Nostalgia-Evoked Inspiration: Mediating Mechanisms and Motivational Implications

Elena Stephan[1], Constantine Sedikides[2], Tim Wildschut[2], Wing-Yee Cheung[2], Clay Routledge[3], and Jamie Arndt[4]

Abstract

Six studies examined the nostalgia–inspiration link and its motivational implications. In Study 1, nostalgia proneness was positively associated with inspiration frequency and intensity. In Studies 2 and 3, the recollection of nostalgic (vs. ordinary) experiences increased both general inspiration and specific inspiration to engage in exploratory activities. In Study 4, serial mediational analyses supported a model in which nostalgia increases social connectedness, which subsequently fosters self-esteem, which then boosts inspiration. In Study 5, a rigorous evaluation of this serial mediational model (with a novel nostalgia induction controlling for positive affect) reinforced the idea that nostalgia-elicited social connectedness increases self-esteem, which then heightens inspiration. Study 6 extended the serial mediational model by demonstrating that nostalgia-evoked inspiration predicts goal pursuit (intentions to pursue an important goal). Nostalgia spawns inspiration via social connectedness and attendant self-esteem. In turn, nostalgia-evoked inspiration bolsters motivation.

The emotion of nostalgia has been considered a brain, psychiatric, and psychological dysfunction since its terminological inception in 1688 (Hofer, 1688/1934). At best, nostalgia was deemed a self-indulgent and maladaptive mawkishness that individuals experience when they are trapped in their past and fail to measure up to the demands of the present. It was also confined to marginalized populations (e.g., seafarers, immigrants, soldiers; Sedikides, Wildschut, & Baden, 2004).

This gloomy and restricted image of nostalgia is being revised in light of empirical evidence (Sedikides, Wildschut, Arndt, & Routledge, 2008; Sedikides et al., 2015). Adopting a prototype approach, according to which people's understanding of nostalgia is shaped by repeated experience and becomes loosely organized around a cognitive structure, Hepper, Ritchie, Sedikides, and Wildschut (2012) demonstrated that laypersons conceive of nostalgia as a predominantly positive, social, and past-oriented emotion. Nostalgia entails remembering an event from one's past—typically a fond, meaningful memory (e.g., childhood, close relationship). One often reflects on the memory through rose-tinted glasses, misses that time or person, and may even long to return to the past. Consequently, one feels sentimental, most often happy but with a tinge of longing. These lay conceptions of nostalgia correspond with formal definitions: *The New Oxford Dictionary of English* (1998) defines nostalgia

as "a sentimental longing or wistful affection for the past" (p. 1266). Nostalgia, then, is a self-relevant, but social, as well as predominantly positive emotion that is felt commonly (approximately 3 times a week; Wildschut, Sedikides, Arndt, & Routledge, 2006) and across cultures (18 countries spanning five continents; Hepper et al., 2014).

Nostalgia does more than capture feelings for certain past events. It has a beneficial impact on the present. In particular, nostalgic (compared with ordinary autobiographical) reflection increases current levels of positive affect (PA; Stephan, Sedikides, & Wildschut, 2012; Verplanken, 2012), self-esteem (Hepper et al., 2012; Wildschut et al., 2006), and social connectedness (i.e., a sense of acceptance, inclusion, and belongingness; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010; Zhou, Sedikides, Wildschut, & Gao, 2008). However, does nostalgia also shape the future? Does it

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[1]Bar-Ilan University, Ramat-Gan, Israel
[2]University of Southampton, UK
[3]North Dakota State University, Fargo, USA
[4]University of Missouri–Columbia, USA

Corresponding Author:
Elena Stephan, Department of Psychology, Bar-Ilan University, Ramat-Gan 5290002, Israel.
Email: elena_stephan@hotmail.com

connect people to the external world and new opportunities? The objective of this article is to address these questions by examining the relation between nostalgia and inspiration, as well as the motivational implications of that relation.

Early speculation on the nostalgia–inspiration link was offered by Davis (1979): ". . . nostalgia, because of its prominence and pervasiveness as a distinctive mind-body state, enters inevitably into the language of all the arts . . ." (p. 85). Research has now established that PA and self-esteem are antecedents of inspiration (Thrash & Elliot, 2003), and that nostalgia augments both (Routledge, Wildschut, Sedikides, & Juhl, 2013). Furthermore, nostalgia increases social connectedness (Wildschut et al., 2006), which, albeit not a known antecedent of inspiration, is a hallmark of attachment security. Attachment security, in turn, underpins inspiration by promoting cognitive openness (Green-Hennessy & Reis, 1998) and curiosity (Mikulincer, 1997). Hence, existing evidence also links, albeit indirectly, social connectedness to inspiration. Accordingly, based on theoretical and empirical literature, we propose that nostalgia fosters inspiration.

Nostalgia and Inspiration

Inspiration is an evoked experience that involves transcendence of ordinary preoccupations and motivates goal pursuit or behavior (Thrash & Elliot, 2003, 2004). Inspiration is experienced as triggered by something beyond the self (*evocation*), involves moving away from the mundane while gaining an awareness of better possibilities or ideas (*transcendence*), and encompasses an urge to enact these ideas (*approach orientation*). Inspiration consists of two interrelated processes (Thrash, Elliot, Maruskin, & Cassidy, 2010). The first process is "being inspired by" and refers to appreciation of the perceived intrinsic value of the evocative stimulus (e.g., beauty of a landscape). The main characteristic of this process is its generality (i.e., general inspiration). The second process is "being inspired to" and refers to transmission, expression, or enactment of an idea or plan. The main characteristic of this process is its domain specificity (i.e., specific inspiration). Evocation and transcendence are considered aspects of "being inspired by" or general inspiration, whereas approach orientation is regarded as an aspect of "being inspired to" or specific inspiration.

How Does Nostalgia Elicit Inspiration?

We propose that nostalgia is linked with inspiration and prompts inspiration—both general and specific. Our rationale derives from research demonstrating nostalgia's capacity to augment PA, self-esteem, and social connectedness.

We reason that, by augmenting PA, nostalgia will facilitate an approach orientation (Watson, Wiese, Vaidya, & Tellegen, 1999). Indeed, nostalgia increases approach motivation as manifested both experientially (e.g., Fun Seeking and Drive facets of the Behavioral Approach System; Carver, 2006) and

behaviorally (e.g., seating distance and helping; Stephan et al., 2014). As such, nostalgia is likely to enable thought patterns that are malleable and inventive (Isen, 2004).[1] Furthermore, by elevating self-esteem, nostalgia will foster confidence that one's exploratory initiatives are likely to be successful (Alicke & Sedikides, 2009). Consistent with this line of reasoning, Thrash and Elliot's (2003) findings suggest that PA and high self-esteem are crucial antecedents of inspiration.

The association between social connectedness and inspiration has not been tested. However, social connectedness is a trademark of attachment security. Securely attached individuals are cognitively open (Green-Hennessy & Reis, 1998; Mikulincer & Arad, 1999), describe themselves as curious, perceive curiosity as an opportunity for growth, and engage in information search to satisfy their curiosity (Kumashiro & Sedikides, 2005; Mikulincer, 1997). Hence, evidence links, albeit indirectly, social connectedness to cognitive openness and greater engagement with the environment, both of which were identified by Thrash and Elliot (2004) as antecedents to inspiration.

Does Nostalgia-Evoked Inspiration Bolster Goal Pursuit?

Researchers have argued that inspiration not only entails transcendence of mundane preoccupations, but it also motivates goal pursuit or behavior (Thrash & Elliot, 2003, 2004). Indeed, trait inspiration predicts increased goal progress over time (Milyavskaya, Ianakieva, Foxen-Craft, Colantuoni, & Koestner, 2012). Also, trait inspiration predicts creativity in writing and poetry (Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010) as well as efficiency and productivity in writing (Thrash, Maruskin, et al., 2010). Finally, the daily experience of inspiration predicts work mastery and creativity (Thrash & Elliot, 2003). But does *nostalgia-prompted inspiration* fortify goal pursuit? Specifically, does inspiration mediate the effect of nostalgia on motivation to enact one's goals? We addressed these questions.

Overview

We focused, in six studies, on the correlational and causal relation between nostalgia and inspiration, the mechanisms underlying this relation, and the motivational implications of that relation. In Study 1, we examined the association between individual differences in nostalgia proneness and self-reported frequency and intensity of inspiration. In Study 2, we manipulated nostalgia and assessed general inspiration (the "inspired by" component of the construct). In Study 3, we manipulated nostalgia and assessed inspiration in specific life domains (the "inspired to" component of the construct). In Study 4, we tested whether PA, social connectedness, and self-esteem (known functions of nostalgia and likely antecedents of inspiration) mediate the effect of nostalgia on inspiration. In Study 5, we conducted a more stringent test of our hypotheses by implementing a novel nostalgia manipulation, which controlled for

the role of PA. Finally, in Study 6, we extended the scope of our investigation by examining whether nostalgia-induced inspiration prompts goal pursuit.

General Methodological Considerations

In each study, we tested all participants available during the designated study period. In the experiments (Studies 2-6), we did so under the stipulation that the number of observations per condition ($n_{condition}$) should be equal to or greater than 20 (Simmons, Nelson, & Simonsohn, 2011). Men are underrepresented in our participant pool and, for this reason, Studies 3, 4, and 6 contained few men ($n < 20$). However, Studies 1, 2 and 5 contained adequate numbers of men and obtained no evidence for sex differences. We therefore excluded sex from the reported analyses.

