

Nostalgia Shapes and Potentiates the Future

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Nostalgia Shapes and Potentiates the Future

Although the emotion of nostalgia refers to one's past, it has implications for one's future. Nostalgia shapes the future by sparking an approach orientation, increasing optimism, and evoking inspiration. Further, nostalgia potentiates the future by strengthening motivation for goal pursuit, boosting creativity, and guiding overt behavior. We define nostalgia and review its implications for one's future.

On Nostalgia

Nostalgia is “a sentimental longing or wistful affection for the past” (Pearsall, 1998, p. 1266). This dictionary definition aligns well with lay conceptions (i.e., prototype analysis; cf. Rosch, 1978). Lay people (Hepper, Ritchie, Sedikides, & Wildschut, 2012) across 18 cultures (Hepper et al., 2014) think of the construct “nostalgia” as encompassing fond, rose-colored, and personally important (i.e., self-defining) memories of one's childhood or relationships, but also as encompassing pining and wishing for momentary returns to the past. They think of it, then, as a bittersweet (albeit more positive than negative) emotion that is relevant to the self and close others. Both content analyses of nostalgic narratives (Abeyta, Routledge, Roylance, Wildschut, & Sedikides, 2015; Holak & Havlena, 1998; Wildschut, Sedikides, Arndt, & Routledge, 2006, Studies 1-2) and in-vivo manipulations of nostalgia (Baldwin, Biernat, & Landau, 2015; Wildschut et al., 2006, Studies 5-7; Stephan, Sedikides, & Wildschut, 2012) have corroborated these properties of the emotion.

The most salient property of nostalgia, however, is its reference to the past: The emotion comprises recollections of meaningful events from one's life. Partly because of this reference, nostalgia has often been considered an escapist reaction to the demands of the present. For example, it has been labeled “a regressive manifestation” (Castelnuovo-Tedesco, 1980, p. 110), has been thought to arise from a subconscious desire to return to one's fetal state (Fodor, 1950), and has been equated with living in times past (Best & Nelson, 1985; Hertz, 1990; Holbrook, 1994). The standard conceptualization of nostalgia has portrayed it as a retreat from the world—often into an idealized yesteryear, as a quest for solace in daydream, and as anxiety if not fear of

the future (Flinn, 1992; Nawas & Jerome, 1965; see also for reviews: Batcho, 2013; Sedikides, Wildschut, & Baden, 2004.)

Implications of Nostalgia for One's Future

There have been a few dissenting voices, however. Foremost among them is that of the sociologist Fred Davis (1977). He opined (p. 420):

It (nostalgia) reassures us of past happiness and accomplishment; and, since these still remain on deposit, as it were, in the bank of our memory, it simultaneously bestows upon us a certain worth, irrespective of how present circumstances may seem to question or obscure this. And current worth, as our friendly bank loan officer assures us, is titled to at least some claim on the future as well.

This bright outlook on nostalgia, depicting it as a resource that can be used to maximize future wellbeing, served as an impetus for our research into how nostalgia shapes and potentiates one's future.

In this chapter, we cover experimental work in which nostalgia is typically manipulated with the Event Reflection Task (ERT; Sedikides et al., 2015, Appendix, p. 257). Participants are randomly assigned to the experimental or control condition. In the experimental condition, they are usually provided with the dictionary definition of nostalgia (“a sentimental longing or wistful affection for the past”) and are then instructed to recollect a nostalgic event from their lives: “... try to think of a past event that makes you feel most nostalgic. Bring this nostalgic experience to mind. Immerse yourself in the nostalgic experience. How does it make you feel? Please spend a couple of minutes thinking about how it makes you feel.” In the control condition, participants are instructed to recollect an ordinary (e.g., regular or everyday) event from their lives: “... try to think of a past event that is ordinary. Bring this ordinary experience to mind. Immerse yourself in the ordinary experience. How does it make you feel?” (Sometimes the control condition involves a positive past event, and we indicate so.) Subsequently, participants note down five keywords that purport to capture the gist of the relevant event; alternatively, they note down five keywords and describe the event in writing (for 5 minutes). Following a 3-item manipulation check (e.g., “I

feel nostalgic at the moment;” Routledge et al., 2011, Study 2; Wildschut et al., 2006, Studies 5-7), participants complete the measures pertaining to the putative mediators or the dependent variables. We note that the effects of nostalgia we report are independent of positive affect.

