

Anticipated Nostalgia: Looking Forward to Looking Back

Wing-Yee Cheung

University of Winchester

Erica G. Hepper

University of Surrey

Chelsea A. Reid

College of Charleston

Jeffrey D. Green

Virginia Commonwealth University

Tim Wildschut

Constantine Sedikides

University of Southampton

Word Count: 8956

Wing-Yee Cheung, Psychology, University of Winchester, UK; Erica G. Hepper, School of Psychology, University of Surrey, UK; Chelsea A. Reid, Department of Psychology, University of Surrey, UK; Chelsea A. Reid, Department of Psychology, College of Charleston, USA; Jeffrey D. Green, Psychology Department, Virginia Commonwealth University, USA; Tim Wildschut and Constantine Sedikides, Center for Research on Self and Identity, Psychology Department, University of Southampton, UK. We thank Karlien Paas for her contribution to coding open-ended responses. Corresponding author: Wing-Yee Cheung, Department of Psychology, University of Winchester, Winchester, SO22 4NR, United Kingdom; Tel: +44 (0) 1962 826452; E-mail: WingYee.Cheung@winchester.ac.uk

Abstract

Anticipated nostalgia is a new construct that has received limited empirical attention. It concerns the anticipation of having nostalgic feelings for one's present and future experiences. In three studies, we assessed its prevalence, content, emotional profile, and implications for self-regulation and psychological functioning. Study 1 revealed that anticipated nostalgia most typically concerns interpersonal relationships, and also concerns goals, plans, current life, and culture. Further, it is affectively laden with happiness, sadness, bittersweetness, and sociality. Studies 2 and 3 assessed the implications of anticipated nostalgia for self-regulation and psychological functioning. In both studies, positive evaluation of a personal experience was linked to stronger anticipated nostalgia, and anticipated nostalgia was linked to savoring of the experience. In Study 3, anticipated nostalgia measured prior to an important life transition predicted nostalgia a few months after the transition, and post-transition nostalgia predicted heightened self-esteem, social connectedness, and meaning in life.

Keywords: nostalgia, anticipated nostalgia, emotion, memory, mental time travel

Humans possess the remarkable capacity to travel mentally through time in both directions: recollecting past experiences and anticipating as well as planning future ones (Roberts & Feeney, 2009; Skowronski & Sedikides, 2019; Suddendorf & Corballis, 2007). We asked whether nostalgia, a past-oriented emotion, can be foreseen or anticipated, giving rise to *anticipated nostalgia*. That is, when individuals contemplate the future, can they foresee themselves feeling nostalgic about their current life? If so, is this a prevalent experience? What are its contents, affective signature, and implications for self-regulation and psychological functioning? Also, does anticipated nostalgia predict the intensity of nostalgia in the future?

Dictionary definitions conceive of nostalgia as past-oriented, describing it as “a sentimental longing or wistful affection for the past” (The New Oxford Dictionary of English, 1998), “a yearning for the return of past circumstances, events, etc.” (Collins English Dictionary—Complete & Unabridged 10th Edition, 2009), or “a wistful desire to return in thought or in fact to a former time in one’s life ...; a sentimental yearning for the happiness of a former place or time” (Random House Dictionary, 2014). These definitions dovetail with lay conceptualizations of nostalgia (Hepper et al., 2012; Hepper et al., 2014) in emphasizing sentimental longing for, or yearning to return to, a previous period in one’s life. Nostalgia is a self-conscious emotion (Van Tilburg, Wildschut, & Sedikides, 2018), as it reflects personally relevant memories (e.g., graduations, birthday celebrations, anniversaries; Abeyta, Routledge, Roylance, Wildschut, & Sedikides, 2015; Holak & Havlena, 1992; Wildschut, Sedikides, Arndt, & Routledge, 2006). It is also an ambivalent emotion, comprising both joy and longing (Batcho, 2007; Hepper, Ritchie, Sedikides, & Wildschut, 2012; Holbrook, 1993), and containing both positive and negative affect (albeit more positive than negative; Sedikides & Wildschut, 2016a; Van Tilburg, Bruder, Wildschut, Sedikides, & Görizt, 2019; Wildschut et al., 2006).

Nostalgia confers key psychological benefits (Sedikides & Wildschut, in press; Sedikides, Wildschut, Routledge, Arndt, et al., 2015). This, in part, stems from the content of nostalgia. Nostalgic memories feature momentous and personally meaningful recollections that are self-defining and often rooted in social relationships (Sedikides & Wildschut, 2019).

In the face of noxious stimuli or aversive states, nostalgia typically buttresses the self by serving as a resource to combat threats. For instance, after receiving negative performance feedback, the recollection of a nostalgic (vs. ordinary) experience weakens attribution of the failure to one's ability, indicating that nostalgia provides a self-affirming buffer against self-threat (Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012). When one feels lonely, nostalgia helps the individual cope with this negative psychological state by increasing perceived social connectedness (Wildschut, Sedikides, & Cordaro, 2011; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). When exposed to information that threatens one's sense of meaning in life, the recollection of a nostalgic (vs. ordinary) lowers defensiveness, indicating that nostalgia provides a way to use the past to cope with existential challenges (Routledge et al., 2011; Routledge, Sedikides, Wildschut, & Juhl, 2013). These pieces of evidence converge to demonstrate the regulatory functions of nostalgia. Specifically, nostalgia serves a *self-oriented* function by raising self-positivity and facilitating perceptions of a positive future (Baldwin & Landau, 2014; Cheung et al., 2013). It fulfils a *sociality* function by increasing social connectedness—a sense of belongingness and acceptance, reinforcing socially-oriented action tendencies, and promoting prosocial behavior (Stephan et al., 2014; Zhou, Wildschut, Sedikides, Shi, & Feng, 2012). It also serves an *existential* function by increasing perceptions of life as meaningful (Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012; Sedikides & Wildschut, 2018).

Anticipated Nostalgia

Considering the human capacity to imagine the future (Atance & O'Neill, 2001; Schacter, Benoit, & Szpunar, 2017) and experience anticipated emotions (Mellers & McGraw, 2001; Pletti, Lotto, Tasso, & Sarlo, 2016), when individuals ponder the future, it is possible that they anticipate feeling nostalgic for their present and future experiences. For example, when contemplating the prospect of an “empty nest,” parents are likely to anticipate feeling nostalgic for the time when their children were young. When preparing their move to a new country, migrants may foresee themselves missing their current life and friends, and feeling nostalgic about them in the future. Similarly, when imagining life after graduation, students may anticipate having nostalgic recollections of university life. Davis (1979, p. 12)

contemplated “whether it is possible to feel nostalgia for the future” and surmised that people can “envision themselves at a relatively distant point in the future looking back nostalgically on events that were imminent or whose occurrence could be anticipated ‘in the normal course’ of the life career.”. He emphasized that “the distinguishing ‘looking back’ feature of nostalgia is retained in this forward projection of an as yet unrealized state.”

We propose that anticipated nostalgia is “the anticipation of feeling nostalgic for life experiences when looking back on them.” This definition is derived from Davis’s (1979) original formulation and is consistent with the manner in which other anticipated emotions have been defined in the literature. Anticipated emotions refer to the “anticipated... affective responses to behavior not yet enacted” (Tangney, Stuewig, & Mashek, 2007, p. 22) and pertain to awareness of the feelings that individuals will experience in the future (Ahn, Kim, & Aggarwal, 2014). For example, anticipated guilt refers to concerns about experiencing guilt at some point in the future (Grant & Wrzesniewski, 2010). The anticipation of negative emotions motivates attempts to prevent them (e.g., “If I tell others about my friend’s secret, I will feel guilty. Therefore, I will not betray her trust”), whereas the anticipation of positive emotions motivates attempts to achieve them (e.g., “Winning the race will make me feel proud. Therefore, I will train harder”) (Baumeister, Vohs, DeWall, & Zhang, 2007; Grant & Ashford, 2008; Grant & Wrzesniewski, 2010).

Anticipated nostalgia differs from *anticipatory nostalgia*, which Batcho and Shikh (2016) defined as: “missing aspects of the present before they are lost in the future” (p. 75) or “missing what has not yet been lost” (p. 76). In the future-oriented emotions literature, anticipated emotions are what individuals expect to experience *in the future* in light of the possible occurrence of a certain event (e.g., anticipated pride), whereas anticipatory emotions are what individuals experience *now* based on their future projection (e.g., fear; Baumgartner, Pieters, & Bagozzi, 2008). Hence, when we refer to anticipated nostalgia, we refer to what Davis (1979) described as the process whereby one expects nostalgia to arise in the *future* when *looking back* on life events. In contrast, anticipatory nostalgia entails that one experiences nostalgia in the *present* when *looking ahead* to life events (specifically, future losses).