In Studies 2 to 6, we assessed the effectiveness of the nostalgia manipulations with a validated three-item manipulation check (Hepper et al., 2012; Wildschut et al., 2006): "Right now, I am feeling quite nostalgic," "Right now, I am having nostalgic feelings," "I feel nostalgic at the moment" (1 = *strongly disagree*, 6 = *strongly agree*; αs > .90). In Studies 2 to 4, we administered this manipulation check immediately following the manipulation. In Studies 5 and 6, we administered the manipulation check at the end of the session to address the possibility that, by placing it prior to the dependent variables in Studies 2 to 4, we created experimental demand. Regardless of administration order of the manipulation check, participants consistently reported feeling significantly ($p < .001$) more nostalgic in the nostalgia than in the control condition. The nostalgia manipulations were effective.

Finally, Studies 4 to 6 included serial mediational analyses. Notwithstanding their well-documented limitations (Bullock, Green, & Ha, 2010), we regard these analyses as informative, because they placed our hypotheses at risk (Fiedler, Schott, & Meiser, 2011). Kenny and Judd (2014) recently demonstrated that the power of the test of the indirect effect in mediational models is often considerably greater than the test of the direct effect. Their demonstration has two implications. First, it is inadvisable to make claims of complete (vs. partial) mediation based on the non-significance of the direct effect, and hence, we did not adopt this distinction (for an in-depth critique of the distinction between complete vs. partial mediation, see Rucker, Preacher, Tormala, & Petty, 2011). Second, testing mediational hypotheses does not impose exceptional sample-size requirements. To secure high statistical power, we also report a research synthesis based on the combined data of Studies 4 to 6.

Study 1: Is Nostalgia Associated With Inspiration?

We sought to establish a basic relation between nostalgia and inspiration. We hypothesized that, if nostalgia is a source of inspiration, then higher levels of nostalgia would be associated with higher frequency and intensity of inspiration. To this end, we carried out a survey in which we collected measures of nostalgia and inspiration.

Method

Participants. Eighty-four University of Southampton student volunteers (57 females, 27 males) completed a questionnaire containing measures of nostalgia proneness and inspiration. Participants' age ranged between 18 and 58 years ($M = 23.78$, $SD = 6.17$).

Procedure. We assessed nostalgia proneness with the Nostalgia Inventory (NI; Batcho, 1995) and the Southampton Nostalgia Scale (SNS; Barrett et al., 2010; Routledge, Arndt, Sedikides, & Wildschut, 2008). For the NI, participants rated the extent to which they felt nostalgic for (1 = *not at all nostalgic*, 5 = *very nostalgic*) 18 aspects of their past (e.g., "Having someone to depend on," "The way people were," "My family," "My pets"). We averaged the items to form an index (α = .77). For the SNS, participants responded to four items that assess frequency of (e.g., "How often do you experience nostalgia?") or proneness to (e.g., "How prone are you to feeling nostalgia?") nostalgic engagement, and three items that assess personal relevance of nostalgic engagement (e.g., "How valuable is nostalgia for you?" "How important is it for you to bring to mind nostalgic experiences?" 1 = *not at all*, 7 = *very much*). Here, we also formed an index (α = .93). The NI and SNS were significantly correlated, $r(84) = .64$, $p < .001$, and yielded parallel results. We therefore standardized (*z* scores) and then averaged the two scales to create a composite (α = .91).

We assessed inspiration with five items based on the Inspiration Scale (IS; Thrash & Elliot, 2003). The items were as follows: "I feel inspired," "I experience inspiration," "Something I encounter or experience inspires me," "I am inspired to do something," and "I am filled with inspiration." Each item was rated in terms of both frequency ("How often does this happen?" 1 = *very rarely*, 6 = *very often*) and intensity ("How deeply or strongly [in general]?" 1 = *not at all*, 6 = *very deeply or strongly*), yielding separate measures of inspiration frequency (α = .91) and intensity (α = .90). Scale (nostalgia vs. inspiration) order was counterbalanced and did not affect the results. One participant did not complete the inspiration assessment and was omitted from the analyses.

Results and Discussion

Nostalgia was positively related to both inspiration frequency, $r(83) = .23$, $p = .034$, and inspiration intensity, $r(83) = .30$, $p = .007$. Inspiration frequency and intensity were highly correlated, $r(83) = .75$, $p < .001$. Accordingly, we examined the correlation between nostalgia and a composite inspiration index, which we created by averaging the frequency and

intensity measures. Nostalgia was positive related to this overall inspiration measure, $r(83) = .28$, $p = .010$. This relation remained significant when we controlled for sex and age in partial correlation analyses.

Study 2: Does Nostalgia Increase General State Inspiration?

Study 1 established a relation between nostalgia and inspiration and thus, set the stage for an in-depth experimental examination of nostalgia as a source for inspiration. We implemented, in Study 2, a validated manipulation of nostalgia, the Event Reflection Task (Sedikides et al., 2015). Participants recalled either a nostalgic or ordinary event from their past. This vivid-recall task was followed by an assessment of general state inspiration (the "inspired by" component). We hypothesized that participants who recalled a nostalgic (vs. ordinary) event would report higher general state inspiration.

Method

Participants and design. One hundred fifty-two University of Southampton undergraduates (108 females, 42 males, 2 unidentified) took part for course credit. Participants' age ranged from 18 to 55 years ($M = 21.56$, $SD = 5.22$). We randomly assigned them to the nostalgia ($n = 74$) or control ($n = 78$) condition.

Procedure and materials. Participants were seated at partitioned desks and received materials in a single printed booklet. They were instructed to bring to mind either a nostalgic or ordinary event from their past and list four keywords describing the event (Sedikides et al., 2015). They read, "Please bring to mind a nostalgic (ordinary) event in your life. Specifically, try to think of a past event that makes you feel nostalgic (that is ordinary). Please write down four keywords relevant to this nostalgic (ordinary) event."

Following completion of the nostalgia manipulation check, we assessed state general inspiration using the following items: "Thinking about this event makes me feel inspired," ". . . inspires me to do something," and ". . . fills me with inspiration" ($\alpha = .91$; $1 =$ *strongly disagree*, $5 =$ *strongly agree*). We adapted the first two items from Thrash and Elliot (2003) and added the third item to increase scale reliability.

Results and Discussion

As hypothesized, participants in the nostalgia condition ($M = 3.35$, $SD = 1.00$) reported higher levels of general state inspiration than those in the control condition ($M = 2.72$, $SD = 1.14$), $F(1, 147) = 12.86$, $p < .001$, $\eta_p^2 = .08$ (one participant did not complete the assessment). Nostalgia increases general state inspiration. Correlational patterns involving the nostalgia manipulation check corroborate this conclusion: The more nostalgic participants felt, the more inspired they were, $r(149) = .41$, $p < .001$.

Study 3: Does Nostalgia Increase Specific State Inspiration?

Study 2 established that nostalgia increases general state inspiration. We asked, in Study 3, whether nostalgia strengthens specific state inspiration (the "inspired to" component). Does nostalgia provide the inspiring impetus for embracing assorted challenges? We implemented the same manipulation of nostalgia as in Study 2, followed by an assessment of specific state inspiration. We hypothesized that participants recalling a nostalgic (vs. ordinary) event would report higher specific state inspiration.

Method

Participants. Fifty University of Southampton undergraduates (39 females, 11 males) took part for course credit. Participants' age ranged from 16 to 48 years ($M = 23.18$, $SD = 5.81$). We randomly assigned them to the nostalgia ($n = 26$) or control ($n = 24$) condition.

Procedure and materials. We seated participants at partitioned desks and presented materials in a single printed booklet. As in Study 2, we instructed them to bring to mind either a nostalgic or ordinary event, and to list four keywords describing the event. The nostalgia manipulation check followed. Finally, we assessed specific state inspiration with a five-item measure (1 = *strongly disagree*, 6 = *strongly agree*). The items, preceded by the stem "Right now, I feel inspired to . . .," were as follows: "meet new people," "travel overseas this summer," "explore some place that I have never been before," "go to a modern art museum," and "try skydiving or some other adventurous activity." We averaged them into a composite ($\alpha = .79$). We adapted this measure from a scale assessing exploration of physical, social, and intellectual environments (Green & Campbell, 2000).

Results and Discussion

As hypothesized, participants in the nostalgia condition ($M = 3.71$, $SD = 0.79$) expressed higher levels of specific state inspiration than those in the control condition ($M = 3.04$, $SD = 1.17$), $F(1, 48) = 5.64$, $p = .022$, $\eta_p^2 = .11$. Nostalgia augments specific state inspiration. As in Study 2, correlational analyses involving the nostalgia manipulation check corroborated this conclusion: The more nostalgic participants felt, the more inspired they reported being, $r(50) = .47$, $p < .001$.

Study 4: How Does Nostalgia Increase Inspiration?