How Nostalgia Shapes the Future

We argue that nostalgia shapes one’s future by sparking approach orientation, increasing optimism, and evoking inspiration.

Approach orientation. We obtained an early lead that nostalgia entails an approach orientation by content-analyzing nostalgic episodes, examining the presence of two narrative sequences (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). In one, redemption, the episode progresses from an affectively unpleasant situation to an affectively pleasant one (“The bad is redeemed, salvaged, mitigated, or made better in light of the ensuing good;” McAdams et al., p. 474). In the other, contamination, the episode follows the reverse order (“The good is spoiled, ruined, contaminated, or undermined by what follows it;” McAdams et al., p. 474). Specifically, we content-analyzed stories submitted to the periodical *Nostalgia* by its readers (Wildschut et al., 2006, Study 1) and descriptions generated by participants under a nostalgia-writing prompt (Wildschut et al., Study 2, p. 979). This prompt instructed them to “... think of an important part of your past (e.g., event or episode) that makes you feel *most nostalgic*. Please bring this nostalgic experience to mind and think it through,” to write about their nostalgic experience “in all its vivid detail,” and to “be as detailed, thorough, and descriptive” as possible. In both studies, nostalgic episodes more frequently followed a redemption than a contamination sequence. As Davis (1979, p. 14) put it, in nostalgia “the component of sadness serves only to heighten the quality of recaptured joy” and, as Chaplin (2000) emphasized, nostalgia reflects appreciation, if not re-enjoyment, of past experiences. In all, although nostalgic episodes often start badly, they acquire momentum as they move along, ending with a bang. This trajectory is a mark of an approach orientation.

We put the idea that nostalgia sparks an approach orientation to test. Having manipulated nostalgia with the ERT, we assessed the fundamental action tendency of approach orientation

(Stephan et al., 2014, Study 3). This tendency is sensitive to signals of reward, facilitating goals and behavior that are likely to lead to desirable outcomes such as hope or happiness (Carver, 2006; Carver & White, 1994). We assessed approach orientation with the 13-item Behavioral Activation System (BAS) subscale of the BIS/BAS Scales (Carver & White, 1994). The BAS applies to three domains: Drive (e.g., “I go out of my way to get things I want”), Fun Seeking (e.g., “I will often do things for no other reason than that they might be fun”), and Reward Responsiveness (e.g., “It would excite me to win a contest”). Nostalgic (relative to control) participants manifested stronger approach orientation: They scored higher on Drive and Fun Seeking. Nostalgic and control participants, however, did not differ on Reward Responsiveness. Prior work (Carver & White, 1994) has suggested that Drive and Fun Seeking are characterized by excitability and euphoria (and are thus more dependent on intrinsic processes), whereas Reward Responsiveness is characterized by maintaining behavior previously associated with reward (and is thus more dependent on environmental contingencies). Drive and Fun Seeking, then, being tuned toward desirable goals, may reflect a more faithful operationalization of approach motivation. Regardless, the results (Stephan et al., 2014, Study 3) do suggest that nostalgia sparks approach motivation.

Findings from other laboratories are consistent with this suggestion. Abeyta and Routledge (2016) tested whether nostalgia induces perceptions of youthfulness, arguably an indirect indicator of approach orientation. They manipulated nostalgia either with the ERT (Studies 2-3) or with YouTube-based song selection (Study 1). In the latter case, participants in the nostalgia condition were provided with the relevant dictionary definition and instructed to “...search for and listen to a song that makes you feel nostalgic. This should be a song that reminds you of a fond memory,” whereas participants in the control condition were instructed to “search for and listen to a song that you heard for the first time recently. This should be a song that you recently discovered and enjoyed listening to” (p. 360). Participants then answered the question “At times, people feel older or younger than they actually are. At this moment, what age do you feel?” (Study 1, p. 360) or the question “At this time, how youthful do you feel?”

(Studies 2, p. 362, and also Study 3). In addition, participants (Study 3—sample of older adults) responded to four adjectives associated with feeling young (“energetic,” “alert,” “happy-go-lucky,” “rejuvenated”) and to four subjective health items (Hays, Sherbourne, & Mazel, 1993; Warner, Schwarzaer, Schüz, & Tesch-Römer, 2012) reflecting a sense of youthfulness (“I am as healthy as anyone I know,” “My health is excellent,” “I seem to get sick a little easier than other people” [reverse-scored], “If you compare yourself with an average person of your sex and age, how healthy are you?”). Across studies, nostalgic (relative to control) participants felt younger than their chronological age, felt more invigorated, and reported having better subjective health.