Batcho and Shikh (2016) developed the Survey of Anticipatory Nostalgia to assess the construct as a dispositional trait. Participants indicated how much they already miss various aspects of the present when contemplating their future absence. Sample items are: “Someone you love will leave someday,” “Someone you love will die someday,” and “You might not always have great friends.” These authors found that, when controlling for personal nostalgia, individuals who were more prone to anticipatory nostalgia had a stronger need to belong, required more social assurance, and were less resilient. Anticipatory-nostalgia prone individuals also judged people and experiences in hypothetical situations as more likely to make them feel sad and worried, whereas personal-nostalgia prone individuals did not do so. These results seem to indicate that anticipatory nostalgia is more strongly characterized by sadness and anxiety than happiness.

We do not expect anticipated nostalgia to share the same emotional profile as anticipatory nostalgia. The definition of anticipatory nostalgia (“missing aspects of the present before they are lost in the future” [p. 75, Batcho & Shikh, 2016]) emphasizes the notion of loss and shares conceptual overlap with brooding or “moody pondering” (Treyner, Gonzalez, & Nolen-Hoeksema, 2003). This is conceptually different from the way we formulated anticipated nostalgia.

Overview and Hypotheses

We examined for the first time the construct of anticipated nostalgia in three studies. In Study 1, we evaluated the profile of anticipated nostalgia by measuring its prevalence, content, and affective signature. To measure prevalence, we asked participants to indicate whether they can think of any experiences that they anticipate feeling nostalgic about in the future and, if so, to describe the experience(s). We examined the content of anticipated nostalgia by coding participants’ narratives. We also asked participants to rate how nostalgic they expected to feel in the future for various present and future life experiences, predominantly adapted from the Nostalgia Inventory (Batcho, 1995). To avoid conflating anticipated nostalgia with anticipatory nostalgia or rumination, we ensured that the items were phrased neutrally (e.g., “My current family”) instead of negatively (e.g., “Times with family or friends won't last forever,” as in Batcho & Shikh, 2016). To identify the affective

signature of anticipated nostalgia, we instructed participants to describe all feelings associated with anticipated nostalgia. We subsequently coded these descriptions. In addition, we presented participants with a list of affective responses and asked them to rate the extent to which each is evoked by anticipated nostalgia.

Studies 2-3 assessed the construct and predictive validity of anticipated nostalgia by examining its implications for self-regulation and psychological functioning. Anticipated emotions and their roles in self-regulation have been studied in a variety of contexts (Gross & Thompson, 2007). In the context of health promotion, for example, anticipated regret about failing to exercise increased the consistency between individuals' intention to exercise and actual exercising behavior (Abraham & Sheeran, 2003; Sandberg & Conner, 2008; Zeelenberg, 1999). In the context of interpersonal relationships, anticipated pride about fair behavior increased levels of fairness (Van der Schalk, Bruder, & Manstead, 2012), and anticipated guilt about selfish behavior predicted stronger prosocial behavior (Lindsey, 2005; Nelissen, Van Someren, & Zeelenberg, 2009). In a similar vein, anticipated nostalgia may trigger a deliberate and self-regulatory attempt to savor positive experiences as they unfold. Savoring is a conscious effort to capture and retain the details of life experience (Bryant, 2003). Savoring facilitates the process of building memory (Bryant & Veroff, 2007), whereby it contributes to the transformation of a current experience into a memory for subsequent nostalgic reflection. Indeed, savoring plays a role in the creation of nostalgic memories, and savoring specific events or general time periods is associated with stronger nostalgia for it (Biskas et al., 2018). Hence, when one anticipates feeling nostalgic about a current positive event at a relatively distant time point, one may be motivated to pay deeper attention to it in order to facilitate and enhance future nostalgia. This motivation may manifest itself in the form of savoring in the anticipation of loss. Accordingly, in Study 2, we hypothesized that participants would experience higher anticipated nostalgia, if they evaluated their current life experiences as more positive (compared to negative). We also hypothesized that high (compared to low) anticipated nostalgia for current life experiences would predict deliberate savoring and recording of said experiences. We note that the motivational drivers are multifaceted and we focused mainly on savoring in the anticipation of loss.

Study 3 sought to replicate and extend Study 2. We measured anticipated nostalgia shortly before a life transition in the context of university graduation. We then assessed whether: (1) participants who perceived their pre-transition life as particularly meaningful anticipated experiencing more post-transition nostalgia, and (2) participants who reported high anticipated nostalgia were more likely to savor their pre-transition experiences in the anticipation of loss. We also examined the predictive validity of anticipated nostalgia by assessing the extent to which it predicted nostalgia and psychological functioning a few months after the life transition occurred. We expected anticipated nostalgia to predict nostalgia after the life transition. Further, we expected this post-transition nostalgia to predict improved psychological functioning. Nostalgia serves key psychological functions. First, it elevates self-esteem (Hepper et al., 2012; Wildschut et al., 2006) and strengthens the accessibility of self-positive attributes (Vess et al., 2012). Second, nostalgia bolsters a sense of acceptance and belongingness (i.e., social connectedness) through feelings of being loved and protected (Hepper et al., 2012; Van Dijke, Wildschut, Leunissen, & Sedikides, 2015; Zhou, Sedikides, Wildschut, & Gao, 2008). Third, nostalgia enhances the perception of one's life as purposeful and meaningful (Hepper et al., 2012; Routledge et al., 2012). Hence, to assess psychological functioning, we focused correspondingly on the self-oriented, sociality, and existential functions of nostalgia (Sedikides, Wildschut, Routledge, Arndt, et al., 2015) by measuring self-esteem, social connectedness, and meaning in life.

Our strategy of participant recruitment was as follows. In Studies 1-2, we planned to recruit a minimum of 191 participants to yield power $\geq .80$ for detecting a small effect size of $r = .20$ (two-tailed $\alpha = .05$; Faul, Erdfelder, Buchner, & Lang, 2009). We exceeded this recruitment target in both studies. In Study 3, facing a pragmatic constraint, we recruited as many participants as possible during a university graduation day ($N = 168$).

Study 1

In Study 1, we aimed to delineate the profile of anticipated nostalgia by evaluating its prevalence, and identifying its content and affective signature. We gathered both open-ended responses and quantitative ratings of potential objects of anticipated nostalgia, as well as affective responses to it. Open-ended responses were coded into common categories, and

quantitative ratings were distilled into factors in an effort to capture the content and affective profile of anticipated nostalgia.

Method

Participants. Participants were 203 US adults (114 women, 83 men, 6 undisclosed gender; $Range_{AGE} = 18-70$, $M_{AGE} = 33.49$, $SD_{AGE} = 12.99$). We conducted the study via Amazon's Mechanical Turk and paid participants \$1.00.

Materials and procedure. Participants completed the following materials in a fixed order, after providing informed consent and responding to demographics questions. We provide all relevant information in Supplemental Material.

Content of anticipated nostalgia. Participants read:

Often, people expect or anticipate that they will feel certain emotions when they experience future events. For example, we might anticipate that we will feel happy when we graduate from college, or we might anticipate feeling sad when a loved one dies, even if these experiences will not happen anytime soon. We are interested in the different emotions that people might anticipate experiencing about future events or achievements, and how that feels right now in the present.

Nostalgia is defined as a 'sentimental longing for one's past,' or as feeling sentimental for a fond and valued memory from one's personal past. Even though nostalgia is a feeling about past memories, people may imagine experiencing something in the future, or the progression of a current experience coming to an end in the future, and anticipate then feeling nostalgic about it.

Participants subsequently listed, in an open-ended format, any experiences about which they felt anticipated nostalgia (Table 1). They checked a box, if they were unable to think of any such experience (10% of them did so). Next, participants read a list of 23 present and future experiences/objects and rated how nostalgic they generally anticipated feeling about each item (0 = *not applicable*, 1 = *not at all*, 6 = *very much*; Table 2). We adapted the items from the Nostalgia Inventory (Batcho, 1995) and directed participants to focus on the present and future (e.g., "My current family," "Places I am planning to go"). We excluded the item concerning not knowing sad or evil things, and added four items that we considered

highly relevant to anticipated nostalgia but that were not represented in the Nostalgia Inventory (e.g., “My children growing up,” “Social relationships I’m currently seeking”). We excluded “not applicable” responses from analyses.