How does nostalgia prompt inspiration? We addressed this question in Study 4, focusing on general state inspiration (as in Study 2). Adopting a convergent operations approach (Campbell & Fiske, 1959), we implemented an alternative, more immersive manipulation of nostalgia for generalizability purposes. To be precise, we capitalized on music's

capacity to evoke nostalgia (Barrett et al., 2010). We elicited nostalgia by presenting participants with lyrics to songs that they had previously identified as nostalgic (compared with control lyrics). This nostalgia manipulation has been validated in prior research (Cheung et al., 2013; Routledge et al., 2011). We hypothesized that exposure to nostalgic (vs. control) song lyrics would heighten inspiration.

Nostalgia engenders PA (Stephan et al., 2012; Verplanken, 2012) and raises self-esteem (Hepper et al., 2012; Wildschut et al., 2006). Thrash and Elliot (2003) identified these two psychological functions as antecedents of inspiration. They speculated that PA and self-esteem facilitate breadth of attention and thinking (Alicke & Sedikides, 2009; Fredrickson, 2001), which are relevant to increases in inspiration. Based on these insights, we hypothesized that PA and self-esteem would mediate the effect of nostalgia on inspiration.

Nostalgia also strengthens social connectedness (Routledge et al., 2011; Van Dijke, Wildschut, Leunissen, & Sedikides, 2015). Social connectedness is associated with more effective engagement with one's environment: Dispositional or primed secure attachment styles facilitate exploratory intentions (Green & Campbell, 2000; Luke, Sedikides, & Carnelley, 2012). Also, social connectedness is associated with cognitive openness: Primed secure attachment styles induce curiosity and cognitive openness (Green-Hennessy & Reis, 1998; Mikulincer & Arad, 1999). Indeed, Thrash and Elliot (2004) identified environmental engagement and cognitive openness as antecedents to inspiration. Therefore, we hypothesized that nostalgia would also increase inspiration by virtue of its capacity to foster social connectedness.

Method

Participants. Sixty University of Southampton undergraduates (53 female, 7 male) participated for course credit. Their age ranged from 19 to 39 years ($M = 21.68$, $SD = 3.93$). We randomly assigned them to the nostalgia ($n = 30$) or control ($n = 30$) condition.

Procedure and materials. The study involved an initial and an experimental session that were separated by approximately 1 week. In the initial session, participants received a dictionary definition of nostalgia ("A sentimental longing or wistful affection for the past") and listed the titles and performing artists of three songs that made them feel nostalgic (i.e., songs that incited a personal experience for which they felt nostalgic). Prior to the experimental session, we randomly allocated participants to conditions. For participants in the nostalgia condition, we retrieved the lyrics of a song that they had listed as personally nostalgic. We then yoked participants in the nostalgia condition to those in the control condition. Specifically, we designated each participant in the control condition to receive the same lyrics as one of the participants in the nostalgia condition. (We ascertained that the control participant did not receive lyrics of songs they considered nostalgic.) Hence, we used the same set of lyrics in the nostalgia and control conditions, holding constant the lyrical content. During the experimental session, participants read the prepared lyrics and completed the nostalgia manipulation check.

Assessment of state PA, social connectedness, and self-esteem (1 = *strongly disagree*, 6 = *strongly agree*) followed. We prefaced the relevant items with the stem "Reading these song lyrics . . . ." We assessed PA with two items (e.g., "makes me feel happy"; Stephan et al., 2012), and we assessed social connectedness (e.g., "makes me feel loved") and self-esteem (e.g., "makes me feel I have many positive qualities") with four-item measures from the State Functions of Nostalgia Scale (Hepper et al., 2012). We assessed inspiration with the three-item measure from Study 2 (e.g., "makes me feel inspired"; 1 = *strongly disagree*, 6 = *strongly agree*).

Results and Discussion

We present descriptive and inferential statistics in Table 1.

Nostalgia and inspiration. As hypothesized, participants in the nostalgia condition reported heightened inspiration compared with those in the control condition. Consistent with Studies 2 and 3, correlational analyses involving the nostalgia manipulation check supported this conclusion: The more nostalgic participants felt, the more inspired they reported being, $r(59) = .53$, $p < .001$ (one participant did not complete the state nostalgia assessment).

Mediational analyses. We present the zero-order correlations between the nostalgia manipulation (dummy coded: 0 = *control, 1 = nostalgia*) and the dependent variables in Table S1 (below diagonal), available online as supplemental material. These correlations provide the basis for the mediational analyses.

We examined the indirect effects of nostalgia on inspiration via the postulated mediators in three steps. First, we conducted a series of simple mediational analyses in which we entered each potential mediator individually. In the second step, we entered the three potential mediators simultaneously in a parallel mediational analysis. Conducting this parallel mediational analysis is important, because it controls for overlap among mediators. In the third step, we examined the serial path of mediators identified in the parallel mediational analysis. We carried out bootstrapping analyses (10,000 resamples) with Hayes's (2013) PROCESS macro (simple and parallel mediational analyses) and with AMOS (serial mediational analyses). By using the term *indirect effect*, we adopt the terminology of intervening variable models and do not claim support for causal effects.

We present results for the simple and parallel mediational analyses in Table 2. The simple mediational analyses revealed

Table 1. Descriptive and Inferential Statistics in Studies 4 to 6.

Measure	Cronbach's α	Control	Nostalgia	F	p	η_p^2
Study 4						
PA	.96	3.20 (1.21)	4.82 (1.06)	30.10	<.001	.34
Social connectedness	.93	2.60 (1.39)	3.89 (1.06)	16.42	<.001	.22
Self-esteem	.94	2.47 (1.32)	3.57 (1.03)	12.94	<.001	.18
Inspiration	.90	2.39 (1.24)	3.48 (1.16)	12.32	<.001	.18
Study 5						
PA	.87	5.14 (0.84)	5.33 (0.84)	2.01	.158	.01
Social connectedness	.93	4.00 (1.45)	5.40 (0.66)	56.28	<.001	.28
Self-esteem	.90	4.22 (1.08)	5.07 (0.80)	29.53	<.001	.17
Inspiration	.94	3.91 (1.32)	4.62 (1.11)	12.67	<.001	.08
Study 6						
PA	.96	4.08 (1.21)	5.31 (0.73)	29.42	<.001	.28
Social connectedness	.94	4.18 (0.78)	4.94 (1.22)	10.29	.002	.12
Self-esteem	.92	4.40 (0.69)	4.76 (0.91)	3.83	.054	.05
Inspiration	.94	3.64 (1.16)	4.22 (1.23)	4.59	.035	.06
Motivation	.95	6.01 (1.49)	6.74 (1.30)	5.31	.024	.07

Note. Degrees of freedom (*df*) for *F* test in Study 4: *df* = 1, 58; in Study 5: *df* = 1, 148 (except for PA: *df* = 1, 146); in Study 6: *df* = 1, 75. PA = positive affect.

Table 2. Indirect Effects and 95% Confidence Intervals (in Brackets) From Simple and Parallel Mediational Analyses in Studies 4 to 6.

Studies	Simple meditational analyses			Parallel mediational analysis		
	PA	Social connectedness	Self-esteem	PA	Social connectedness	Self-esteem
Study 4	0.63[a] [0.20, 1.17]	0.74[a] [0.36, 1.31]	0.71[a] [0.28, 1.28]	0.16 [−0.27, 0.66]	0.39[a] [0.15, 0.99]	0.46[a] [0.09, 0.96]
Study 5	0.13 [−0.04, 0.35]	0.79[a] [0.49, 1.13]	0.70[a] [0.43, 1.02]	0.05 [−0.01, 0.17]	0.33[a] [0.09, 0.64]	0.47[a] [0.24, 0.79]
Study 6	0.34[a] [0.03, 0.70]	0.34[a] [0.09, 0.77]	0.28[a] [0.01, 0.65]	−0.07 [−0.47, 0.30]	0.13 [−0.05, 0.51]	0.24[a] [0.002, 0.65]
Synthesis	0.34[a] [0.22, 0.50]	0.64[a] [0.45, 0.88]	0.58[a] [0.39, 0.80]	0.10[a] [0.003, 0.22]	0.28[a] [0.13, 0.47]	0.42[a] [0.26, 0.62]

Note. Results are based on 10,000 bootstraps. Study 4: *N* = 60; Study 5: *N* = 148 (2 participants did not complete the PA measure); Study 6: *N* = 77. The research synthesis was based on the combined raw data from Studies 4 to 6 (*N* = 285). In each study, variables were assessed using the same 6-point metric (1 = *strongly disagree*, 6 = *strongly agree*). Because participants were nested within studies, "study" was treated as a clustering variable in the research synthesis (see Hayes, 2013, pp. 434-435). PA = positive affect.
[a]95% confidence interval does not include 0.

significant indirect effects of nostalgia on inspiration via PA, social connectedness, and self-esteem. In the parallel mediational analysis, the indirect effect via PA was no longer significant, but the indirect effects via social connectedness and self-esteem remained significant.