Baldwin and Landau (2014) tested whether nostalgia promotes perceptions of psychological growth (“the potential to cultivate inner potentialities, seek out optimal challenges, and integrate new experiences into the self-concept;” p. 163), arguably an indirect indicator of approach orientation as well. In two experiments, these researchers manipulated nostalgia with the ERT and assessed psychological growth, operationalized in terms of self-expansion, curiosity, and inclination toward new experiences. Nostalgia promoted psychological growth.

Optimism. We first wondered whether nostalgic episodes reflect optimism (i.e., expectation of positive, rather than negative, outcomes; Scheier & Carver, 1985). They do (Cheung et al., 2013, Study 1). We manipulated nostalgia with the ERT, and subjected the ensuing narratives to Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, & Francis, 2007) analyses. LIWC has an internal dictionary of approximately 4,500 words and calculates the proportion of word categories. The LIWC was successful at classifying 77.06% of words, a ratio typical of relevant studies (Pennebaker & Graybeal, 2001). We analyzed the proportion of optimism-related words, a category consisting of 70 words (e.g., optimism, hope, determined). LIWC arrived at this proportion by dividing the number of optimism-related words by the total word count for a given narrative. Nostalgic (relative to ordinary) episodes included a higher proportion of optimism-related words. Nostalgic episodes made more references to optimism. We examined next the causal relation between nostalgia and optimism.

Nostalgia increases optimism. In an experimental foray into the topic, we (Cheung et al., 2013, Study 2) manipulated nostalgia with the ERT and measured optimism with four items: “optimistic about my future,” “like the sky is the limit,” “hopeful about my future,” “ready to take on new challenges.” Nostalgia increased optimism. We obtained the same result pattern in an exact replication (Cheung, Sedikides, & Wildschut, 2016).

We obtained this pattern in two additional studies. In one, we manipulated nostalgia with nomothetically-derived song lyrics (Cheung et al., 2013, Study 3). First, participants listened to a nostalgic or control song. Whether a given song was nostalgic or not was confirmed in a pretest through normative ratings. Next, participants completed a brief measure of optimism (i.e., “optimistic about the future,” “hopeful about the future”). Nostalgic (relevant to control) songs increased optimism. In the following study, participants read idiosyncratically-derived nostalgic versus control song lyrics (Cheung et al., 2013; Study 4). More precisely, participants designated in a preliminary session three songs that made them feel nostalgic, and, three weeks later, received randomly the lyrics of one of these three songs. Each “nostalgia lyrics” participant was yoked to a “control lyrics” participant, who received the same song lyrics (assuming that she or he had not designated them before as nostalgic). Afterwards, all participants reported their level of optimism on the 6-item Revised Life Orientation Test (Scheier, Scheier, Carver, & Bridges, 1994; e.g., “In uncertain times, I usually expect the best”). Participants who read nostalgic lyrics were more optimistic than those who read control lyrics.

In another study, we measured scent-induced nostalgia and optimism (Reid, Green, Wildschut, & Sedikides, 2015). During a pretest, participants sampled at random 33 pleasantly or neutrally scented oils and reported how nostalgic each made them feel. We retained the 12 scents with the highest item-total correlations (e.g., Chanel #5, fresh-cut roses, eggnog, apple pie) for the subsequent experiment in which participants sampled (also at random) each of the 12 scents, presented in glass test tubes. Participants rated each scent for nostalgia (i.e., “How nostalgic does this scent make you feel?”) and reported their optimism (i.e., “optimistic about my future,”

“ready to take on new challenges”). Higher levels of scent-evoked nostalgia predicted greater levels of optimism.

Other laboratories have produced parallel findings. Following an ERT-based induction in a sample of older adults, Abeyta and Routledge (2016, Study 3) assessed health-related optimism with three items (Hays et al., 1993; Warner et al., 2012): “How do you estimate the likelihood that your health status will worsen in the near future?”, “If you compare yourself with an average person of your sex and age, how likely is it for you that your health will worsen in the near future?”, “I expect my health to get worse.” Nostalgic participants reported higher health-related optimism than controls. Similarly, Kersten, Cox, and Van Enkevort (2016, Experiment 1) manipulated nostalgia with the ERT and assessed health-related optimism with a 16-item scale (Aspinwall & Brunhart, 1996; e.g., “If I did get a serious illness, I would recover from it sooner than most other people”). Nostalgia increased health-related optimism. Finally, Abeyta, Routledge, and Juhl (2015, Experiment 1) manipulated nostalgia with the ERT and assessed how likely participants felt they would achieve their relationship goals. Nostalgic (relative to control) participants expressed higher optimism about the attainment of such goals.

