al., 2006). Yet, such events do not constitute the sole trigger of nostalgia. For example, nostalgia can be induced via music, song lyrics, or scents (Reid et al., 2015; Routledge et al., 2011). Importantly, music-induced (Routledge et al., 2011, Study 1), lyrics-induced (Routledge et al., 2011, Study 2), or scent-induced (Reid et al., 2015) nostalgia leads to increases in meaning. We expect that our key findings (i.e., effect of nostalgia on motivation, mediation of this effect by meaning) will be replicated with alternative inductions of nostalgia, although this proposition awaits empirical verification.

We use stems (i.e., “thinking about this event,” or “with this event in mind”) to measure the putative mediator (i.e., meaning) and outcome (i.e., motivation) of nostalgia. Although they may add precision, stems are not necessary for nostalgia to influence a variety of outcomes (Sedikides et al., 2015), including meaning (Hepper et al., 2012, Study 7; Leunissen et al., 2016; Reid et al., 2015; Routledge et al., 2011, 2012; Van Tilburg et al., 2015). For example: (1) as Routledge et al. (2011, Study 2) showed, experimentally-induced nostalgia increases meaning when measured with the 5-item Presence of Meaning in Life subscale of the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006; e.g., “I understand my life’s meaning”); (2) as Leunissen et al. (2016, Experiment 1) showed, experimentally-induced nostalgia increases meaning when measured by the 4-item Positive Meaning subscale of the Work and Meaning Inventory (Steger, Dik, & Duffy, 2012; e.g., “I have found a meaningful career”); and (3) as Leunissen et al. (2016, Experiment 2) showed, experimentally-induced nostalgia increases meaning when measured by the 10-item Work and Meaning Inventory (Steger et al., 2012; e.g., “I know my work makes a positive

difference in the world”). Of course, another replication, this time assessing both meaning and motivation in the absence of stems, would expand the scope of this research.

Although meaning has traditionally been defined and operationalised in terms of purposefulness and significance of life (Frankl, 1959/2006), recent perspectives have advocated refined conceptualizations of it. For example, King, Heintzelman, and Ward (2016) defined meaning not only in terms of purposefulness (i.e., sense of goals and direction in life) and significance (i.e., sense of life being inherently valuable and worth living), but also in terms of coherence (i.e., sense of life being comprehensible or making sense). Adding to that, Martela and Steger (2016) presented preliminary evidence for the discriminability of the three facets of meaning. Future investigations will do well to examine which of the three facets of meaning most potently mediates the effect of nostalgia on motivation.

We used a measurement-of-mediation design in both experiments. Although we obtained replicable results, we acknowledge limitations of this design (Bullock, Green, & Ha, 2010). Nevertheless, we consider the mediational analyses as informative, given that they placed the hypothesised model (Figure 1) at risk (Fiedler, Schott, & Meiser, 2011). Failure of the postulated link (meaning) would have invalidated the model. Regardless, follow-up work would do well to add experimental-causal-chain designs (Spencer, Zanna, & Fong, 2005), in which a researcher would manipulate meaning and examine its effects on goal pursuit. In addition, follow-up studies could focus on actual behaviour (e.g., persistence with goal pursuit) rather than behavioural intentions.

Our findings pose a challenge to a prominent perspective in the emotion literature, namely that ambivalent emotions constitute a poor guide for action and are thus unpleasant and often short-lived (Larsen, McGraw, & Cacioppo, 2001). Nostalgia, despite involving a blend of positive and negative elements (Sedikides & Wildschut, 2016a), strengthened goal pursuit. Nostalgia, however, may entail happiness and sadness without necessarily giving rise to internal conflict. For example, the positive and negative elements of nostalgic narratives are juxtaposed in such a manner as to form a redemption sequence: Although the narratives

encompass disappointment or loss, these negative situations are redeemed by subsequent triumphs over hardship (Wildschut et al., 2006). This may explain why, despite the presence of negative elements, nostalgia is often experienced as a positive emotion and is associated with such outcomes as inspiration (Stephan et al., 2014; Sedikides & Wildschut, 2016b), optimism (Cheung, Sedikides, & Wildschut, 2016; Cheung et al., 2013), creativity (Van Tilburg, Sedikides, & Wildschut, 2015; Sedikides & Wildschut, 2016b), and—presently—goal pursuit.