Affective signature of anticipated nostalgia. First, participants listed, in an open-ended format, “all feelings and emotions that you have when anticipating nostalgia about your life experience(s)” (Table 4). Second, participants read a list of 17 affective responses and rated the extent to which their experience(s) of anticipated nostalgia produced each one (1 = *not at all*, 6 = *very much*; Table 5). We derived 15 of these affective responses from the prototypical features of nostalgia identified by Hepper et al. (2012; e.g., “emotional or sentimental,” “comforted or warm,” “longing or yearning”). Further, considering the motivational properties of anticipated emotions (Ahn et al., 2014; Grant & Wrzesniewski, 2010; Renner, Lindenmeier, Tscheulin & Drevs, 2013), we added two items to capture the putative energizing properties of anticipated nostalgia (i.e., “excited,” “motivated or energetic”).

Results and Discussion

Content of anticipated nostalgia.

Coding of open-ended responses. Ninety percent of participants reported they could recall an experience of anticipated nostalgia, underscoring its prevalence in daily life. Participants listed between 0-15 objects of anticipated nostalgia ($M = 3.34$, $SD = 2.60$), totaling 699 objects. We coded these objects using 19 categories, 12 of which were based on the Nostalgia Inventory (e.g., “parents/other family,” “friends, classmates or colleagues,” “pets or animals;” Batcho, 1995). The remaining seven were based on research on the content of nostalgia (e.g., “personal achievements” such as graduating from university or getting promoted at work, “significant possessions” such as getting a new car or purchasing a rare coin, and “life stages” such as being at school or being young; Hepper et al., 2012; Wildschut et al., 2006). A trained research assistant (RA) coded each object into one of the 19 categories (or noted, if they were unclassifiable or failed to follow instructions). The second author coded 40% of objects and confirmed the reliability of the coding scheme; Krippendorff’s $\alpha = .780$, 95% CI [.732, .832]. We retained for analysis the categories applied by the first coder.

Table 1 displays the frequencies of the 19 categories.

The two most frequent categories of objects of anticipated nostalgia were children (22.89%) and romantic relationships (13.16%). They were followed by important personal achievements (10.73%) and transitions (9.44%), respectively. Travel/holiday/vacation (5.29%), parents/other family (5.15%), unspecified family (4.58%), and friends/classmates (2.86%) also figured repeatedly. In total, categories of objects pertaining to interpersonal relationships accounted for almost half (48.64%) of responses.

Ratings of common objects of anticipated nostalgia. We conducted an exploratory factor analysis on the ratings of common objects of anticipated nostalgia, using principal axis factoring with oblique (oblimin) rotation. The scree plot identified three factors (Table 2; the rank-order of each rated object is displayed in Table 3), which explained 48.01% of the total variance. We aggregated the items within each factor. Participants indicated that they anticipated feeling most nostalgic about their interpersonal relationships (7 items; e.g., “my current family;” $\alpha = .78$; $M = 4.72$, $SD = 0.99$), followed by their goals and plans (3 items; e.g., “personal goals I am currently working on;” $\alpha = .74$; $M = 4.35$, $SD = 1.21$), and their current life and culture (9 items; e.g., “the way people are;” $\alpha = .81$; $M = 3.67$, $SD = 1.03$). The three means differed significantly from one another, $t_s(198) > 4.45$, $p_s < .001$, $d_s > .339$, corroborating the notion that interpersonal relationships are a prominent object of anticipated nostalgia.

Affective signature of anticipated nostalgia.

Coding of open-ended responses. Participants listed between 0-21 affective responses to anticipated nostalgia ($M = 3.79$, $SD = 2.94$; three participants did not provide any responses). The RA coded all 769 affective responses into one of 20 categories based on the affectively-relevant features in the prototype of nostalgia (e.g., “pride/success,” “comfort/warmth;” Hepper et al., 2012, 2014). The second author coded 40% of responses and confirmed the reliability of the coding scheme, Krippendorff’s $\alpha = .904$, 95% CI [.863, .937]. We retained the categories applied by the first coder for analysis.

Overall, 543 affective responses were captured by the coding scheme (70.61%). An additional 182 responses (23.67%) were valid but not captured by the coding scheme (e.g.,

“inspired,” “excited”) and were initially coded as “unclassifiable.” We excluded the remaining 44 (5.72%) invalid responses that did not describe a feeling (e.g., “memorial,” “getting my dream car”). Among the responses captured by the coding scheme, the most common category of affective responses that participants reported feeling was happiness, followed by sadness, anxiety, social or relational sentiments (e.g., compassion, love), pride, and comfort/warmth (Table 4). These six most frequent categories accounted for 52.80% of all responses. Several participants also stated that anticipated nostalgia gave rise to mixed or bittersweet feelings (3.51%).

The RA and the second author then independently condensed the remaining 182 valid but unclassifiable affective responses into thematic categories based on their semantic meaning. Synonyms were identified using a thesaurus and assigned to 16 thematic categories (e.g., “curious” and “intrigued” were both coded as curious). The coders agreed on 154 (84.62%) responses, with discrepancies reflecting tendencies to form larger versus smaller thematic categories ($n = 23$) or varying interpretations ($n = 5$). All discrepancies were resolved by discussion between the coders. Table 4 displays the final thematic categories ascribed to at least three participants. Among the thematic categories applicable to at least five participants, three themes emerged: (1) future-orientation, (e.g., anticipation, excitement, hope/optimism, determination, uncertainty), (2) gratitude (e.g., thankful, appreciative), and (3) anger or hostility (e.g., hostile, annoyance).

Ratings of affective responses. Participants rated the extent to which anticipated nostalgia gave rise to 17 affective responses. Exploratory factor analysis of these ratings identified three factors (Table 5; the rank order of each rated emotion is displayed in Table 6), which explained 60.07% of the total variance. We aggregated the items within each factor. The factor with the highest mean rating was bittersweet reflection (4 items; e.g., “bittersweet or mixed feelings,” “longing or yearning;” $\alpha = .60$; $M = 4.69$, $SD = 0.91$), followed by positive affect (6 items; e.g., “excited,” “happy;” $\alpha = .88$; $M = 4.04$, $SD = 1.24$), and negative affect (6 items; e.g., “regret,” “sad or depressed;” $\alpha = .87$; $M = 2.95$, $SD = 1.30$). The three means differed significantly from one another, $t_s(202) > 6.33$, $ps < .001$, $d_s > .591$. This indicates that, whereas anticipated nostalgia is bittersweet, it also gives rise to more positive

than negative affect.

Summary. The majority of participants believed they could anticipate feeling nostalgic for life experiences when looking back on them in the future. Both the open-ended responses and ratings of common objects of anticipated nostalgia revealed that it features most prominently interpersonal relationships, followed by personal experiences such as one's achievements, goals, and plans. The predominance of positive over negative affect was also consistent in both the open-ended responses and ratings of affective responses involved in anticipated nostalgia. It is worth noting that bittersweet reflection received the highest ratings as an affective response. Yet, the equivalent open-ended responses (mixed or bittersweet feelings, longing, missing, wishing, and wanting to return to the past) only accounted for 9.36% of the total. This is perhaps because most participants listed components of the mixed affective responses (e.g., "sad" and "happy"), but did not produce the higher order category label (e.g., "bittersweet"). Indeed, 50 (24.63%) participants provided responses that contributed to both the "happiness" and "sadness" categories. Specifically, out of the 140 "happiness" and 102 "sadness" entries, 123 (51%) were reported by these participants.

Study 2

In Study 2, we examined the construct validity of anticipated nostalgia (Cronbach & Meehl, 1955) by testing two hypotheses. The first hypothesis concerned the triggers of anticipated nostalgia. In Study 1, we obtained evidence that anticipated nostalgia is a predominantly positive emotion. A key implication is that an event evaluated as positive should be more likely to trigger anticipated nostalgia. This would also be consistent with the focus of past-oriented nostalgia on positive or fond memories (Hepper et al., 2012; Wildschut et al., 2006). The second hypothesis concerned the self-regulatory effort to savor an unfolding experience that one anticipates being nostalgic about in the future. Savoring is one mechanism through which nostalgic memories are created (Biskas et al., 2018). Hence, in Study 2 we measured savoring of current experiences in the anticipation of loss. We hypothesized that anticipated nostalgia would be linked with increased self-regulatory effort to capture and retain details of an event as it unfolds.

Method

Participants. Two hundred Virginia Commonwealth University (VCU) undergraduates completed the study online (137 women, 63 men; $Range_{AGE} = 18-37$, $M_{AGE} = 20.11$, $SD_{AGE} = 2.72$).