Nostalgia increases optimism by elevating self-esteem. How does nostalgia increase optimism? Davis (1977), as quoted above, implied that it does so by raising self-esteem (“current worth”). When nostalgizing, people recollect mostly positive and meaningful events from their past. Such recollection is likely to boost their self-esteem (Peetz & Wilson, 2008; Wilson & Ross, 2003), and, as a consequence, to make them feel optimistic. Preliminary findings are consistent with the nostalgia—self-esteem link. Experimentally-manipulated nostalgia elevates self-esteem (Baldwin & Landau, 2014, Experiment 2; Hepper et al., 2012, Study 7; Wildschut et al., Studies 5-6), regardless of whether it is assessed in terms of bespoke items (e.g., “feel good about myself,” “value myself”) or the 10-item Rosenberg self-esteem scale (Rosenberg, 1965; e.g., “I feel that I’m a person of worth, at least on an equal plane with others”). Also, preliminary findings are consistent with the self-esteem—optimism link. Self-esteem is positively associated with optimism (Chemers, Watson, & May, 2000; Mäkikangas, Kinnunen, & Feldt, 2004).

We (Cheung et al., 2013, Study 3) tested the full sequence (nostalgia \Rightarrow self-esteem \Rightarrow optimism) in an experiment in which we manipulated nostalgia with nomothetically-derived song lyrics, as described above. Nostalgia increased optimism (i.e., “optimistic about the future,” “hopeful about the future”) via self-esteem (i.e., “feel good about myself,” “satisfied with myself”). This mediational pattern was replicated in a study where participants read idiosyncratically-derived nostalgic versus control song lyrics (Cheung et al., 2013; Study 4), as described above; here, self-esteem was measured with four items (“feel good about myself,” “I like myself better,” “I like myself more,” and “I have many positive qualities”), and, as reminder, optimism was measured with the Revised Life Orientation Test. Lastly, this mediational pattern was replicated in a study in which we (Cheung et al., 2016) manipulated nostalgia with the ERT and measured self-esteem and optimism with four items (*self-esteem*: “feel good about myself,” “I like myself better,” “I like myself more,” and “I have many positive qualities”; *optimism*: “optimistic about my future,” “like the sky is the limit,” “hopeful about my future,” “ready to take on new challenges”). In sum, self-esteem constitutes a mechanism through which nostalgia increases optimism.

Nostalgia increases optimism by fostering social connectedness, which elevates self-esteem. But how does nostalgia elevate self-esteem, in the first place? Social connectedness, a sense of belongingness or acceptance, is a prime candidate, according to insights and evidence from several influential theories (sociometer theory: Leary & Baumeister, 2000; contingencies of self-worth: Crocker & Wolfe, 2001; terror-management theory: Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Nostalgia is a social emotion. Nostalgic episodes reflect momentous occasions from one’s life (e.g., weddings, graduations, vacations, Thanksgiving dinners). Although in those episodes the self is the master of ceremonies, the self is almost invariably surrounded by close others (e.g., family, friends, romantic partners). Nostalgia then must engender social connectedness. Indeed it does, as experimental tests have demonstrated. During nostalgic reverie, the person feels loved, protected, socially supported, able to trust others, empathetic towards others, and more emotionally supportive of others (Hepper et al.,

2012, Study 7; Wildschut et al., 2006, Studies 5-7; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010, Study 5; Zhou, Sedikides, Wildschut, & Gao, 2008; Zhou, Wildschut, Sedikides, Shi, & Feng, 2012, Studies 1-4).

We (Cheung et al., 2014, Study 4) proceeded to test the idea that nostalgia-induced social connectedness leads to higher self-esteem, which in turn leads to greater optimism (nostalgia \Rightarrow social connectedness \Rightarrow self-esteem \Rightarrow optimism). We induced nostalgia with idiosyncratically-derived lyrics (see above), and then assessed social connectedness (i.e., “connected to loved ones,” “protected,” “loved,” “trust others”), self-esteem (“feel good about myself,” “I like myself better,” “I like myself more,” and “I have many positive qualities”), and optimism (Revised Life Orientation Test). Nostalgia fostered social connectedness, which subsequently elevated self-esteem, which in turn increased optimism. Cheung et al. (2016) replicated this mediational sequence, although they found it to be pronounced among individuals high (than low) on nostalgia proneness, that is, on the dispositional tendency to engage frequently in nostalgia and to ascribe personal importance to nostalgia (Barrett et al., 2010; Routledge, Arndt, Sedikides, & Wildschut, 2008 – see below).