We next examined the serial mediational path from nostalgia to inspiration via social connectedness and self-esteem. The serial mediational model was theoretically grounded. Several theories concur that self-esteem at least partly originates from social connectedness. These are attachment theory (Bowlby, 1982), contingencies of self-worth (Crocker & Wolfe, 2001), sociometer theory (Leary, 2005), and terror-management theory (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Social connectedness forms a platform for self-esteem and gives rise to it. Self-esteem, in turn, is an antecedent of inspiration (Thrash & Elliot, 2003). Hence, we tested a model in which nostalgia increases social connectedness, which fosters self-esteem,

which boosts inspiration (Figure 1). We calculated 95% bootstrapped percentile confidence intervals (CIs) and bootstrapped standard errors for direct and indirect effects (10,000 bootstrap samples). We present tests of direct and indirect effects in Table 3. Four direct effects were significant. Nostalgia increased social connectedness (Path a), but not self-esteem (above and beyond social connectedness; Path b) or inspiration (above and beyond social connectedness and self-esteem; Path c). Social connectedness predicted increased self-esteem (above and beyond nostalgia; Path d), and it also predicted increased inspiration (above and beyond nostalgia and self-esteem; Path e). Finally, self-esteem predicted increased inspiration (above and beyond nostalgia and social connectedness; Path f).

All indirect effects were significant, but one (Figure 1). First, the effect of nostalgia on self-esteem was mediated by social connectedness (Path a × Path d). With regard to the effect of nostalgia on inspiration, there was a significant total
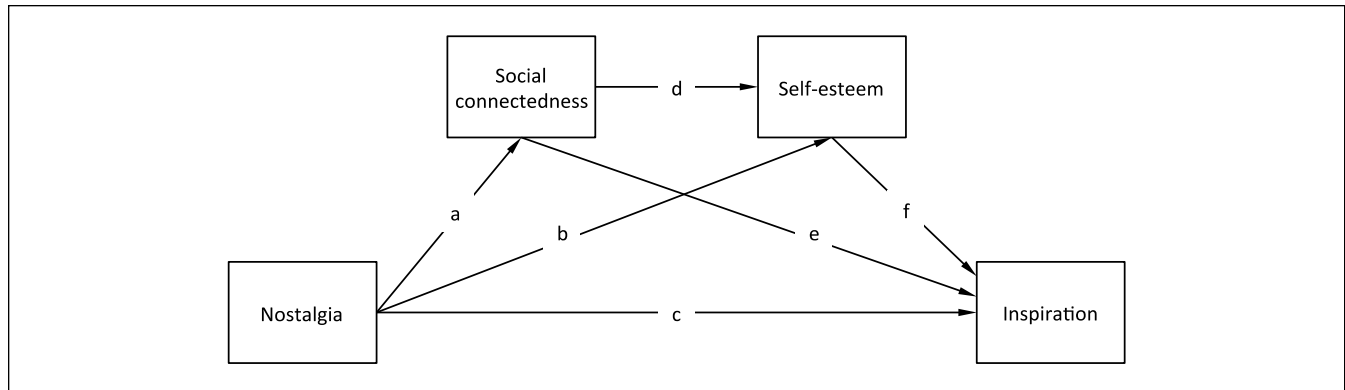
Figure 1. Serial mediational model tested in Studies 4 to 6.

Table 3. Tests of Direct and Indirect Effects in the Figure 1 Serial Mediational Model: Study 4, Study 5, and Synthesis of Studies 4 to 6.

Effect	Path	Study 4		Study 5		Synthesis of Studies 4 to 6	
		Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI
Direct effects							
Nostalgia $\Rightarrow$ Social connectedness	a	1.29[a]	[0.63, 1.90]	1.39[a]	[1.03, 1.75]	1.20[a]	[0.94, 1.46]
Nostalgia $\Rightarrow$ Self-esteem	b	0.36	[−0.28, 1.06]	0.19	[−0.13, 0.53]	0.18	[−0.06, 0.41]
Nostalgia $\Rightarrow$ Inspiration	c	0.19	[−0.42, 0.76]	−0.20	[−0.55, 0.15]	0.01	[−0.26, 0.26]
Social connectedness $\Rightarrow$ Self-esteem	d	0.58[a]	[0.31, 0.82]	0.47[a]	[0.33, 0.60]	0.50[a]	[0.40, 0.60]
Social connectedness $\Rightarrow$ Inspiration	e	0.32[a]	[0.14, 0.63]	0.26[a]	[0.07, 0.45]	0.25[a]	[0.12, 0.38]
Self-esteem $\Rightarrow$ Inspiration	f	0.45[a]	[0.10, 0.67]	0.65[a]	[0.46, 0.85]	0.59[a]	[0.45, 0.73]
Indirect effect							
Nostalgia $\Rightarrow$ Self-esteem							
Via social connectedness	a × d	0.75[a]	[0.31, 1.28]	0.66[a]	[0.41, 0.93]	0.60[a]	[0.42, 0.79]
Nostalgia $\Rightarrow$ Inspiration							
Total		0.90[a]	[0.44, 1.49]	0.91[a]	[0.59, 1.26]	0.75[a]	[0.54, 0.99]
Via social connectedness	a × e	0.41[a]	[0.14, 0.92]	0.36[a]	[0.10, 0.66]	0.30[a]	[0.14, 0.48]
Via self-esteem		0.50[a]	[0.08, 0.98]	0.55[a]	[0.31, 0.85]	0.45[a]	[0.28, 0.65]
Independent of social connectedness	b × f	0.16	[−0.09, 0.61]	0.12	[−0.08, 0.37]	0.10	[−0.04, 0.26]
Mediated by social connectedness	a × d × f	0.34[a]	[0.08, 0.61]	0.43[a]	[0.24, 0.66]	0.35[a]	[0.23, 0.50]

Note. Path = Figure 1 path. Coeff. = unstandardized path coefficient. CI = bootstrapped percentile confidence interval. Results are based on 10,000 bootstraps. Study 4: *N* = 60; Study 5: *N* = 150. The research synthesis was based on the combined raw data from Studies 4 to 6 (*N* = 287). In each study, variables were assessed using the same 6-point metric (1 = *strongly disagree*, 6 = *strongly agree*). "Study" was treated as a clustering variable in the research synthesis (Hayes, 2013, pp. 434-435).
[a]95% confidence interval does not include 0.

indirect effect of nostalgia on inspiration via social connectedness and self-esteem. We partitioned this total indirect effect into a significant indirect effect via social connectedness (a × e) and a significant indirect effect via self-esteem. Subsequently, we partitioned the indirect effect via self-esteem into a non-significant indirect effect that was independent of social connectedness (b × f) and a significant indirect effect that was mediated by social connectedness (a × d × f). The latter indirect effect (a × d × f) supports the notion that nostalgia increases inspiration via a serial mediational path from social connectedness to self-esteem. This indirect effect remained significant (a × d × f = .31, 95%

CI = [0.11, 0.67]) in a supplemental analysis, which controlled for the (non-significant) indirect path from nostalgia to inspiration via PA.

Summary. These analyses converge on the mediating roles of social connectedness and self-esteem. Initial support for a mediating role of PA in the simple mediational analyses disappeared when we controlled for overlap among the individual mediators in the parallel mediational analysis. Serial mediational analyses gave credence to a theoretically grounded model in which nostalgia increases social connectedness, which subsequently fosters self-esteem, which then

boosts inspiration. We will present a comparison of alternative sequences in the "Research Synthesis" section of this article, based on the pooled data of Studies 4 to 6.

Study 5: Does Nostalgia Contribute to Inspiration Above and Beyond Mere Positivity?

In Study 4, the serial mediational analyses supported a model in which nostalgia strengthens social connectedness, which augments self-esteem, which then raises inspiration (Figure 1). We aimed to evaluate the replicability of this finding, while testing its generality. We focused on the distinction between nostalgia and PA by pitting an induction of nostalgia against an induction of PA. Does nostalgia contribute to inspiration above and beyond PA?

Specifically, we implemented an immersive vivid-recall manipulation, which contrasted the nostalgia condition (Studies 2 and 3) with a condition in which participants recalled a PA-eliciting event. We hypothesized that nostalgic (vs. positive-event) recollection would heighten inspiration, and this effect would be mediated by increased social connectedness and successively, self-esteem.

Method

Participants. We recruited and tested via Amazon's Mechanical Turk (MTurk) 150 English-speaking U.S. residents (83 female, 67 male). Their age ranged from 19 to 73 years ($M = 38.87$, $SD = 12.66$). We randomly assigned them to the nostalgia ($n = 73$) or positive-event ($n = 77$) condition.

Procedure and materials. Participants in the nostalgia condition thought of a nostalgic event in their life (as in Studies 2 and 3), whereas participants in the positive-event condition thought of a lucky event in their life (". . . bring to mind a lucky event in your life. Specifically, try to think of a positive past event that was brought on by chance rather than through your own actions"). All participants then listed four event-relevant keywords and spent 5 min on written narrative.

We assessed PA, social connectedness, and self-esteem with the same measures as in Study 4. Two participants failed to complete the PA measure. Next, participants completed a four-item global state inspiration measure: "Thinking about this event makes me feel filled with inspiration," ". . . inspired to do something," ". . . inspired to see things in new and original ways," ". . . inspired with new ideas and insights." We derived the first item from Thrash and Elliot (2003), gleaned the second item from current Study 2, and constructed the remaining two items. The nostalgia manipulation check followed.

Results and Discussion

We display descriptive and inferential statistics in Table 1.

PA. The nostalgia and positive-event conditions did not differ significantly on PA. As intended, the two conditions were approximately matched on PA.