Materials and procedure. Participants first read that the study concerned how people think about the future as they come closer to a major life transition, such as university graduation. They then rated their current experience at university ($-3 = extremely\ negative$, $3 = extremely\ positive$): “How would you describe your experience at VCU thus far?” ($M = 1.50$, $SD = 1.04$). Next, participants rated the extent to which they anticipated feeling nostalgic in the future for the current period in their life. This new measure of anticipated nostalgia comprised eight items (e.g., “In the future, I will miss the people from this period of my life,” “In the future, I will reminisce about this period in my life;” $1 = strongly\ disagree$, $6 = strongly\ agree$; $\alpha = .89$; $M = 4.62$, $SD = 0.85$). To bypass experimental demand, we excluded the word “nostalgia” from all items. The mean rating was above the scale midpoint (3.5 ; $t[199] = 18.76$, $p < .001$, $d = 1.33$), indicating that, on average, undergraduates who contemplated going through life transition experienced high levels of anticipated nostalgia. Finally, participants rated 12 items assessing the extent to which they savored their current university experience over the past few weeks in the anticipation of loss. Sample items are: “I spend time with people I know I may not be around much longer,” “I attend events that are unique to the area (e.g., festivals, concerts),” “I buy paraphernalia (e.g., t-shirts, souvenirs) associated with this period of my life” ($1 = strongly\ disagree$, $6 = strongly\ agree$; $\alpha = .85$; $M = 3.94$, $SD = 0.88$).

Results and Discussion

Positive evaluation of the current university experience was related to increased anticipated nostalgia, $r(200) = .36$, $p < .001$. Furthermore, higher levels of anticipated nostalgia were positively associated with deliberate savoring of the current university experience in the anticipation of loss, $r(200) = .41$, $p < .001$. Study 2 thus furnished evidence for the hypothesized positive links between anticipated nostalgia and two conceptually related constructs: positive evaluation and savoring of a current life event in the anticipation of loss. Support for these hypotheses provides construct validation (Cronbach & Meehl,

1955) for the new measure of anticipated nostalgia and points to the self-regulatory implications of anticipated nostalgia.

Study 3

In Study 3, we attempted to replicate and extend the findings of Study 2, using a longitudinal design. We first assessed anticipated nostalgia shortly before an important life transition (i.e., graduation) took place (Time 1) and tested whether it was associated with: (1) participants' positive evaluation of life before transition and (2) their efforts to savor the experiences that they anticipated being nostalgic about in the future. To establish convergent validity, we assessed these two constructs using alternative measures (vis-à-vis Study 2). We assessed positive evaluation by examining the extent to which participants considered life before the transition as meaningful. We assessed savoring in the anticipation of loss by examining the intention to preserve pleasant memories for later recollection.

We also sought to extend the findings of Study 2 by examining the predictive validity of anticipated nostalgia and its implications for psychological functioning. We assessed nostalgia 4-9 months after graduation (Time 2) and hypothesized that anticipated nostalgia at Time 1 would predict nostalgia at Time 2. At Time 2, we also measured self-esteem, social connectedness, and meaning in life. We hypothesized that, in replication of past findings (Sedikides, Wildschut, Routledge, Arndt, et al., 2015), nostalgia would be associated with greater self-esteem, social connectedness, and meaning. Further, we tested a mediation model whereby anticipated nostalgia at Time 1 predicts greater self-esteem, social connectedness, and meaning in life at Time 2, via Time 2 nostalgia (Figure 1).

Method

Participants. One hundred and sixty-eight undergraduate and graduate students at University of Southampton took part at Time 1 (T1) during the day of their graduation ceremony (115 women, 52 men, 1 undisclosed gender; $Range_{AGE} = 20-55$, $M_{AGE} = 22.35$, $SD_{AGE} = 4.00$). At Time 2 (T2), which was 4-9 months after T1, 67 participants (39.9% of the original sample) completed the survey online for a chance to win a £50 Amazon voucher (51 women, 15 men, 1 undisclosed gender; $Range_{AGE} = 20-55$, $M_{AGE} = 22.16$, $SD_{AGE} = 4.38$).

Analyses involving T1 included all 168 participants, whereas analyses involving both T1 and T2 included 67 participants.

Procedure and materials. At T1, under the heading: “Thinking About Your University Life”, we assessed anticipated nostalgia, perceived meaningfulness of university life, and intention to preserve pleasant memories. We used very brief scales to enhance the study’s completion rate, because participants had limited availability on their graduation day. We assessed anticipated nostalgia using two items that we constructed for the purpose of this study (1 = *not at all*, 6 = *very strongly*): “How strongly do you think you will miss your university life?” and “How strongly do you think you will feel nostalgic about your university life?” ($r[166] = .74$, $M = 4.48$, $SD = 1.25$). We assessed perceived meaningfulness of university life using one item (1 = *not meaningful*, 6 = *very meaningful*): “How meaningful is your university life to you?” ($M = 4.64$, $SD = 1.08$). Finally, we assessed intention to preserve pleasant memories, an indicator of savoring, with one item (0 = *not applicable*; 1 = *not at all*, 6 = *very much so*): “If you took any photographs, was it to save the pleasant memories for later recollection?” ($M = 4.35$, $SD = 1.40$; “not applicable” responses were not included in the analysis).

At T2, we assessed participants’ nostalgia for university life. Participants first read that nostalgia is defined by the *New Oxford Dictionary of English* as “a sentimental longing for the past” (1998, p. 1266). The T2 nostalgia measure comprised three items (1 = *strongly disagree*, 6 = *strongly agree*): “Thinking about my university life leaves me feeling nostalgic,” “I feel nostalgic when I think about my university life,” and “My university life is a nostalgic experience for me” ($\alpha = .96$, $M = 4.35$, $SD = 1.33$).

Next, we assessed T2 self-esteem, T2 social connectedness, and T2 meaning in life using items adapted from Hepper et al. (2012). All items were preceded by the stem “Thinking about my University life makes me feel...” (1 = *strongly disagree*, 6 = *strongly agree*). Two items each measured self-esteem: “good about myself” and “like myself better” ($r[66] = .65$, $p < .001$; $M = 3.93$, $SD = 1.06$); social connectedness: “loved” and “trust others” ($r[66] = .71$, $p < .001$; $M = 3.67$, $SD = 1.22$); and meaning: “life is meaningful” and “life has a purpose” ($r[66] = .90$, $p < .001$; $M = 4.02$, $SD = 1.21$).

Results and Discussion

Anticipated nostalgia at T1 was positively associated with perceived meaningfulness of university life, $r(166) = .51, p < .001$, and the intention to preserve pleasant memories for later recollection, $r(147) = .43, p < .001$. Hence, we conceptually replicated findings of Study 2. Further, a one-sample t-test revealed that anticipated nostalgia was above the scale midpoint (3.5), $t(165) = 10.15, p < .001, d = 0.79$, indicating that anticipated nostalgia was commonly experienced by graduating university students facing this life transition.

Of importance, anticipated nostalgia at T1 predicted stronger nostalgia at T2, $r(66) = .56, p < .001$. Participants who anticipated feeling nostalgic about university life indeed felt more nostalgic a few months after leaving university. In turn, nostalgia for university life at T2 was associated with stronger self-esteem, social-connectedness, and meaning in life, $r(66) = .49, p < .001, r(66) = .42, p = .001, r(66) = .42, p < .001$, respectively. These findings provide a basis for testing whether anticipated nostalgia before a life transition conduces to stronger nostalgia after experiencing the life transition, which then imbues individuals with self-esteem, social connectedness, and meaning in life.

Self-esteem was positively associated with social connectedness and meaning in life, $r(66) = .39, p = .001$, and $r(66) = .56, p < .001$, respectively. Social connectedness was also positively associated with meaning in life, $r(66) = .44, p < .001$. Given that these three domains of psychological functioning are conceptually and empirically distinct (although related), we analyzed them separately in the following mediation model.

Mediation analyses. We estimated the Figure 1 model using AMOS within SPSS. In this model, we allowed the error terms of self-esteem, social connectedness, and meaning in life to covary in order to control for shared method variance. We calculated bias-corrected 95% bootstrap confidence intervals (CIs) and bootstrap standard errors for direct and indirect effects (10,000 bootstrap samples). Table 7 displays tests of direct and indirect effects. All but three direct effects (i.e., paths shown in Figure 1) were significant. Anticipated nostalgia at T1 increased T2 nostalgia (path a). Anticipated nostalgia at T1 did not directly increase T2 self-esteem (path b), social connectedness (path c), or meaning in life (path d). Controlling

for T1 anticipated nostalgia, T2 nostalgia predicted increased T2 self-esteem (path e), social connectedness (path f), and meaning in life (path g).

In addition to these direct effects, all indirect effects in Figure 1 were significant. Consistent with the possibility that T2 nostalgia mediates the positive associations of T1 anticipated nostalgia with T2 self-esteem, social connectedness, and meaning in life, the sequential paths from T1 anticipated nostalgia, via T2 nostalgia, to T2 self-esteem (path a * path e), social connectedness (path a * path f), and meaning in life (path a * path g) were all significant.