Inspiration. Does nostalgia evoke inspiration, and, if so, how? The experience of inspiration entails transcending the mundane while becoming aware of more attractive possibilities or ideas and intending to act upon them (Thrash & Elliot, 2003, 2004). We (Stephan et al., 2015, Study 1) began by examining the natural covariance between nostalgia and inspiration. We assessed nostalgia with the Nostalgia Inventory (Batcho, 1995) and the Southampton Nostalgia Scale (Barrett et al., 2010; Routledge et al., 2008). For the Nostalgia Inventory, participants rate how nostalgic they feel for 18 facets of their past (e.g., “My family,” “My pets,” “TV shows,” “Having someone to depend on”). For the Southampton Nostalgia Scale, participants respond to four items that apply to frequency of nostalgia proneness (e.g., “How often do you experience nostalgia,” “How prone are you to feeling nostalgia”), and to three items that apply to personal relevance of nostalgic engagement (e.g., “How important is it for you to bring to mind nostalgic experiences?”, “How valuable is nostalgia for you?”). The two

nostalgia scales were highly correlated, and so we created a composite that we used in data analyses. We assessed inspiration with five items from the Inspiration Scale (Thrash & Elliot, 2003): “I feel inspired,” “I experience inspiration,” “Something I encounter or experience inspires me,” “I am inspired to do something,” “I am filled with inspiration.” Participants rated each item on both frequency (“How often does this happen?”) and intensity (“How deeply or strongly [in general]?”). Nostalgia was positively associated with inspiration frequency and intensity. Further, given that frequency and intensity were highly correlated, we formed an overall inspiration index. Unsurprisingly, nostalgia was positively associated with that index as well. Having shown that nostalgia and inspiration covary naturally, we proceeded to test their causal relation.

Inspiration evokes inspiration. In the first experiment addressing this relation, we (Stephan et al., 2015, Study 2) manipulated nostalgia with the ERT and assessed general inspiration with a three items (“feel inspired,” “inspires me to do something,” “fills me with inspiration”), two of which we adapted from Thrash and Elliott (2003) and one which we created. Nostalgia evoked general inspiration. We obtained the same finding in an exact replication (Stephan et al., 2015, Study 6). Further, we replicated this finding in an experiment that manipulated nostalgia with idiosyncratically derived song lyrics (as in Cheung et al., 2013, Study 4), and in an experiment that manipulated nostalgia with the ERT but used a positive event condition (“...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;” p. 1402) rather than an ordinary even condition (Stephan et al., 2015, Studies 4 and 5, respectively). Finally, we replicated this finding by manipulating nostalgia with the ERT but assessing specific, rather than general, inspiration with a 5-item scale (“meet new people,” “travel overseas this summer,” “go to a modern art museum,” “try skydiving or some other adventurous activity,” “explore some place that I have never been before” -- adapted from Green & Campbell, 2000). In all, nostalgia evokes inspiration.

Nostalgia evokes inspiration by elevating self-esteem. We wondered next about the mechanism through which nostalgia might evoke (general) inspiration. Self-esteem, once again, may qualify as such. Thrash and Elliot (2003) reported that high self-esteem plays a critical role in the evocation of inspiration. Also, research indicates that nostalgia elevates self-esteem (Baldwin & Landau, 2014, Experiment 2; Hepper et al., 2012, Study 7; Wildschut et al., Studies 5-6). We thus tested the above implied mediational model (nostalgia \Rightarrow self-esteem \Rightarrow inspiration) and found support for it in three experiments. As mentioned above, one assessed nostalgia with the ERT (nostalgic vs. ordinary event; Stephan et al., 2015, Study 6), another with a revised version of the ERT (nostalgic vs. positive event; Stephan et al., Study 5), and a third with idiosyncratically-derived song lyrics (Stephan et al., 2015, Study 4).