Nostalgia and inspiration. As hypothesized, participants in the nostalgia condition reported heightened inspiration compared with those in the positive-event condition. Given that the nostalgia and positive-event conditions did not differ on PA, the effect of nostalgia (vs. positive event) on inspiration was essentially unaltered when we controlled for PA by including it as a covariate, $F(1, 145) = 10.02$, $p = .002$, $\eta^2 = .07$. Consistent with Studies 2 to 4, correlational analyses involving the nostalgia manipulation check revealed that the more nostalgic participants felt, the more inspired they were, $r(150) = .45$, $p < .001$.

Mediational analyses. We present the zero-order correlations among the nostalgia manipulation and the dependent variables in Table S1 (above diagonal), available online as supplemental material. These correlations provide the basis for the mediational analyses. Results for the simple and parallel mediational analyses replicated those of Study 4, with one exception (Table 2). Contrary to Study 4, PA did not mediate the effect of nostalgia on inspiration in the simple mediational analyses. This was the intended result of introducing the more stringent positive-event control condition.

We next examined the serial mediational path from nostalgia to inspiration via social connectedness and self-esteem (Figure 1). Results exactly replicated Study 4. For the sake of brevity, we highlight the key findings only (Table 3). The effect of nostalgia on inspiration was mediated by a serial indirect effect via social connectedness and ensuing self-esteem (a × d × f). This focal indirect effect remained significant (a × d × f = .18, 95% CI = [0.10, 0.31]) in a supplemental analysis, which controlled for the (non-significant) indirect path from nostalgia to inspiration via PA.

Summary. Study 5 furnished additional support for the mediating role of social connectedness and self-esteem: Nostalgia raised social connectedness, which predicted increased self-esteem, which foreshadowed inspiration. Crucially, the effect of nostalgia on inspiration (through social connectedness and self-esteem) emerged above and beyond PA. We present a comparison of alternative sequences in the "Research Synthesis" section of this article.

Study 6: Does Nostalgia-Evoked Inspiration Boost Goal Pursuit?

Nostalgia is associated with inspiration (Study 1) and increases both general and specific inspiration (Studies 2 and 3), and its effect on inspiration is mediated by social connectedness and self-esteem above and beyond PA (Studies 4 and 5). What are the motivational implications of nostalgia-evoked (general) inspiration? Does nostalgia-evoked inspiration bolster
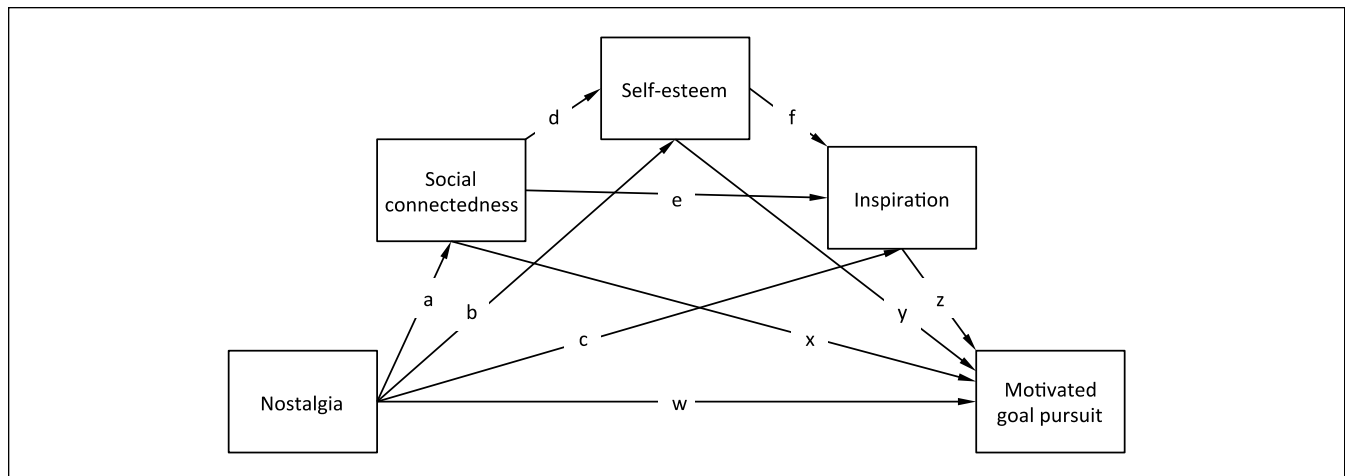
Figure 2. Serial mediational model tested in Study 6.

motivation in the form of goal pursuit (i.e., intentions to strive for a personally relevant goal)? Furthermore, does it do so via the same mediational pathway involving social connectedness and self-esteem? We induced nostalgia with a narrative manipulation that was similar, but more immersive, to that of Studies 2 and 3. Subsequently, we assessed social connectedness, self-esteem, inspiration, and goal pursuit.

Method

Participants and design. Seventy-seven University of Southampton undergraduates (62 females, 15 males) participated for course credit or £3 reimbursement. They ranged in age from 18 to 50 years ($M = 20.39$, $SD = 4.01$). We assigned them randomly to the nostalgia ($n = 39$) or control ($n = 38$) condition.

Procedure and materials. As in Studies 2 and 3, participants brought to mind either a nostalgic or ordinary event, listed four relevant keywords, and provided a 5-min written narrative. Next, they completed the same PA, social connectedness, and self-esteem measures as in Studies 4 and 5, and the same inspiration measure as in Study 5. The assessment of goal pursuit followed with a measure we constructed after Milyavskaya et al. (2012). Participants identified their most important goal and rated five items pertaining to it. The items, preceded by the stem "Right now," were as follows: "I am motivated to pursue my goal," "I want to put more time and effort into my goal pursuit," "I feel excited about pursuing my goal," "I feel energized to pursue my goal," "I look forward to pursuing my goal" (1 = *do not agree at all*, 9 = *agree completely*). Finally, participants completed the nostalgia manipulation check.

Results and Discussion

Table 1 presents descriptive and inferential statistics.

Nostalgia and inspiration. As hypothesized, nostalgic participants were more inspired than their control counterparts. Correlational patterns involving the nostalgia manipulation check indicated that the more nostalgic participants felt, the more inspired they were, $r(77) = .40$, $p < .001$. These findings replicate (directly or conceptually) Studies 2 to 5.

Nostalgia and goal pursuit. Nostalgic participants were more motivated to pursue their most important goal than control participants. Two independent judges identified three broad themes in the listed goals: social (e.g., having a family), agentic (e.g., graduating with good grades), and hedonistic (e.g., enjoying life). They agreed on 94.8% of the cases ($k = .89$) and resolved disagreements through discussion. Supplemental analyses revealed that nostalgia (vs. control) strengthened goal pursuit, irrespective of goal theme.

Mediational analyses. We present the zero-order correlations among the nostalgia manipulation and the dependent variables in Table S2, available online as supplemental material. These correlations provide the basis for the following mediational analyses. As in Studies 4 and 5, we first examined mediation of the nostalgia effect on inspiration by conducting simple and parallel mediational analyses (Table 2). Results were consistent with the previous studies, with one notable exception. Contrary to Studies 4 and 5, social connectedness did not mediate the effect of nostalgia on inspiration in the parallel mediational analyses, although the indirect effect was in the expected direction.

Next, we tested an extended version of the Figure 1 model that we examined in Studies 4 and 5. In this model, the direct effect of nostalgia on goal pursuit is mediated by a serial path linking nostalgia $\Rightarrow$ social connectedness $\Rightarrow$ self-esteem $\Rightarrow$ inspiration $\Rightarrow$ motivation (Figure 2). We present bootstrapped tests (10,000 samples) of direct and indirect effects in Table 4.

Table 4. Tests of Direct and Indirect Effects in the Figure 2 Serial Mediational Model: Study 6.

Effect	Path	Coeff.	95% CI
Direct effects			
Nostalgia $\Rightarrow$ Social connectedness	a	.75[a]	[0.28, 1.18]
Nostalgia $\Rightarrow$ Self-esteem	b	.03	[−0.31, 0.33]
Nostalgia $\Rightarrow$ Inspiration	c	.23	[−0.30, 0.73]
Nostalgia $\Rightarrow$ Motivation	w	.22	[−0.31, 0.79]
Social connectedness $\Rightarrow$ Self-esteem	d	.44[a]	[0.27, 0.65]
Social connectedness $\Rightarrow$ Inspiration	e	.17	[−0.12, 0.47]
Social connectedness $\Rightarrow$ Motivation	x	.31	[−0.10, 0.65]
Self-esteem $\Rightarrow$ Inspiration	f	.65[a]	[0.30, 1.02]
Self-esteem $\Rightarrow$ Motivation	y	−.27	[−0.70, 0.17]
Inspiration $\Rightarrow$ Motivation	z	.65[a]	[0.28, 0.98]
Indirect effect			
Nostalgia $\Rightarrow$ Self-esteem			
Via social connectedness	a × d	.33[a]	[0.11, 0.64]
Nostalgia $\Rightarrow$ Inspiration			
Total		.36[a]	[0.05, 0.78]
Via social connectedness	a × e	.13	[−0.09, 0.44]
Via self-esteem		.24[a]	[0.002, 0.57]
Independent of social connectedness	b × f	.02	[−0.20, 0.25]
Mediated by social connectedness	a × d × f	.22[a]	[0.05, 0.48]
Nostalgia $\Rightarrow$ Motivation			
Total		.52[a]	[0.10, 0.97]
Via social connectedness	a × x	.23	[−0.08, 0.53]
Via self-esteem		−.10	[−0.34, 0.06]
Independent of social connectedness	b × y	−.01	[−0.15, 0.09]
Mediated by social connectedness	a × d × y	−.09	[−0.26, 0.07]
Via inspiration		.38[a]	[0.03, 0.87]
Independent of social connectedness and self-esteem	c × z	.15	[−0.20, 0.53]
Mediated by social connectedness	a × e × z	.08	[−0.06, 0.29]
Mediated by self-esteem	b × f × z	.01	[−0.13, 0.19]
Mediated by social connectedness and self-esteem	a × d × f × z	.14[a]	[0.03, 0.36]

Note. Path = Figure 2 path. Coeff. = unstandardized path coefficient. CI = bootstrapped percentile confidence interval. *N* = 77.
[a]95% confidence interval does not include 0.