To assess model fit, we first trimmed the non-significant direct paths from T1 anticipated nostalgia to T2 self-esteem (path b), social connectedness (path c), and meaning in life (path d). We then calculated fit indices for the resultant non-saturated model (Figure 1, minus paths b, c, and d). This model provided good fit: $\chi^2(2, N = 66) = 3.29, p = .35, SRMSR = .04, RMSEA = .038, CFI = 0.99$.

We also tested alternative models exploring the position of T2 nostalgia in the postulated causal sequence. Given that anticipated nostalgia was measured at T1, T2 nostalgia cannot precede anticipated nostalgia. However, T2 self-esteem, social connectedness, and meaning in life could precede T2 nostalgia. Hence, we tested an alternative model in which T2 self-esteem, social connectedness, and meaning in life served as parallel mediators of the association between T1 anticipated nostalgia and T2 nostalgia. The fit of the alternative model was poor: $\chi^2(1, N = 66) = 14.66, p < .001, SRMSR = .09, RMSEA = .46, CFI = .84$. Hence, we retained the original model, in which T2 nostalgia precedes T2 self-esteem, social connectedness, and meaning in life.

General Discussion

Anticipated nostalgia, a new construct, has not previously received empirical attention. To capture its profile, we assessed its prevalence, content, and affective signature by asking participants to describe and evaluate their anticipated nostalgia experiences and associated affective responses. We also examined the implications of anticipated nostalgia for self-regulation, and its prospective relation to nostalgia and psychological functioning at a later time.

The Profile of Anticipated Nostalgia

In three studies, we obtained consistent evidence that anticipated nostalgia is a prevalent emotion. In Study 1, 90% of participants could identify at least one target about which they experienced anticipated nostalgia. In Studies 2 and 3, ratings of anticipated nostalgia were consistently above the scale mid-point. We also assessed what constitute the most common life experiences about which people anticipate feeling nostalgic, and the affective composition of anticipated nostalgia. In Study 1, findings drawn from open-ended responses and ratings converged in demonstrating that anticipated nostalgia predominantly concerns close relationships. Other than social relationships, personal achievements or goals are also prominent objects of anticipated nostalgia, with additional life and cultural experiences featuring less prominently. The content of anticipated nostalgia dovetails with that of actual, experienced nostalgia, which typically entails social interaction with close others in the context of momentous life events (Hepper et al., 2012; Wildschut et al., 2006). People seem to have good insight about the sources of their future nostalgia. These findings also align with open-ended descriptions of the related construct of anticipatory nostalgia in Batcho and Shikh (2016, Study 3).

As for its affective signature, anticipated nostalgia involves a mixture of positive and negative emotions, and the higher order emotion of bittersweetness. Interestingly, anticipated nostalgia includes other key affective components, including excitement, optimism, and curiosity about the future, as well as gratitude for what one has or anger for what one might lose. These bittersweet, future-oriented, and approach-oriented emotions mark the affective profile of anticipated nostalgia. Again, these features resemble those of experienced nostalgia, which commonly encompasses both positive and negative emotions (albeit more positive than negative; Sedikides & Wildschut, 2016a), and has high relevance to the future (e.g., curiosity, growth, optimism, inspiration; Sedikides & Wildschut, 2016b) and approach-oriented motivation (Sedikides et al., 2018; Stephan et al., 2014). One discernible difference between anticipated and experienced nostalgia is that anticipated nostalgia motivates attempts to savor present experiences as they unfold to preserve them for future recollection.

Implications of Anticipated Nostalgia

We found that anticipated nostalgia has implications for self-regulation, as revealed by its positive associations with appreciation of current life and an active effort to capture it. Specifically, when experiencing positive life events, individuals were more likely to feel anticipated nostalgia and also savor these experiences by engaging in activities that help preserve their memories (e.g., purchasing items with nostalgic potential, taking photographs). Such self-regulatory effort may bridge the gap between the actual and envisioned amount of time spent remembering personal experiences. Individuals overestimate how frequently they will remember positive experiences and underestimate the difficulty of bringing these experiences to mind when not being prompted (Tully & Meyvis, 2017). Given that anticipated nostalgia is associated with savoring in the anticipation of loss (e.g., acquiring keepsakes, taking photographs), it is likely to facilitate actual remembering and bring it in line with envisioned remembering. Future research can investigate whether anticipated nostalgia indeed reduces the gap between actual and intended recollection of positive life experiences. If so, future inquiry should devise practical strategies to inspire more engagement in anticipated nostalgia. For example, before going through important life transitions, one can take part in more social events and rituals that galvanize reflection on one's current life, and also take photographs to capture the moment.

We found, in addition, that anticipated nostalgia shapes the future. In Study 3, anticipated nostalgia measured shortly before a life transition predicted nostalgia a few months after the transition took place. People correctly forecasted that they would feel nostalgic in the future, and savored unfolding experiences to facilitate and enhance future nostalgia. That future nostalgia, in turn, was associated with increased self-esteem, social connectedness, and meaning. These findings are consistent with prior research that personal nostalgia confers pivotal psychological benefits (Sedikides & Wildschut, 2018, 2019, in press; Sedikides, Wildschut, Routledge, Arndt, et al., 2015) and identified anticipated nostalgia as a precursor to deliberate savoring and preservation of positive life experiences for later nostalgic reverie.

Anticipated Nostalgia versus Anticipatory Nostalgia

Although both anticipated and anticipatory nostalgia often focus on interpersonal relationships, the two constructs are distinct. Following Davis' (1979) original formulation, we defined *anticipated* nostalgia as the anticipation of feeling nostalgic for present and future experiences, at a relatively distant point in the future. Thus, whereas in our definition one expects nostalgia to arise in the *future* when *looking back* on life events, Batcho and Shikh's (2016) alternative concept of *anticipatory* nostalgia entails that one experiences nostalgia prematurely in the *present* when *looking ahead* to life events (specifically, future losses). Our findings highlight at least three key differences between the two constructs. First, they have distinct affective signatures. Our findings indicate that *anticipated* nostalgia is a bittersweet, but predominantly positive emotion, which more closely mirrors the emotional profile of nostalgia. In their investigation of trait-like individual differences, Batcho and Shikh reported that *anticipatory* nostalgia is associated with sadness, anxiety, emotional distancing, and difficulty in enjoying the present. Second, anticipated nostalgia is approach-oriented and contributes to optimal psychological functioning, whereas Batcho and Shikh (2016) found that anticipatory nostalgia related to less optimal outcomes such as worry and low resilience. Third, anticipatory nostalgia has thus far been measured in a way that focuses on aversive or existentially threatening scenarios (e.g., "Times with family or friends won't last forever," "Life will become more complicated"; Batcho & Shikh, 2016), whereas we used more neutrally phrased items to assess the extent to which participants anticipate feeling nostalgic about their current life (e.g., "Things I do currently," "My friends I have"). These differences indicate that anticipated nostalgia is a construct distinct from anticipatory nostalgia. Future research might explore their inter-relation.

Limitations and Constraints on Generality

Whereas our studies converged in revealing the ubiquity and self-regulatory relevance of anticipated nostalgia, future work would do well to address a number of limitations. First, Studies 2-3 assessed anticipated nostalgia in relation to a specific life transition: graduation. We expect that our results generalize to other life transitions. Future investigations can evaluate transitions such as moving to another country, becoming a parent, and retiring from

gainful employment. A second limitation is that Studies 2-3 relied on student samples. As a consequence, the results may hold only for a younger population. It would be beneficial to test whether the self-regulatory relevance of anticipated nostalgia, and its impact on psychological functioning, apply across contexts and for people of varying age groups. Further limitations are that, in Study 3, we only retained 39.9% of the original sample and we only used very brief scales due to time constraints of the graduates on their graduation day. The study, though, served as a first step in establishing the predictive validity of anticipated nostalgia. Future investigations will do well to test the replicability and robustness of our findings in larger and more diverse samples, and use longer scales to assess the key variables. Finally, we only assessed three functions of nostalgia linked to the self-oriented, sociality, and existential domains. Follow-up work should include additional functions, such as self-continuity (Sedikides, Wildschut, Routledge, & Arndt, 2015), inspiration (Stephan et al., 2015), optimism (Cheung et al., 2013), and motivation (Sedikides et al., 2018). By extension, future research should also evaluate the relevance of anticipated nostalgia for broader domains of wellbeing, such as resilience. Resilience entails the ability to bounce back and return to optimal functioning after stressful events, as well as the capacity to withstand life's challenges (Zautra, 2009). Given that anticipated nostalgia is associated with savoring, and thereby facilitates the retention of positive memories, it may build psychological resources and resilience (cf. Wildschut, Sedikides, & Alowidy, 2019).