Nostalgia evokes inspiration by fostering social connectedness, which elevates self-esteem. We capitalized on a rich source of evidence that points to social connectedness as a solid basis for self-esteem (Crocker & Wolfe, 2001; Leary & Baumeister, 2000; Pyszczynski et al., 2004), and tested the extended mediational sequence (nostalgia \Rightarrow social connectedness \Rightarrow self-esteem \Rightarrow inspiration). We found support for it in three experiments. The first assessed nostalgia via the ERT (nostalgic vs. ordinary event; Stephan et al., 2015, Study 6), the second via a revised ERT (nostalgic vs. positive event; Stephan et al., Study 5), and the third via idiosyncratically-derived song lyrics (Stephan et al., 2015, Study 4). In summary, nostalgia fosters social connectedness, which elevates self-esteem, which then evokes inspiration.

How Nostalgia Potentiates the Future

Having discussed how nostalgia shapes one's future, we now turn to the issue of how the emotion potentiates it. We argue that it does so by strengthening motivation for goal pursuit, boosting creativity, and guiding overt behavior.

Motivation for goal pursuit. We have found that nostalgia sparks an approach orientation, increases optimism, and evokes creativity. Nostalgia, then, has motivational potential. Does such potential materialize in the concrete case of goal pursuit?

Nostalgia strengthens motivation for goal pursuit. We addressed the causal relation between nostalgia and motivation for goal pursuit in three experiments. We (Sedikides et al., 2017, Experiment 1) started by manipulating nostalgia with the ERT and assessing motivation for goal pursuit with a procedure that we adapted from Milyavskaya, Ianakieva, Foxen-Craft, Colantuoni, and Koestner (2012). In particular, participants listed five important goals and designated the most important one. Afterwards, they reported how motivated they were to pursue their most important goal (i.e., “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”). Nostalgia strengthened participants’ motivation to pursue their most important goal. We (Stephan et al., 2015, Study 6) obtained the same finding in an experiment where we manipulated nostalgia with the ERT and measured motivation for goal pursuit with the adapted Milyavskaya et al. (2012) procedure. In addition, we asked two independent judges to code the types of goals that participants listed. The judges identified three themes: agentic goals (e.g., graduating with good grades), hedonistic goals (e.g., enjoying life), social goals (e.g., having a family). Ancillary analyses revealed that nostalgia strengthened goal pursuit on all three goal domains. Research by Abeyta, Routledge, and Juhl (2015) also indicated that nostalgia strengthens social, and in particular, relationship goals (e.g., connecting with friends).

In an effort to specify the effect of nostalgia on goal pursuit, we (Sedikides et al., 2017, Experiment 2) manipulated nostalgia via the ERT and assessed goal pursuit with another modification of the Milyavskaya et al. (2012) procedure. Specifically, we asked participants to respond to the abovementioned five statements (e.g., “I am motivated to pursue this goal”), but this time with regard to both their most important goal and least important goal (presented at random). Nostalgia strengthened participants’ most important goal, but not their least important goal. This suggests that nostalgia has a specific influence on goal pursuit, galvanizing a persons’ cherished goals.

We identified two mechanisms through which nostalgia strengthens motivation for goal pursuit. One is meaning in life. The other is a protracted causal sequence going from nostalgia-induced social connectedness to self-esteem to inspiration.

Nostalgia strengthens motivation for goal pursuit by imbuing life with meaning.

As we discussed, nostalgia pertains to recollections of time spent with close others (e.g., family, partners, friends) during momentous life events (e.g., vacations, graduations, Thanksgiving dinners). Also, nostalgia fosters social connectedness. Close others (Lambert et al., 2010), and social connectedness more generally (Stavrova & Luhmann, 2016), are key sources of meaning. Indeed, research has established that nostalgia augments perceptions of life as meaningful (Hepper et al., 2012; Reid et al., 2005; Routledge et al., 2011; Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012). Meaning in life, in turn, has been linked to motivational constructs (i.e., approach orientation, curiosity, exploration; Steger, Kashdan Sullivan, & Lorentz, 2008), albeit not to motivational goal pursuit per se.

We (Sedikides et al., 2017) tested whether nostalgia evokes motivation for goal pursuit through meaning in life (nostalgia \Rightarrow meaning in life \Rightarrow motivation for goal pursuit). We manipulated nostalgia with the ERT, assessed meaning in life, and then assessed motivation to pursue one's goals (Experiment 1) or motivation to pursue one's most important goal (Experiment 2), as mentioned above. We assessed meaning in life with the items "life is meaningful," "life has a purpose," "there is a greater purpose to life," and "life is worth living" (Hepper et al., 2012; Wildschut et al., 2006). Meaning in life emerged as a mechanism through which nostalgia strengthens motivation for goal pursuit, particularly in relation to one's most important goal.