With regard to the effect of nostalgia on inspiration (the Figure 1 component embedded in Figure 2), results again supported a serial indirect path via social connectedness and ensuing self-esteem (a × e × h), thereby replicating the key finding of Studies 4 and 5. With regard to the effect of nostalgia on motivation, one indirect effect was significant. As hypothesized, this indirect effect of nostalgia on motivation operated via social connectedness, self-esteem, and inspiration (a × e × h × j). This indirect effect remained significant (a × e × h × j = .07, 95% CI = [.02, .20]) in a supplemental analysis, which controlled for the (non-significant) indirect path from nostalgia to motivation via PA. Nostalgia strengthens motivation via a serial mediational path from social connectedness to self-esteem to inspiration.

Summary. Study 6 focused on the motivational implications of nostalgia-evoked inspiration. The results were consistent with a theoretical model according to which nostalgia-evoked inspiration spawns motivational goal pursuit, and it does so through increases in social connectedness and self-esteem. We present a comparison of alternative sequences below.

Research Synthesis

Studies 4 to 6 each examined the mediational roles of PA, social connectedness, and self-esteem in accounting for the effect of nostalgia on inspiration. This enabled us to pool the raw data from these studies and complete an integrative research synthesis based on the combined data set (*N* = 287; for analyses involving PA, *N* = 285). Given that individuals were nested within studies, our analyses featured "study" as a clustering variable. We implemented a fixed-effects approach to clustering by including two dummy variables to code within which of the three studies a participant was nested (Hayes, 2013).[2]

Mediational Analyses

We first tested mediation of the nostalgia effect on inspiration by conducting simple and parallel mediational analyses (Table 2, research synthesis). Both types of analysis yielded significant indirect effects via PA, social connectedness, and self-esteem. Whereas the unique indirect effect via PA was significant in the research synthesis, it was not significant in any of the three individual studies (Table 2, Parallel mediational analysis). This finding should therefore be interpreted with caution.

We next examined the serial mediational path from nostalgia to inspiration via social connectedness and self-esteem (Figure 1). The research synthesis accentuated the findings of Studies 4 to 6 (Table 3). Most important, the serial indirect effect of nostalgia on inspiration via social connectedness and ensuing self-esteem proved highly robust ($a \times d \times f$). This indirect effect remained significant ($a \times d \times f = .32$, 95% CI = [0.22, 0.48]) in a supplemental analysis, which controlled for the indirect effect of nostalgia on inspiration via PA.[3]

Testing Alternative Models

We tested several alternative models. Within a set of models for the same data, the Akaike Information Criterion (AIC; Akaike, 1974) and Expected Cross Validation Index (ECVI; Browne & Cudeck, 1993) can be used to compare competing models that need not be nested (smaller is better). However, any two models that have the same paths between the same variables will have the same fit, even if some paths are in a different direction. For example, to test whether a model in which self-esteem precedes social connectedness offers a viable alternative, one cannot simply reverse the order of social connectedness and self-esteem in Figure 1. Doing so would create an alternative model that differs from Figure 1 only in the direction of the link between social connectedness and self-esteem, and would have the same fit as the original model. We therefore tested a series of parsimonious models in which each variable predicted only the variable that immediately followed it in the postulated causal chain. This allowed us to determine which ordering of variables produced the lowest AIC and ECVI values. We present results in Table 5.

Alternatives to Figure 1. Because nostalgia was manipulated, its position is fixed. However, social connectedness, self-esteem, and inspiration can be arranged in six different sequences. We tested these and found that the alternative models produced markedly higher AIC and ECVI values (worse fit) than the hypothesized model, in which nostalgia leads to inspiration via social connectedness and self-esteem. The original model, in addition to being firmly grounded in prior theory, provided a superior description of the combined data from Studies 4 to 6.

Table 5. Comparison of Alternative Serial Mediational Models.

Model tested	AIC	ECVI
Figure 1		
Saturated model	42.00	.147
Nostalgia ⇒ social connectedness ⇒ self-esteem ⇒ inspiration	57.43	.201
Nostalgia ⇒ social connectedness ⇒ inspiration ⇒ self-esteem	100.68	.352
Nostalgia ⇒ self-esteem ⇒ social connectedness ⇒ inspiration	134.64	.471
Nostalgia ⇒ self-esteem ⇒ inspiration ⇒ social connectedness	130.29	.456
Nostalgia ⇒ inspiration ⇒ social connectedness ⇒ self-esteem	149.42	.522
Nostalgia ⇒ inspiration ⇒ self-esteem ⇒ social connectedness	101.83	.356
Figure 2		
Saturated model	30.00	.395
Nostalgia ⇒ social connectedness ⇒ self-esteem ⇒ inspiration ⇒ motivation	26.92	.354
Nostalgia ⇒ social connectedness ⇒ self-esteem ⇒ motivation ⇒ inspiration	46.33	.610
Nostalgia ⇒ social connectedness ⇒ motivation ⇒ self-esteem ⇒ inspiration	70.62	.929
Nostalgia ⇒ motivation ⇒ social connectedness ⇒ self-esteem ⇒ inspiration	50.13	.660

Note. AIC = Akaike Information Criterion. ECVI = Expected Cross Validation Index. Smaller AIC and EVCI values indicate better model fit. AIC and EVCI values reported under Figure 1 are based on the combined data from Studies 4 to 6. AIC and EVCI values reported under Figure 2 are based on data from Study 6.

Alternatives to Figure 2. In Figure 2, we extended the Figure 1 model to include motivation. This meant that the number of possible alternative models increased exponentially. We therefore concentrated on the position of motivation, keeping the order of social connectedness, self-esteem, and inspiration fixed, given that the preceding analyses unequivocally supported this order. Using Study 6 data, we varied the position of motivation in the postulated causal sequence, resulting in four sequences. Each of the alternative models produced higher AIC and ECVI values than the hypothesized model, in which motivation flows from inspiration. Results again pointed to an empirical advantage for the theoretically grounded original model.

General Discussion

We conceptualized nostalgia as a self-relevant, social, and predominantly positive emotion serving key psychological functions. These functions include (but are not limited to) PA, social connectedness, and self-esteem (Sedikides et al., 2015). The reported studies contribute to this literature by examining the idea that nostalgia opens the door to new, exciting possibilities. Specifically, we assessed the relation between nostalgia and inspiration.

Summary of Findings

We defined inspiration as an experience that involves evocation (triggering by a stimulus beyond the self), transcendence (moving away from the routine and becoming aware of possibilities), and an approach orientation (feeling ready for enacting a new idea or plan; Thrash & Elliot, 2003, 2004). Inspiration can be general ("inspired by") or specific ("inspired to"). Evocation and transcendence are features of general inspiration, whereas approach orientation is a feature of specific inspiration (Thrash, Elliot, et al., 2010).

We tested the nostalgia–inspiration link and its motivational implications. Nostalgia proneness was associated with more frequently and strongly experienced inspiration (Study 1). Recollections of nostalgic (vs. ordinary) events produced greater general inspiration (Study 2) and greater inspiration to engage in novel activities in specific domains (Study 3). PA, social connectedness, and self-esteem qualified singly as mechanisms through which nostalgia enhances inspiration. However, social connectedness and self-esteem outweighed PA when all mediators were considered simultaneously. More important, consistent with diverse theoretical perspectives, we obtained support for a serial mediational model in which nostalgia boosts inspiration via social connectedness and ensuing self-esteem (Studies 4 to 6). Study 5, in particular, reinforced this model while ruling out the role of PA. Finally, nostalgia-evoked inspiration bolstered motivation, and did so via a serial mediational pathway involving social connectedness and self-esteem (Study 6). In all, by strengthening psychological resources—most crucially, social connectedness and self-esteem—nostalgia inspires individuals to enact new ideas and plans, which facilitate goal pursuit. Nostalgia affords not only remarkable intrapersonal benefits (Sedikides et al., 2015) but also distinct patterns of future-oriented tendencies (i.e., inspiration, goal pursuit).