Coda

Anticipated nostalgia has implications for autobiographical memory, self-regulation, and psychological functioning. We hope that our findings provide the impetus for future research on content, emotional profile, and functions of this new and understudied psychological phenomenon.

References

- Abeyta, A., Routledge, C., Roylance, C., Wildschut, R. T., & Sedikides, C. (2015). Attachment-related avoidance and the social and agentic content of nostalgic memories. *Journal of Social and Personal Relationships, 32*, 406-413. doi:10.1177/0265407514533770
- Abraham, C., & Sheeran, P. (2003). Acting on intentions: The role of anticipated regret. *British Journal of Social Psychology, 42*, 495-511. doi:10.1348/014466603322595248
- Ahn, H. K., Kim, H. J., & Aggarwal, P. (2014). Helping fellow beings: Anthropomorphized social causes and the role of anticipatory guilt. *Psychological Science, 25*, 224-229. doi:10.1177/0956797613496823
- Atance, C. M., & O'Neill, D. K. (2001). Episodic future thinking. *Trends in Cognitive Sciences, 5*, 533-539. doi:10.1016/S1364-6613(00)01804-0
- Baldwin, M., & Landau, M. J. (2014). Exploring nostalgia's influence on psychological growth. *Self and Identity, 13*, 162-177. doi:10.1080/15298868.2013.772320
- Batcho, K. I. (1995). Nostalgia: A psychological perspective. *Perceptual and Motor Skills, 80*, 131-143. doi:10.2466/pms.1995.80.1.131
- Batcho, K. I. (2007). Nostalgia and the emotional tone and content of song lyrics. *The American Journal of Psychology, 120*, 361-381.
- Batcho, K. I., & Shikh, S. (2016). Anticipatory nostalgia: Missing the present before it's gone. *Personality and Individual Differences, 98*, 75-84. doi:10.1016/j.paid.2016.03.088
- Baumeister, R. F., Vohs, K. D., DeWall, C. N., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review, 11*, 167-203. doi:10.1177/1088868307301033
- Baumgartner, H., Pieters, R., & Bagozzi, R. P. (2008). Future-oriented emotions: conceptualization and behavioral effects. *European Journal of Social Psychology, 38*, 685-696. doi:10.1002/ejsp.467
- Biskas, M., Cheung, W. Y., Juhl, J., Sedikides, C., Wildschut, T., & Hepper, E. G. (2018). A prologue to nostalgia: savouring creates nostalgic memories that foster optimism. *Cognition and Emotion*. Advance online publication. doi:10.1080/02699931.2018.1458705

- Bryant, F. B. (2003). Savoring Beliefs Inventory (SBI): A scale for measuring beliefs about savoring. *Journal of Mental Health, 12*, 175–196. doi:10.1080/0963823031000103489
- Bryant, F. B., & Veroff, J. (2007). *Savoring: A new model of positive experience*. Mahwah, NJ: Erlbaum.
- Cheung, W. Y., Wildschut, T., Sedikides, C., Hepper, E. G., Arndt, J., & Vingerhoets, A. J. (2013). Back to the future: Nostalgia increases optimism. *Personality and Social Psychology Bulletin, 39*, 1484-1496. doi:10.1177/0146167213499187
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*, 281-302.
- Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia*. New York, NY: Free Press.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160. doi: 10.3758/BRM.41.4.1149
- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. In B. M. Staw & A. P. Brief (Eds.), *Research in organizational behavior* (Vol. 28, pp. 3–34). Greenwich, CT: JAI Press.
- Grant, A. M., & Wrzesniewski, A. (2010). I won't let you down... or will I? Core self-evaluations, other-orientation, anticipated guilt and gratitude, and job performance. *Journal of Applied Psychology, 95*, 108-121. doi:10.1037/a0017974
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3-24). New York, NY: Guilford.
- 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
- Holak, S. L., & Havlena, W. J. (1992). Nostalgia: An exploratory study of themes and emotions in the nostalgic experience. *Advances in Consumer Research, 19*, 380–386.

- Holbrook, M. B. (1993). Nostalgia and the consumption preferences: Some emerging patterns of consumer tastes. *Journal of Consumer Research*, *20*, 245-256.
- Lindsey, L. L. M. (2005). Anticipated guilt as behavioral motivation: An examination of appeals to help unknown others through bone marrow donation. *Human Communication Research*, *31*, 453-481. doi:10.1093/hcr/31.4.453
- Mellers, B. A., & McGraw, A. P. (2001). Anticipated emotions as guides to choice. *Current Directions in Psychological Science*, *10*, 210-214. doi: 10.1111/1467-8721.00151
- Nelissen, R., Van Someren, D. S., & Zeelenberg, M. (2009). Take it or leave it for something better? Responses to fair offers in ultimatum bargaining. *Journal of Experimental Social Psychology*, *45*, 1227-1231. doi:10.1016/j.jesp.2009.06.004
- Pletti, C., Lotto, L., Tasso, A., & Sarlo, M. (2016). Will I regret it? Anticipated negative emotions modulate choices in moral dilemmas. *Frontiers in Psychology*, *7*, 1918. doi:10.3389/fpsyg.2016.01918
- Renner, S., Lindenmeier, J., Tschulin, D. K., & Drevs, F. (2013). Guilt appeals and prosocial behavior: An experimental analysis of the effects of anticipatory versus reactive guilt appeals on the effectiveness of blood donor appeals. *Journal of Nonprofit and Public Sector Marketing*, *25*, 237-255. doi:10.1080/10495142.2013.816595
- Roberts, W. A., & Feeney, M. C. (2009). The comparative study of mental time travel. *Trends in Cognitive Sciences*, *13*, 271-277. doi:10.1016/j.tics.2009.03.003
- Routledge, C., Arndt, J., Sedikides, C., Wildschut, T., Hart, C. M., Juhl, J., & Schlotz, W. (2011). The past makes the present meaningful: Nostalgia as an existential resource. *Journal of Personality and Social Psychology*, *101*, 638-652. doi:10.1037/a0024292
- Routledge, C., Sedikides, C., Wildschut, T., & Juhl, J. (2013). Finding meaning in the past: Nostalgia as an existential resource. In K. Markman, T. Proulx, & M. Lindberg (Eds.), *The psychology of meaning* (pp. 297-316). Washington, DC: American Psychological Association.
- Routledge, C., Wildschut, T., Sedikides, C., Juhl, J., & Arndt, J. (2012). The power of the past: Nostalgia as a meaning-making resource. *Memory*, *20*, 452-460. doi:10.1080/09658211.2012.677452

- Sandberg, T., & Conner, M. (2008). Anticipated regret as an additional predictor in the theory of planned behaviour: A meta-analysis. *British Journal of Social Psychology, 47*, 589-606. doi:10.1348/014466607X258704
- Schacter, D. L., Benoit, R. G., & Szpunar, K. K. (2017). Episodic future thinking: Mechanisms and functions. *Current Opinion in Behavioral Sciences, 17*, 41-50. doi:10.1016/j.cobeha.2017.06.002
- Sedikides, C., Cheung, W. Y., Wildschut, T., Hepper, E. G., Baldursson, E., & Pedersen, B. (2018). Nostalgia motivates pursuit of important goals by increasing meaning in life. *European Journal of Social Psychology, 48*, 209-216. doi:10.1002/ejsp.2318
- Sedikides, C., & Wildschut, T. (2016a). Nostalgia: A bittersweet emotion that confers psychological health benefits. In A. M. Wood & J. Johnson (Eds.), *Wiley handbook of positive clinical psychology* (pp. 25-36). Hoboken, NJ: Wiley.
- Sedikides, C., & Wildschut, T. (2016b). Past forward: Nostalgia as a motivational force. *Trends in Cognitive Sciences, 20*, 319-321. doi: 10.1016/j.tics.2016.01.008
- Sedikides, C., & Wildschut, T. (2018). Finding meaning in nostalgia. *Review of General Psychology, 22*, 48-61. doi:10.1037/gpr0000109
- Sedikides C., & Wildschut, T. (2019). The sociality of personal and collective nostalgia. *European Review of Social Psychology, 30*(1), 23-173. doi:10.1080/10463283.2019.1630098
- Sedikides, C., & Wildschut, T. (in press). The motivational potency of nostalgia: The future is called yesterday. *Advances in Motivation Science*.
- Sedikides, C., Wildschut, T., Routledge, C., & Arndt, J. (2015). Nostalgia counteracts self-discontinuity and restores self-continuity. *European Journal of Social Psychology, 45*, 52-61. doi:10.1002/ejsp.2073
- Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, 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
- Skowronski, J. J., & Sedikides, C. (2019). On the evolution of the human self: A data-driven review and reconsideration. *Self and Identity, 18*, 46-61. doi:10.1080/15298868.2017.1350601