Finally, our findings indicate that nostalgia is relevant to the management of multiple goal pursuit. In juggling between multiple goals, individuals do better when they inhibit less important goals and disproportionately allocate mental resources to more important goals (Shah, 2005). Nostalgia, through heightening meaning, places life priorities in perspectives and facilitates effective goal pursuit by motivating individuals to focus on their most important goal. Future investigations will need to identify the mechanisms underlying this process. For example, does nostalgia, via meaning, promote a sequential (rather than concurrent) approach to managing multiple goals (Orehek & Vazeou-Nieuwenhuis, 2013)?

### References

- Abeyta, A. A., Routledge, C., & Juhl, J. (2015). Looking back to move forward: Nostalgia as a psychological resource for promoting relationship goals and overcoming relationship challenges. *Journal of Personality and Social Psychology, 109*, 1029-1044.  
doi:10.1037/pspi0000036
- Abeyta, A., Routledge, C., Roylance, C., Wildschut, R. T., & Sedikides, C. (2015). Attachment-related avoidance and the social and agentic content of nostalgic memories. *Journal of Social and Personal Relationships, 32*, 406-413. doi:10.1177/0265407514533770
- 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
- Batcho, K. I. (1995). Nostalgia: A psychological perspective. *Perceptual and Motor Skills, 80*, 131-143. doi:10.2466/pms.1995.80.1.131
- Batcho, K. I. (2007). Nostalgia and the emotional tone and content of song lyrics. *The American Journal of Psychology, 120*, 361-381.
- Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism? (don't expect an easy answer). *Journal of Personality and Social Psychology, 98*, 550-558.  
doi:10.1037/a0018933
- 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., 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
- Emmons, R. A. (2003). Personal goals, life meaning, and virtue: wellsprings of a positive life. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: positive psychology and the life well-lived*. Washington, DC: American Psychological Association.

- Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of Experimental Social Psychology*, 47, 1231-1236. doi:10.1016/j.jesp.2011.05.007
- Frankl, V. E. (1959/2006). *Man's search for meaning*. Boston, MA: Beacon Press.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis. A regression-based approach*. New York, NY: Guilford.
- Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure of coding data. *Communication Methods and Measures*, 1, 77-89.
- 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., Robertson, S., & Routledge, C. (2017). *Time capsule: Nostalgia shields wellbeing from limited time horizons*. Manuscript under review, University of Surrey.
- 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
- Hicks, J. A., & King, L. A. (2008). Religious commitment and positive mood as information about meaning in life. *Journal of Research in Personality*, 42, 43-57. doi:10.1016/j.jrp.2007.04.003
- Hicks, J. A., & King, L. A. (2009). Positive mood and social relatedness as information about meaning in life. *Journal of Positive Psychology*, 4, 471-482. doi:10.1080/17439760903271108
- 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
- Holak, S. L., & Havlena, W. J. (1992). Nostalgia: An exploratory study of themes and emotions in the nostalgic experience. *Advances in Consumer Research*, 19, 380-386.



- King, L. A., Heintzelman, S. J., & Ward, S. J. (2016). Beyond the search for meaning: A contemporary science of the experience of meaning in life. *Current Directions in Psychological Science*, 25, 211-216. doi:10.1177/0963721416656354
- 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
- Klinger, E. (1977). *Meaning and void: inner experience and the incentives in people's lives*. Minneapolis, MN: University of Minnesota Press.
- 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
- Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time? *Journal of Personality and Social Psychology*, 81, 684-696. doi:10.1037//0022-3514.81.4.684
- Leroy, G. (2011). *Designing user studies in informatics*. New York, NY: Springer.
- Leunissen, J. M., Sedikides, C., Wildschut, T., & Cohen, T. R. (2016). Organizational nostalgia increases work meaning and mitigates the negative effects of burnout on turnover intentions. *Journal of Occupational Health Psychology*. Advance online publication. doi:org/10.1037/ocp0000059
- Luo, Y. L. L., Liu, Y., Cai, H., Wildschut, T., & Sedikides, C. (2016). Nostalgia and self-enhancement: Phenotypic and genetic approaches. *Social Psychological and Personality Science*, 7, 857-866. doi:10.1177/1948550616660158
- Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, 11, 531-545. doi:10.1080/17439760.2015.1137623