Strengths

Our research has several strengths. From a methodological standpoint, we capitalized on a systematic sequence of studies, with a consistent replicate-and-extend strategy. We also used several techniques to manipulate nostalgia (e.g., vivid-recall, song lyrics, inclusion of a positive-event control condition), relied both on student and community (MTurk) samples, and recruited participants from two cultures (the United Kingdom, the United States). From a theoretical standpoint, the question of how to promote inspiration has received scant empirical attention: We redressed this imbalance by establishing nostalgia as a potent agent of inspiration. We went beyond the question of whether nostalgia influences inspiration to inform how it does so and to what effect. Specifically, we examined mediators (e.g., social connectedness, self-esteem) and downstream consequences (goal pursuit).

Inspiration is resistant to volitional control (Thrash & Elliot, 2004). Our research offers a way to promote inspiration: Waxing nostalgic (and repeatedly so) will lead to (and sustain) inspiration. Moreover, the link between nostalgia and goal pursuit is non-obvious and perhaps even counterintuitive in light of nostalgia's alleged ossifying influence on creative output (Reynolds, 2011). Our research provides a compelling account: This link is due to the intervening influence of inspiration.

Weaknesses

We also note several weaknesses. Studies 3, 4, and 6 contained few men, and there may be sex differences that those studies could not detect. However, Studies 1, 2, and 6 included adequate numbers of men and found no hint of sex differences in the relation between nostalgia and inspiration. Should sex differences exist, they are likely weak. Personality traits may also shape the effect of nostalgia on inspiration. Verplanken (2012), for instance, found that persons high (compared with low) on habitual worrying (i.e., the "attempt to engage in mental problem-solving of unresolved or uncertain issues or challenges"; p. 285) did not benefit as much from a nostalgia induction similar to the one we used in Studies 2, 3, and 6. Although Verplanken's participants generally reported elevated mood immediately following the nostalgia induction, high (compared with low) habitual worriers in the nostalgia condition reported higher levels of anxiety and depression after a temporal delay. Future research could fruitfully explore whether habitual worrying and related personality traits (e.g., neuroticism) impose boundary conditions on the nostalgia–inspiration link.

Questions may arise from the use of an "ordinary event" control condition in Studies 2, 3, and 6: Is it nostalgia per se that gives rise to the effects? First, in our prior research, we have contrasted nostalgia with several other control inductions (including PA) and observed unique effects (Cheung et al., 2013; Hepper et al., 2012; Routledge, Wildschut, Sedikides, Arndt, & Juhl, 2012; Stephan et al., 2012; Van Tilburg, Sedikides, & Wildschut, 2015; Wildschut, Bruder, Robertson, van Tilburg, & Sedikides, 2014). Second, in Study 4, a nostalgia manipulation based on song lyrics led to convergent results. We used the same set of lyrics in the nostalgia and control conditions. Yet inspiration (along with social connectedness and self-esteem) was higher for participants who had previously identified the songs as eliciting nostalgia compared with those who had not done so. Third, we observed evidence for the critical role of nostalgic feeling per se when using the assessment of state nostalgia (i.e., the manipulation check) as a predictor. As in Study 1, in which two distinct measures of nostalgia predicted inspiration, the more nostalgia participants reported following a nostalgia induction, the more inspired they felt in Studies 2 to 6. Fourth, Study 5 addressed directly the role of PA by including a positive-event control condition, in which participants

were instructed to recall a lucky event from their past. The results were identical to those obtained previously (Study 4) and subsequently (Study 6) with the ordinary-event control condition. Finally, the mediation models in Studies 4 to 6 support a theoretically grounded sequence that follows from prior work on the functions of nostalgia, but would be more challenging to explain if the observed effects were due to some other consequence of the nostalgia manipulation. Thus, there is a solid case for the role of nostalgia in fostering inspiration. Nonetheless, it would be desirable for future research to compare nostalgia with other positive affective states, beyond luck (e.g., amusement, joy). This would help to shed further light on nostalgia's unique effects, over and above PA.

We tested complex models of serial mediational sequences, using a measurement-of-mediation design. To address the limitations of this design, future research should harness the strengths of experimental-causal-chain designs (Spencer, Zanna, & Fong, 2005). Here, a researcher would manipulate social connectedness and examine downstream consequences on self-esteem and inspiration, and would then manipulate self-esteem and assess its consequences on inspiration. Longitudinal designs could also address these issues. Although the limitations of the measurement-of-mediation design are now well documented (Bullock et al., 2010), we nonetheless regard the serial mediational analyses of Studies 4 to 6 as informative, because they placed the hypothesized models (Figures 1 and 2) at risk (Fiedler et al., 2011). That is, the postulated mediational chains comprised several links. Failure of even a single link would have invalidated the hypothesized models, but each link held and did so repeatedly.

Another weakness relates to our reliance on self-reports, which raises the legitimate question whether nostalgia is influencing what people say about positively oriented psychological states (i.e., social connectedness, self-esteem, inspiration) rather than what they do. Our response is two-fold. First, prior evidence indicates that self-reports of perceived social connectedness are a stronger predictor of well-being than is social connectedness per se (Henderson, 1981; Henderson, Byrne, Duncan-Jones, Scott, & Adcock, 1980), in particular when individuals experience stressful events (Cohen & Wills, 1985). This provides justification for examining perceived rather than actual social connectedness. Nonetheless, testing the effect of nostalgia on the longitudinal development of social network size and quality is a priority for future research. Second, we obtained stronger support for the theoretically grounded sequence of influence than for assorted alternative sequences, casting doubt on the idea that the present findings merely reflect a halo of shared response orientations (i.e., common method variance; Campbell & Fiske, 1959). In addition, Study 6's notable assessment of goal pursuit showcases the downstream consequences of nostalgia-induced inspiration for behavioral tendencies. We turn to these and other implications next.

Implications

In showing that nostalgia influenced future goals and action propensity, our research poses a challenge to a prominent view in the affect literature, namely, that ambivalent emotional states provide a poor guide for action and are therefore unpleasant, unstable, and often short-lived (Larsen, McGraw, & Cacioppo, 2001). Our findings reveal that nostalgia, despite involving a blend of positive and negative affective content (Hepper et al., 2012; Stephan et al., 2012), increases the fundamentally future- and action-oriented state of inspiration. Perhaps nostalgia incorporates happiness and sadness without producing high levels of internal conflict or confusion. For example, the positive and negative elements of nostalgic narratives are often juxtaposed so as to form a redemption sequence (Sedikides, Wildschut, Arndt, & Routledge, 2006; Wildschut et al., 2006). Although nostalgic narratives often include elements of disappointment and loss, these negative life scenes are redeemed by subsequent triumphs over adversity (Sedikides & Wildschut, in press). This may explain why, despite the presence of negative affect, nostalgia is often experienced as a positive emotion and is associated with optimism (Cheung et al., 2013) and growth (Baldwin & Landau, 2014).

Our research also contributes to the inspiration literature. Thrash and Elliot (2003) identified PA and self-esteem as antecedents of inspiration. The current findings are consistent with this work, showing, in the context of simple mediational analyses, that nostalgia increased inspiration by generating PA and boosting self-esteem (Study 4). More important, we examined the role of social connectedness as an antecedent to inspiration. We proposed that social connectedness could increase inspiration, based on evidence that dispositional or primed secure attachment styles facilitate exploratory intentions (Green & Campbell, 2000) and cognitive openness (Mikulincer & Arad, 1999). We found that social connectedness per se predicted increased inspiration and mediated the effect of nostalgia on inspiration. Furthermore, our findings were consistent with prior theory and evidence that social connectedness nurtures self-esteem (Bowlby, 1982; Crocker & Wolfe, 2001; Leary, 2005; Pyszczynski et al., 2004), which in turn augments inspiration (Thrash & Elliot, 2003). Showing that social connectedness can be a potent mechanism (singly or via self-esteem) by which nostalgia breeds inspiration constitutes a novel contribution to the inspiration literature. More generally, showing that nostalgia promotes inspiration is a novel addition to this literature.

Our findings speak to the issue of whether the effect of nostalgia on inspiration is specific ("inspired to") or general ("inspired by"). If this effect were specific, the inspirational benefits of nostalgia would be tied to the confines of the nostalgic episode. For example, nostalgic reverie about a past relationship or life success would correspondingly inspire future relationship striving or success seeking. The findings

are inconsistent with such a possibility. Instead, they are congruent with the possibility that nostalgia serves as a generalized source of inspiration that promotes activity in domains unrelated to the focus of the nostalgic episode. The results of Studies 3 to 6 are directly pertinent to this claim. In Studies 3, 5, and 6, nostalgia about a past event led to generalized inspiration. In Study 4, music-induced (i.e., relatively content-free) nostalgia bred inspiration. The results of Study 1 are also relevant. This study demonstrated an association of a general tendency to be nostalgic with frequency and intensity of inspiration. Simply being prone to nostalgia, then, may facilitate inspiration. Moreover, we obtained evidence, in Study 6, for the motivational potency of nostalgia-elicited inspiration. General inspiration strengthened the proclivity for goal pursuit. Regardless, a task for future research would be to broaden understanding of the link between nostalgia and inspiration by (a) re-examining the specificity of nostalgia in sustaining goal pursuit (e.g., does nostalgic reverie about particular goals lead to stronger, and more enduring, inspiration to pursue them compared with generic nostalgic reverie) and (b) addressing the extent to which nostalgia-evoked inspiration translates into overt, goal-pursuit behavior (Milyavskaya et al., 2012; Thrash, Elliot, et al., 2010).