- Stephan, E., Sedikides, C., Wildschut, T., Cheung, W. Y., Routledge, C., & Arndt, J. (2015). Nostalgia-evoked inspiration: mediating mechanisms and motivational implications. *Personality and Social Psychology Bulletin, 41*, 1395-1410. doi:10.1177/0146167215596985
- Stephan, E., Wildschut, T., Sedikides, C., Zhou, X., He, W., Routledge, C., . . . Vingerhoets, A. J. (2014). The mnemonic mover: Nostalgia regulates avoidance and approach motivation. *Emotion, 14*, 545-561. doi:10.1037/a0035673
- Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: what is mental time travel and is it unique to humans? *Behavioral and Brain Sciences, 30*, 299-313. doi:10.1017/S0140525X07001975
- Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). What's moral about the self-conscious emotions? In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 21-37). New York, NY: Guilford Press.
- The New Oxford Dictionary of English*. (1988). (J. Pearsal, Ed.). Oxford, UK: Oxford University Press.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*, 247-259. doi:10.1023/A:1023910315561
- Tully, S., & Meyvis, T. (2017). Forgetting to remember our experiences: People overestimate how much they will retrospect about personal events. *Journal of Personality and Social Psychology, 113*, 878-891. doi:10.1037/pspa0000094
- Van der Schalk, J., Bruder, M., & Manstead, A. (2012). Regulating emotion in the context of interpersonal decisions: the role of anticipated pride and regret. *Frontiers in Psychology, 3*, 513. doi:10.3389/fpsyg.2012.00513
- Van Dijke, M., Wildschut, T., Leunissen, J., & Sedikides, C. (2015). Nostalgia buffers the negative impact of low procedural justice on cooperation. *Organizational Behavior and Human Decision Processes, 127*, 15-29. doi:10.1016/j.obhdp.2014.11.005
- Van Tilburg, W. A. P., Bruder, M., Wildschut, T., Sedikides, C., & Göritz, A. S. (2019). An appraisal profile of nostalgia. *Emotion, 19*(1), 21-36. doi:10.1037/emo0000417

- Van Tilburg, W. A. P., Wildschut, T., & Sedikides, C. (2018). Nostalgia's place among self-conscious emotions. *Cognition and Emotion, 32*, 742-759.
doi:10.1080/02699931.2017.1351331
- Vess, M., Arndt, J., Routledge, C., Sedikides, C., & Wildschut, T. (2012). Nostalgia as a resource for the self. *Self and Identity, 11*, 273-284. doi:10.1080/15298868.2010.521452
- Wildschut, T., Sedikides, C., & Alowidy, D. (2019). Hanin: Nostalgia among Syrian refugees. *European Journal of Social Psychology*. Advance online publication. doi:10.1002/ejsp.2590
- 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, C., Sedikides, C., & Cordaro, F. (2011). Self-regulatory interplay between negative and positive emotions: The case of loneliness and nostalgia. In I. Nyklicek, A. J. J. M. Vingerhoets, & M. Zeelenberg (Eds.), *Emotion regulation and well-being* (pp. 67-83). New York, NY: Springer.
- Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., & Cordaro, P. (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
- Zautra, A. J. (2009). Resilience: One part recovery, two parts sustainability. *Journal of Personality, 77*, 1935-1943. doi:10.1111/j.1467-6494.2009.00605.x
- Zeelenberg, M. (1999). Anticipated regret, expected feedback and behavioral decision making. *Journal of Behavioral Decision Making, 12*, 93-106. doi: 10.1002/(SICI)1099-0771(199906)12:2<93::AID-BDM311>3.0.CO;2-S
- Zhou, X., Sedikides, C., Wildschut, T., & 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
- Zhou, X., Wildschut, T., Sedikides, C., Shi, K., & Feng, C. (2012). Nostalgia: The gift that keeps on giving. *Journal of Consumer Research, 39*, 39-50. doi:10.1086/662199

Table 1

Frequencies of Categories of Open-Ended Objects of Anticipatory Nostalgia in Study 1

Categories of objects	Examples	Frequency
Children	Becoming a parent; birth of my first child; seeing my children graduate; grandchildren being born	160
Romantic relationship	Falling in love; getting married; future anniversaries	92
Personal achievement	Graduating university; getting promoted at work; losing weight; achieving my dream career	75
Personal transitions	Moving to another home; getting my first real job; leaving my current job; retiring	66
Travel/holiday/vacation	Going on a great vacation; a Christmas holiday; traveling to different cities	37
Parents/other family	Remembering grandma after she dies; my siblings' weddings; last holiday with my mother and father	36
Unspecified family	Family reunion; visiting my family; seeing relatives	32
Life stages	My years at university; working at a job that I love; memories of my youth when I am old	32
Specific home/house	My first house; buying a dream house	22
Friends/classmates	Seeing an old friend; high school reunion; being happy with a bunch of friends	20
Pets/animals	Getting my first family pet; my aging kitties passing away	17
Significant possessions	Getting a new car; purchasing a rare coin for my collection	11
Media/culture	Going out to the movies; when I participate in a gaming tournament	9
Music/arts experience	Future concerts I may attend; getting back into singing	4
Food/drink	Eating at a great restaurant; eating certain family dishes	4
Loss/bereavement	Deaths; the inevitability of friends and family dying as I age	4
Living in an area/country	I will feel nostalgic for the city I live in after I move away	3
Job/place of study	Leaving my current work situation when I go back to school	3
Religious experience	Receiving Jesus as my personal Lord and savior and friend	2

Note. $N(\text{objects}) = 699$. 34 exemplars were deemed unclassifiable within the coding scheme and 36 did not reflect valid responses (e.g., "I don't really know what will happen in the future so I can't really say").

Table 2

Exploratory Factor Analysis of Rated Objects of Anticipatory Nostalgia in Study 1

Item	Current life/culture	Close rela- tionships	Goals and plans
The way people are	.705		
Possessions/gadgets I have now	.663		
My current heroes/heroines	.578		
The way society is	.562		
Feelings I have	.522	.302	
TV shows, movies I watch currently	.514		
Things I do currently	.460		
Music I listen to currently	.403		
Social relationships I'm currently seeking	.366		
Not having to worry ^a	.357		
Someone I love		.771	
My current family		.699	
My children growing up		.633	
My friends I have		.485	
Social relationships I'm currently maintaining		.459	
Having someone to depend on		.446	
My pets		.389	
My current house ^a			
Places I am planning to go			-.786
Holidays I am planning to take			-.714
Personal goals I'm currently working on	.308		-.406
My current workplace / place at which I study ^a			

Note. We excluded one item (“my church or religion”) from the analysis, because it did not correlate with any other item > .30 and therefore was not an appropriate candidate for factor analysis. We suppress loadings smaller than 0.30 for ease of reading. We retained loadings in bold font (significantly larger than 0.30) in subscale scores. ^aWe excluded these items from further analysis, because they did not load on any factor.

Table 3

Rank Order of Rated Objects of Anticipatory Nostalgia in Study 1

Item	Mean	SD
Someone I love	5.24	1.20
My children growing up	5.09	1.51
My current family	4.97	1.37
My pets	4.82	1.51
My friends I have	4.57	1.39
Places I am planning to go	4.44	1.48
Music I listen to currently	4.36	1.51
Personal goals I'm currently working on	4.36	1.48
Social relationships I'm currently seeking	4.29	1.42
Holidays I am planning to take	4.24	1.51
Having someone to depend on	4.18	1.56
My current house	4.13	1.60
Things I do currently	3.99	1.53
Feelings I have	3.96	1.62
Not having to worry	3.86	1.76
TV shows, movies I watch currently	3.73	1.60
Social relationships I'm currently maintaining	3.72	1.57
My current workplace / place at which I study	3.67	1.75
The way people are	3.52	1.58
My current heroes/heroines	3.35	1.71
Possessions/gadgets I have now	3.31	1.70
The way society is	3.22	1.64

Table 4

Frequencies of Categories of Emotions Involved in Anticipatory Nostalgia in Study 1