- Milyavskaya, M., Ianakieva, I., Foxen-Craft, E., Colantuoni, A., & Koestner, R. (2012). Inspired to get there: The effects of trait and goal inspiration on goal progress. *Personality and Individual Differences*, 52, 56-60. doi:10.1016/j.paid.2011.08.031
- Orehek, E., & Vazeou-Nieuwenhuis, A. (2013). Sequential and concurrent strategies of multiple goal pursuit. *Review of General Psychology*, 17, 339-349. doi:10.1037/a0032584.
- 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., Juhl, J., Vingerhoets, A. J., & Scholtz, 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., Sedikides, C., Wildschut, T., & Juhl, J. (2013). Finding meaning in the past: Nostalgia as an existential resource. In K. Markman, T. Proulx, & M. Lindberg (Eds.), *The psychology of meaning* (pp. 297-316). Washington, DC: American Psychological Association.
- 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
- Ryff, C. D. (2012). Existential well-being and health. In P. T. P. Wong (Ed.), *The human quest for meaning* (2n ed., pp. 233-248). New York, NY: Routledge.
- 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., & Baden, D. (2004). Nostalgia: Conceptual issues and existential functions. In J. Greenberg, S. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 200-214). New York, NY: Guilford Press.

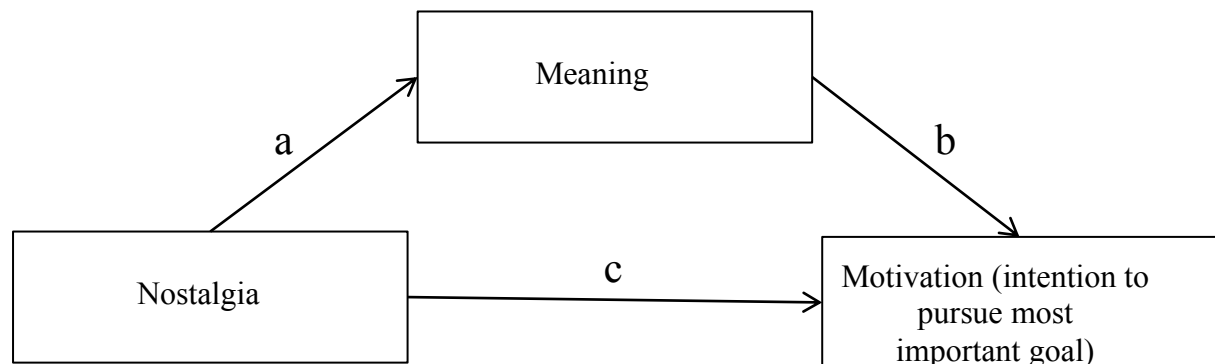
- Sedikides, C., Wildschut, T., Cheung, W.-Y., Routledge, C., Hepper, E. G., Arndt, J., Vail, K., Zhou, X., Brackstone, K., & Vingerhoets, A. J. J. M. (2016). Nostalgia fosters self-continuity: Uncovering the mechanism (social connectedness) and the consequence (eudaimonic well-being). *Emotion, 16*, 524-539. doi:10.1037/emo0000136
- Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, X. (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
- Shah, J. Y. (2005). The automatic pursuit and management of goals. *Current Directions in Psychological Science, 14*, 10-13. doi:10.1111/j.0963-7214.2005.00325.x
- Spencer, S. J., Zanna, M., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology, 89*, 845-851. doi:10.1037/0022-3514.89.6.845
- Stavrova, O., & Luhmann, M. (2016). Social connectedness as a source and consequence of meaning in life. *The Journal of Positive Psychology, 11*, 470-479, doi:10.1080/17439760.2015.1117127
- Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: the Work and Meaning Inventory (WAMI). *Journal of Career Assessment, 20*, 322-337. doi:10.1177/1069072711436160
- 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
- Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*, 199-228. doi:10.1111/j.1467-6494.2007.00484.x

- Stephan, E., Wildschut, T., Sedikides, C., Zhou, X., He, W., Routledge, C., Cheung, W. Y., & Vingerhoets, A. J. J. M. (2014). The mnemonic mover: Nostalgia regulates avoidance and approach motivation. *Emotion, 14*, 545-561. doi:10.1037/a0035673
- 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
- The New Oxford Dictionary of English*. (1998). (J. Pearsall, Ed.). Oxford, UK: Oxford University Press.
- Van Tilburg, W. A. P., & Igou, E. R. (2013). On the meaningfulness of behavior: An expectancy x value approach. *Motivation and Emotion, 37*, 373-388. doi:10.1007/s11031-012-9316-3
- Van Tilburg, W. A.P., Igou, E. R., & Sedikides, C. (2013). In search of meaningfulness: Nostalgia as an antidote to boredom. *Emotion, 13*, 450-461. doi:10.1037/a0030442
- Van Tilburg, W. A. P., Sedikides, C., & Wildschut, T. (2015). The mnemonic muse: Nostalgia fosters creativity through openness to experience. *Journal of Experimental Social Psychology, 59*, 1-7. doi:10.1016/j.jesp.2015.02.002
- 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
- Wilson, J. L. (2005). *Nostalgia: Sanctuary of meaning*. Cranbury, NJ: Associated University Presses.
- 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