Nostalgia strengthens motivation for goal pursuit through an extended causal sequence involving social connectedness, self-esteem, and inspiration. We focused on an additional, serial mechanism via which nostalgia might strengthen pursuit of one's goals. We built on prior findings (Stephan et al., 2015, Studies 1-5) in which we had documented an extended mediational pathway through which nostalgia evokes inspiration (nostalgia \Rightarrow social

connectedness \Rightarrow self-esteem \Rightarrow inspiration). We asked whether the end point of this pathway, inspiration, might strengthen goal pursuit, given that inspiration entails intent to act (Thrash & Elliot, 2003, 2004). This was indeed the case (Stephan et al., 2015, Study 6). Put otherwise, nostalgia strengthens motivation for to pursue one's goals, and in particular one's most important goal, by fostering social connectedness, which raises self-esteem, which in turn leads to inspiration.

Creativity. It seems to be a cultural meme that nostalgia boosts creativity (both original and useful ideas; Feist, 1998), or at least literary creativity. Indeed, nostalgia has been duly implicated in explanations of creative works (Austin, 2003; Cook, 2009; Flinn, 1992). The link between nostalgia and creativity is plausible, given that nostalgia sparks approach orientation, evokes inspiration, and strengthens motivation to pursue one's important goal(s). We (Van Tilburg, Sedikides, & Wildschut, 2015) examined the nostalgia-creativity link in several experiments.

Nostalgia boosts creativity. We wondered whether nostalgia boosts self-reported creativity (Van Tilburg et al., 2015, Experiment 3). After manipulating nostalgia with the ERT, we instructed participants to fill out a 12-item creativity scale (Ivcevic, 2007). Sample items are: “My strategy towards challenging tasks is to...” (1 = *creative and novel solutions*, 6 = *traditional and familiar solutions*), “When solving challenging tasks I tend to propose strategies that are...” (1 = *innovative and risky*, 6 = *cautious and dependable*, reversed). Nostalgia boosted self-reported creativity.

But does nostalgia also boost actual creativity? We (Van Tilburg et al., 2015, Experiment 1) manipulated nostalgia with the ERT and asked participants to write a story about a princess, a cat, and a race car in 30 minutes (Proulx, 2012; Proulx & Inzlicht, 2012). We proceeded with content coding (Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010). Specifically, we asked two independent judges, familiar with the concept of creativity, to code the stories (“How creative do you consider the story to be?”). Judges' ratings were highly correlated, and we thus formed and analyzed a composite. Nostalgia boosted actual creativity.

We (Van Tilburg et al., 2015, Experiment 2) tested the replicability of this effect with an alternate procedure. After manipulating nostalgia with the ERT, we instructed participants to write a story (in 30 minutes) that began with the sentence: “One cold winter evening, a man and a woman were alarmed by a sound coming from a nearby house” (Thrash et al., 2010). Content coding followed, which, again, produced highly consistent codings between the judges. As in the prior experiment, nostalgia boosted actual creativity.

Finally, we (Van Tilburg et al., 2015, Experiment 4) tested the replicability of this effect with a different nostalgia manipulation and a different creativity task. The manipulation was a revised ERT using a positive (i.e., lucky) event condition in lieu of an ordinary event one. The task was a linguistic creativity measure (Zhou et al., 2009) in which we instructed participants to “try to write a creative sentence about each keyword,” followed by 10 common words (beautiful, eating, fun, money, pain, sea, sun, tasty, warm, water; <http://www.kuleuven.be/semlab/>; De Deyne & Storms, 2008). Evaluative coding followed, producing high inter-judge agreement. In replication, nostalgia boosted creativity.

Nostalgia boosts creativity though openness to experience. How does nostalgia boost creativity? A likely mechanism is openness to experience (henceforth: openness), which reflects “an interest in varied experience for its own sake” (McCrea, 1987, p. 1259). Nostalgia is likely to influence openness, as it influences states associated with openness such as inspiration (Thrash & Elliot, 2003) and approach orientation (Niholson, Soane, Fenton-O’Creevy, & Willman, 2005). Also, openness is likely to be related to creativity, as a meta-analysis (Feist, 1998) indicated.