Coda

We established that nostalgia is associated with, and indeed prompts, inspiration—both general and specific. Inspiration, in turn, intensifies goal pursuit. Nostalgia is a psychological resource that fosters motivational forays. The potential for nostalgia to give way (through inspiration) to goal-formation, goal striving, and goal completion is an exciting possibility that carries practical implications in the educational, clinical, and organizational domains.

Notes

1. Although inspiration and positive affect (PA) are positively correlated (Thrash & Elliot, 2003), inspiration is distinct from PA and has unique antecedents, correlates, and consequences (Thrash, 2007). Episodes of inspiration and PA are distributed distinctly across days of the week: Inspiration declines on weekends, whereas PA does not. Moreover, relative to PA, inspiration involves a comparable level of approach motivation (e.g., interest in an activity), but higher levels of transcendence (insight) and evocation (not feeling responsible for the experience).

2. We capitalized on the large combined sample to conduct factor analyses of the individual items assessing PA, social connectedness, self-esteem, and inspiration in Studies 4 to 6. These analyses address whether the constructs assessed by the individual items are not only conceptually but also empirically distinct. All items loaded on their intended factors (and not on other factors), supporting the conclusion that they measured empirically distinct constructs. We present the results in Tables S4 and S5, available as supplemental online material.

3. We also tested, separately for Studies 4 to 6, whether nostalgia increased social connectedness, above and beyond PA. If the effect of nostalgia on social connectedness is reduced when controlling for PA, this would suggest that the direct effect of nostalgia on inspiration can be mediated by a serial path linking nostalgia ⇒ PA ⇒ social connectedness ⇒ self-esteem ⇒ inspiration. The analyses revealed that increased PA can be sufficient, but is not necessary, to carry the effect of nostalgia to social connectedness (and henceforth to self-esteem and inspiration). We present the results in Table S3, available as online supplemental material.

References

Akaike, H. (1974). New look at statistical-model identification. *IEEE Transactions on Automatic Control*, *19*, 716-723. doi:10.1109/TAC.1974.1100705

Alicke, M. D., & Sedikides, C. (2009). Self-enhancement and self-protection: What they are and what they do. *European Review of Social Psychology*, *20*, 1-48. doi:10.1080/10463280802613866

Baldwin, M., & Landau, M. (2014). Exploring nostalgia's influence on psychological growth: Evidence for mediation by positive emotion and consequences for self-perceptions and behavioral intentions. *Self and Identity*, *13*, 162-177. doi:0.1080/15298868.2013.772320

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

Batcho, K. I. (1995). Nostalgia: A psychological perspective. *Perceptual & Motor Skills*, *80*, 131-143.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment*. New York, NY: Basic Books. (Original work published 1969)

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: SAGE.

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

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*, 81-105.

Carver, C. S. (2006). Approach, avoidance, and the self-regulation of affect and action. *Motivation and Emotion*, *30*, 105-110. doi:10.1007/s11031-006-9044-7

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

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310-357.

Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review*, *108*, 593-623. doi:10.1037/0033-295X.108.3.593

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

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

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*, 218-226. doi:10.1037/0003-066X.56.3.218

Green, J. D., & Campbell, W. K. (2000). Attachment and exploration in adults: Chronic and contextual accessibility. *Personality and Social Psychology Bulletin*, *26*, 452-461. doi:10.1177/0146167200266004

Green-Hennessy, S., & Reis, H. T. (1998). Openness in processing social information among attachment types. *Personal Relationships*, *5*, 449-466. doi:10.1111/j.1475-6811.1998.tb00182.x

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

Henderson, S. (1981). Social relationships, adversity and neurosis: An analysis of prospective observations. *British Journal of Psychiatry*, *138*, 391-398.

Henderson, S., Byrne, D. G., Duncan-Jones, P., Scott, R., & Adcock, S. (1980). Social relationships, adversity and neurosis: A study of associations in a general population sample. *British Journal of Psychiatry*, *136*, 574-583.

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

Hofer, J. (1934). Medical dissertation on nostalgia (C. K. Anspach, Trans.). *Bulletin of the History of Medicine*, *2*, 376-391. (Original work published 1688)

Isen, A. M. (2004). Some perspectives on positive feelings and emotions: Positive affect facilitates thinking and problem solving. In A. S. R. Manstead, N. Frijda, & A. Fischer (Eds.), *Feelings and emotions: The Amsterdam Symposium* (pp. 263-281). *New York, NY: Cambridge University Press*.

Kenny, D. A., & Judd, C. M. (2014). Power anomalies in testing mediation. *Psychological Science*, *25*, 334-339. doi:10.1177/0956797613502676

Kumashiro, M., & Sedikides, C. (2005). Taking on board liability-focused feedback: Close positive relationships as a self-bolstering resource. *Psychological Science*, *16*, 732-739. doi:10.1111/j.1467-9280.2005.01603.x

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

Leary, M. R. (2005). Sociometer theory and the pursuit of relational value: Getting to the root of self-esteem. *European Review of Social Psychology*, *16*, 75-111. doi:10.1080/10463280540000007

Luke, M. A., Sedikides, C., & Carnelley, K. (2012). Your love lifts me higher! The energizing quality of secure relationships. *Personality and Social Psychology Bulletin*, *38*, 721-733. doi:10.1177/0146167211436117

Mikulincer, M. (1997). Adult attachment style and information processing: Individual differences in curiosity and cognitive closure. *Journal of Personality and Social Psychology*, *72*, 1217-1230. doi:10.1037/0022-3514.72.5.1217

Mikulincer, M., & Arad, D. (1999). Attachment working models and cognitive openness in close relationships: A test of chronic and temporary accessibility effects. *Journal of Personality and Social Psychology*, *77*, 710-725. doi:10.1037/0022-3514.77.4.710

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

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

Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why do people need self-esteem? A theoretical and empirical review. *Psychological Bulletin*, *130*, 435-468. doi:10.1037/0033-2909.130.3.435

Reynolds, S. (2011). *Retromania: Pop culture's addiction to its own past*. London, England: Faber and Faber.

Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology*, *44*, 132-140. doi:10.1016/j.jesp.2006.11.001

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

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

Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis is social psychology: Current practices and new recommendations. *Social & Personality Psychology Compass*, *5*, 359-371.

Sedikides, C., & Wildschut, T. (in press). Nostalgia: A bitter-sweet emotion that confers psychological health benefits. In J. Johnson & A. Wood (Eds.), *The handbook of positive clinical psychology*. *Hoboken, NJ: Wiley*.

Sedikides, C., Wildschut, T., Arndt, J., & Routledge, C. D. (2006). Affect and the self. In J. P. Forgas (Ed.), *Affect in social thinking and behavior: Frontiers in social psychology* (pp. 197-215). New York, NY: Psychology Press.

Sedikides, C., Wildschut, T., Arndt, J., & Routledge, C. D. (2008). Nostalgia: Past, present, and future. *Current Directions in Psychological Science*, *17*, 304-307. doi:10.1111/j.1467-8721.2008.00595.x

Sedikides, C., Wildschut, T., & Baden, D. (2004). Nostalgia: Conceptual issues and existential functions. In J. Greenberg, S. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 200-214). New York, NY: Guilford Press.

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

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, *22*, 1359-1366. doi:10.1177/0956797611417632

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

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., Wildschut, T., Sedikides, C., Zhou, X., He, W., Routledge, C., . . . Vingerhoets, A. J. J. M. (2014). The mnemonic mover: Nostalgia regulates avoidance and approach motivation. *Emotion*, *14*, 545-561. doi:10.1037/a0035673

Thrash, T. M. (2007). Differentiation of the distributions of inspiration and positive affect across days of the week: An application of logistic multilevel modeling. In A. D. Ong & M. Van Dulmen (Eds.), *Oxford handbook of methods in positive psychology* (pp. 515-529). Oxford University Press.

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology*, *84*, 871-889. doi:10.1037/0022-3514.84.4.871

Thrash, T. M., & Elliot, A. J. (2004). Inspiration: Core characteristics, component processes, antecedents and function.

Journal of Personality and Social Psychology, *87*, 957-973. doi:10.1037/0022-3514.87.6.957

Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of Personality and Social Psychology*, *98*, 488-506. doi:10.1037/a0017906

Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of Personality and Social Psychology*, *98*, 469-487. doi:10.1037/a0017907

Van Dijke, M., Wildschut, T., Leunissen, J., & Sedikides, C. (2015). Nostalgia buffers the negative impact of low procedural injustice on cooperation. *Organizational Behavior and Human Decision Processes*, *127*, 15-29. doi:10.1016/j.obhdp.2014.11.005

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

Verplanken, B. (2012). When bittersweet turns sour: Adverse effects of nostalgia on habitual worries. *European Journal of Social Psychology*, *42*, 285-289. doi:10.1002/ejsp.1852

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology*, *76*, 820-838. doi:10.1037/0022-3514.76.5.820

Wildschut, T., Bruder, M., Robertson, S., van Tilburg, W. A. P., & 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

Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., & Cordaro, F. (2010). Nostalgia as a repository of social connectedness: The role of attachment-related avoidance. *Journal of Personality and Social Psychology*, *98*, 573-586. doi:10.1037/a0017597

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