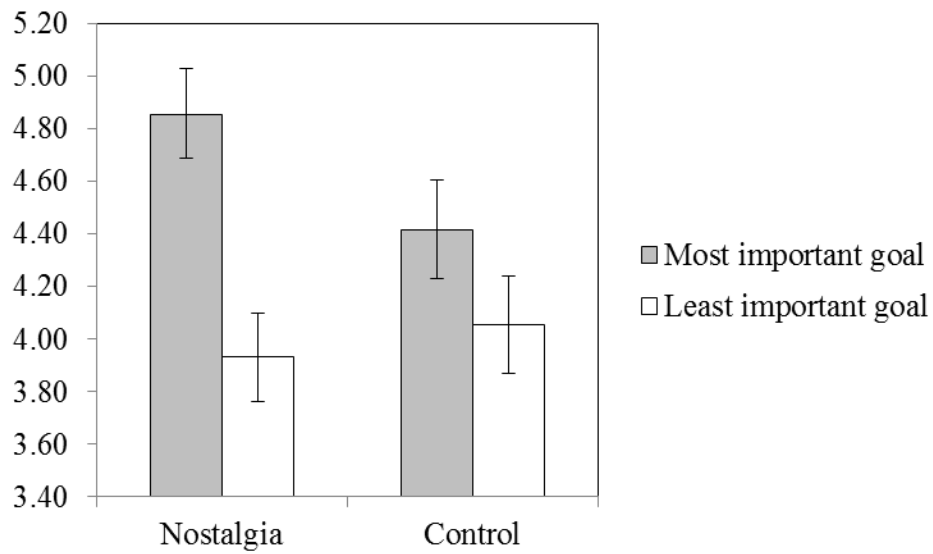
### Footnotes

<sup>1</sup>Two independent coders read through participants' most important goal, and proceeded to identify three themes: social (e.g., having a family, having good relationships with family and friends), agentic (e.g., being successful, graduate with good grades), and hedonic (e.g., being happy, enjoying life). We used a bootstrapping analysis (Hayes & Krippendorff, 2007; 10,000 resamples) to calculate intercoder reliability,  $\alpha = .91$ , 95% CI = .822, .978. The coders resolved disagreements through discussion. Overall, 37.9% of goals were coded as social, 36.2% as agentic, and 25.9% as hedonic. A 2 (condition: nostalgia vs. control)  $\times$  3 (goal type: social, agentic, hedonic) chi-square analyses indicated that goal type did not vary as a function of nostalgia,  $\chi^2(2) = .11$ ,  $p = .944$ . Further, a 2 (condition: nostalgia vs. control)  $\times$  3 (goal type: social, agentic, hedonic) ANOVA revealed that goal type did not interact with nostalgia to influence motivation,  $F(2, 52) = 1.23$ ,  $p = .302$ ,  $\eta_p^2 = .045$ .

<sup>2</sup>Two independent coders read through participants' most important goal, and identified the same three themes as in Experiment 1: social, agentic, hedonic. We used a bootstrapping analysis (Hayes & Krippendorff, 2007; 10,000 resamples) to calculate intercoder reliability,  $\alpha = .86$ , 95% CI = .728, .969. Coders resolved disagreements via discussion. The goal distribution was different from that of Experiment 1: 16.7% of goals were coded as social, 81.1% as agentic, and 2.2% as hedonistic. Yet again, as a 2 (condition: nostalgia vs. control)  $\times$  3 (goal type: social, agentic, hedonic) chi-square analyses revealed, goal type did not vary as a function of nostalgia,  $\chi^2(2) = .01$ ,  $p = .995$ . And again, as a 2 (condition: nostalgia vs. control)  $\times$  3 (goal type: social, agentic, hedonic) ANOVA indicated, goal type did not interact with nostalgia to influence motivation,  $F(2, 83) = 2.00$ ,  $p = .142$ ,  $\eta_p^2 = .046$ .



*Figure 1.* Mediational model tested in Experiments 1 and 2.



*Figure 2.* Motivation to pursue the most important goal and least important goals as a function of condition (nostalgia vs. control) in Experiment 2. Error bars represent standard errors.