After manipulating nostalgia with the ERT, we (Van Tilburg et al., 2015, Experiment 3) assessed openness with the 10-item Openness to Experience subscale of the 44-item Big Five Inventory (Benet-Martínez & John, 1998). Sample items are: “I see myself as someone who is curious about many different things,” “I see myself as someone who has an active imagination,” “I see myself as someone who is inventive.” Subsequently, we asked participants to complete a 12-item self-reported creativity scale (Ivcevic, 2007). Openness mediated the effect of nostalgia on self-reported creativity. We replicated this pattern with actual creativity. After manipulating

nostalgia with a revised ERT (i.e., featuring a positive ordinary event as control), we (Van Tilburg et al., 2015, Experiment 4), assessed openness with the 10-item Openness to Experience subscale (Benet-Martínez & John, 1998) and assessed creativity with the linguistic creativity measure (Zhou et al., 2009). Nostalgia's effect on actual creativity was mediated by openness.

Overt behavior. Finally, nostalgia potentiates the future by guiding overt behavior. This behavior takes the form of prosociality and engagement in physical activity.

Prosociality. One index of prosociality is *physical proximity*. An example of this index is how close a person sets her or his chair to that of a prospective interaction partner (i.e., reduced seating distance; Macrae, Bodenhausen, Milne, & Jetten, 1994). We (Stephan et al., 2014, Study 4) manipulated nostalgia with the ERT, and then informed participants of an impending social interaction (i.e., conversation) they would have with an unacquainted participant who was waiting in a nearby cubicle. In preparation for this conversation, the experimenter first asked participants to position two chairs (one for them, one for the interaction partner) in the room, and then left the scene under a pretext. Participants in the nostalgia condition positioned the chairs closer to each other than participants in the control condition. Nostalgia induced physical proximity.

A more direct index of prosociality is *monetary donations to charity*. In our study (Zhou et al., 2012, Study 5), participants (all Chinese Nationals) first completed various laboratory tasks for which they were paid 7 renminbi (in 1 renminbi notes). Subsequently, participants were randomly assigned to two conditions. They were presented with printed charity appeals for “Half the Sky Foundation.” We used a nostalgic appeal in the experimental condition and a future-oriented appeal in the control condition. The two appeals looked the same (e.g., illustrated children's photographs or children engaged in leisure activities), but differed in an important way. The experimental-condition appeal consisted of nostalgic cues, such as the headline “Those Were the Days: Restoring the Past for Children in Wenchuan.” The control-condition appeal, on the other hand, consisted of cues to the future, such as the headline “Now Is the Time: Build the Future for Children in Wenchuan.” We proceeded to discreetly alert participants to a collection

box near the laboratory exit and casually mention that they could privately donate as much or as little money as they wished. Nostalgic participants donated more money than control participants. (We returned this money to participants and donated the pooled sum to charity.)

An even more direct index of prosociality is *helping*. Having manipulated nostalgia with the ERT, we (Stephan et al., 2014, Study 5) staged a mishap. An experimenter (unaware of conditions) walked into the room holding a folder of papers and a box of pencils, made an awkward move, and spilled the pencils on the floor. We counted the number of pencils that participants picked up, a validated measure of helping (Vohs, Mead, & Goode, 2008). Nostalgic participants helped more than controls.

Physical activity. Kersten, Cox, and Van Enkevort (2016, Study 3) manipulated nostalgia with the ERT three times over the course of two weeks. At the end of this 2-week period, the researchers assessed health optimism with Aspinwall and Bruhnhart's (1996) 16-item measure. Importantly, the researchers also assessed behavior, namely, physical activity operationalized as steps taken (counted by a wireless fitness tracker, *Fitbit One*). Step count is valid measure of physical activity (Takacs et al., 2014). Nostalgic participants exhibited more intense physical activity (i.e., took more steps) than controls. This effect was mediated by health optimism.

Coda

Nostalgia has been regarded an ossifying, escapist emotion for too long. Yet these adjectives only served to caricature the emotion. Nostalgia may refer to the past, but it points to the future. It allows one to visit the past, but not remain in it. This visit bestows vigor and insight for forging ahead. Through a variety of mechanisms, nostalgia shapes the future, as it sparks approach orientation, increases optimism, and evokes inspiration. And through a variety of mechanisms, nostalgia potentiates the future, as it strengthens motivation for goal pursuit, boosts creativity, and guides behavior.

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