Feeling	Examples	Frequency
<i>Categories based on previous research</i>		
Happiness	Happy; joy; elated; ecstatic; pleasure; smiling	140
Sadness/depression	Sad; crying; depression; sorrow; melancholy	102
Anxiety/pain	Anxious; fear; nervous; worried; painful	67
Social feelings	Love; compassion; kind; tenderness; passionate	34
Pride/success	Pride; satisfaction; accomplishment; successful	32
Comfort/warmth	Content; secure; fondness; warm and fuzzy	31
Longing/yearning	Longing; long for old times; wistfulness	30
Bittersweet/mixed feelings	Bittersweet; emotions are really mixed; it feels both good and bad	27
Calm/relaxed	Calm; peaceful; relaxed; relief	18
Regret	Regret; remorse	13
Missing	Missing someone or something; loss	8
Loneliness	Lonely; loneliness	7
Accepting change/growth	Knowing nothing's permanent; will feel strange but happy at the long way I've come	6
Thinking/reflectiveness	Thoughtful; reflective	6
Emotional/sentimental	Emotional; sentimental	5
Lethargy/laziness	Tired; boredom	5
Wishing	Wishfulness; desire	5
Wanting to return to past	Wanting to relive those happy times	3
Dreams/daydreaming	Dreamy	2
Homesickness	Homesick	1
<i>Thematic categories generated from unclassifiable responses</i>		
Excitement	Excited; excitement	44
Gratitude	Grateful; thankful; appreciative of what I have	16
Anger/hostility	Angry; hostile; annoyance	15
Anticipation	Anticipation	12
Hope/optimism	Hope; hopeful; optimism	8
Curiosity	Curious; intrigued	5
Awe	Awe; lost in wonder	4
Confidence	Confidence; strength	4
Awareness of time passing	Amazed at how quickly time passes; awareness that nothing lasts forever	3
Confusion	Confused	3
Determination	Determined; dedication	3
Emptiness	Empty; futility	3

Frustration	Frustrated; frustration	3
Guilt	Guilty	3
Inspiration	Inspired	3
Uncertainty	Uncertain; unsure	3

Note. $N(\text{exemplars}) = 769$. 44 exemplars did not reflect valid responses. Of the 182 unclassifiable responses, all themes mentioned by more than 2 participants are listed.

Table 5

Exploratory Factor Analysis of Rated Emotions Involved in Anticipatory Nostalgia in Study 1

Item	Positive affect	Bittersweet reflection	Negative affect
Excited	.868		
Motivated or energetic	.809		
Proud	.766		
Happy	.738		
Comforted or warm	.671		
Calm or relaxed	.553		
Wishful	.365	.357	
Emotional or sentimental		.585	
Bittersweet or mixed feelings		.522	
Thoughtful		.484	
Longing or yearning		.452	
Pain or anxiety			.739
Lethargic or lazy			.689
Regret			.680
Lonely			.680
Sad or depressed			.656
Homesick		.374	.502

Note. Loadings smaller than 0.30 are suppressed for ease of reading. Loadings in bold font were retained in subscale scores. “Wishful” was excluded from subsequent analysis because its loading was ambiguous.

Table 6

Rank order of Rated Emotions Involved in Anticipatory Nostalgia in Study 1

Item	Mean	SD
Emotional or sentimental	5.01	1.27
Longing or yearning	4.68	1.31
Thoughtful	4.62	1.23
Wishful	4.46	1.35
Bittersweet or mixed feelings	4.45	1.58
Happy	4.45	1.45
Comforted or warm	4.21	1.52
Excited	4.02	1.68
Proud	3.99	1.56
Calm or relaxed	3.88	1.43
Motivated or energetic	3.73	1.58
Homesick	3.40	1.75
Sad or depressed	3.32	1.73
Lonely	3.10	1.80
Pain or anxiety	3.04	1.71
Regret	2.73	1.65
Lethargic or lazy	2.14	1.34

Table 7

Tests of Direct and Indirect Effects in Mediational Model in Study 3

Effect	Figure			
	1 path	Coeff.	SE	95% CI
Direct effects				
Anticipatory nostalgia \Rightarrow T2 Nostalgia	a	.609**	.118	.364 to .824
Anticipatory nostalgia \Rightarrow T2 Esteem	b	.141	.115	-.067 to .386
Anticipatory nostalgia \Rightarrow T2 Social	c	.101	.135	-.132 to .401
Anticipatory nostalgia \Rightarrow T2 Meaning	d	-.051	.150	-.344 to .252
T2 Nostalgia \Rightarrow T2 Esteem	e	.319**	.129	.082 to .584
T2 Nostalgia \Rightarrow T2 Social	f	.330*	.117	.077 to .529
T2 Nostalgia \Rightarrow T2 Meaning	g	.408**	.130	.150 to .648
Indirect effect: Anticipatory nostalgia \Rightarrow T2 Esteem				
Via T2 Nostalgia	a * e	.194**	.087	.056 to .398
Indirect effect: Anticipatory nostalgia \Rightarrow T2 Social				
Via T2 Nostalgia	a * f	.201**	.075	.071 to .360
Indirect effect: Anticipatory nostalgia \Rightarrow T2 Meaning				
Via T2 Nostalgia	a * g	.249**	.090	.099 to .458

Note. Coeff. = unstandardized path coefficient; Esteem = Self-esteem; Social = Social connectedness; 95% CI = 95% bootstrap confidence interval; ** $p < .01$, * $p < .05$; $N = 66$.

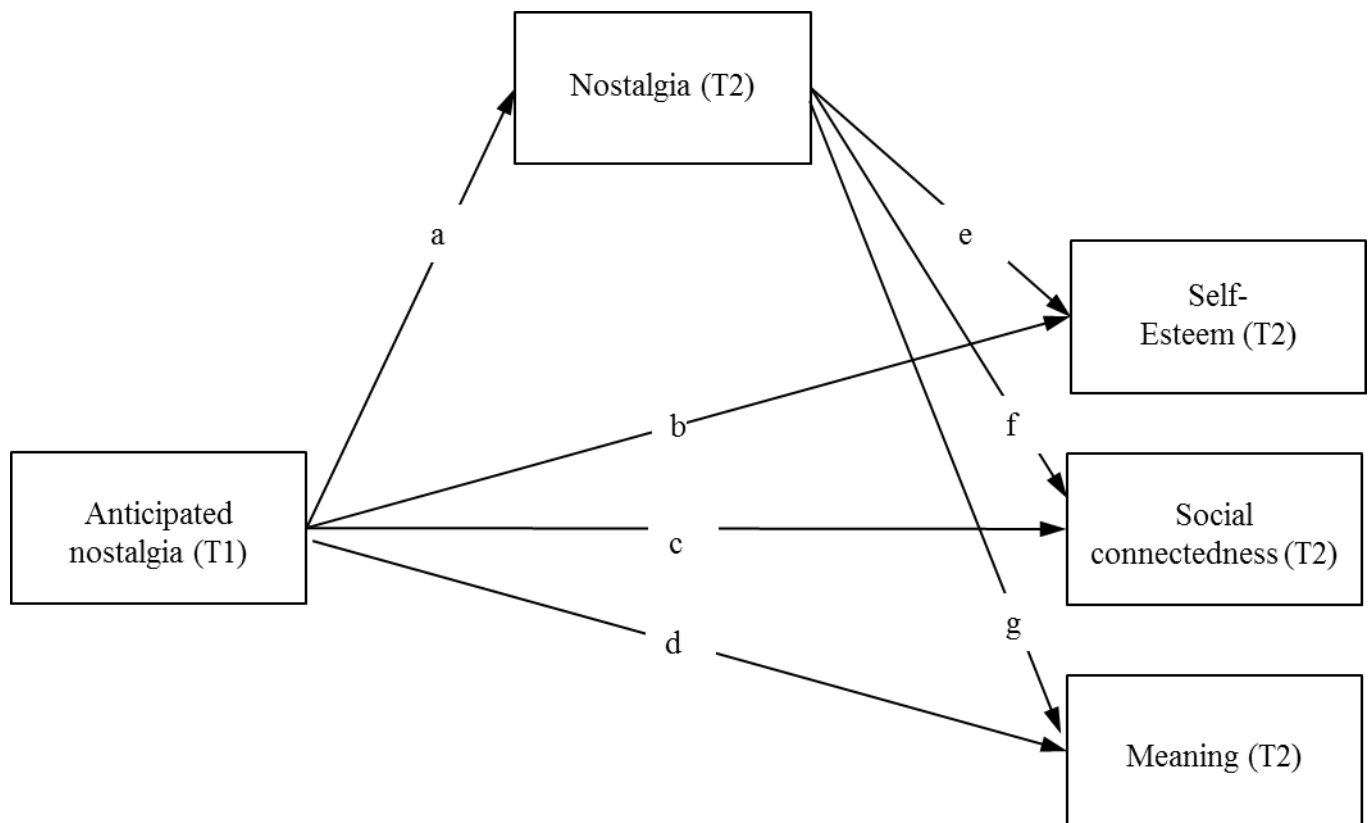


Figure 1: *Mediational Model Tested in Study 3*