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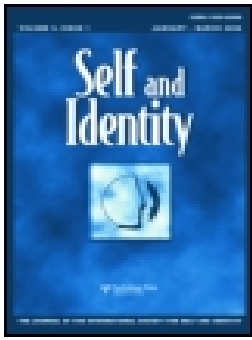
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ARTICLE



Nostalgia and temporal self-appraisal: Divergent evaluations of past and present selves

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ABSTRACT

The present research examined how nostalgia influences temporal self-appraisals and whether those appraisals relate to current mood. Across two studies, participants recalled either an ordinary or nostalgic memory and provided appraisals of their present and past selves. Participants who recalled nostalgic memories evaluated their past selves more positively than their present selves, whereas the reverse occurred for those who recalled ordinary memories. Those who recalled a positive future event also evaluated their future selves more positively than their present selves. Nostalgia simultaneously enhanced positive mood by heightening favorable evaluations of past selves and diminished positive mood by heightening unfavorable evaluations of present selves. The current work supports a temporal-selves framework that allows for a more nuanced portrait of the nostalgic experience.

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Nostalgia; temporal; self; mood

“Make America Great Again” and “Let’s Make America Great Again,” the central campaign slogans for U.S. Presidents Donald J. Trump and Ronald Reagan, respectively, appealed to a very specific human experience: nostalgia. Defined as a sentimental longing or wistful affection for the past (e.g., Pearsall, 1998), nostalgia has been a topic of discussion for centuries. We suspect that most readers have had the experience of waxing nostalgic for the “good old days.” The driving question of the present work is about that experience – how does nostalgia influence the way people feel about themselves?

First coined in the 17th century by Swiss physician Johannes Hofer (1969–1972), the term “nostalgia” was employed to describe a neurological disease that afflicted mercenaries battling in foreign lands. Symptoms included crippling anxiety, intense homesickness, bouts of melancholy, and disordered eating and sleeping (McCann, 1941). The notion that exclusively “abnormal” populations experienced nostalgia persisted well into the 20th century, as it continued to be characterized as a psychological disorder (Rosen, 1975) featuring overtones of homesickness and a sense of being uprooted.

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Author Note Consistent with emerging norms for gender inclusivity, we sometimes use they/them in the singular form. All data presented here were originally part of a master’s thesis completed by Hannah J. Osborn which included some variables not discussed in the present manuscript. Data for all studies and the original thesis are available at <https://osf.io/hmbwn/>

Academic thinking outside of the clinical domain opined that nostalgia could have deleterious psychological consequences (e.g., depression, romanticizing the past, focusing on loss; Castelnuovo-Tedesco, 1980) to the extent that temporal comparisons draw attention to negative aspects of the present-self (e.g., “look at where I was and look where I am now – I can never go back”; Peters, 1985).

Whereas early academic research on nostalgia had a generally negative bent, contemporary research suggests that nostalgia is in fact a predominantly positive experience. For instance, a content analysis of autobiographical narratives published in the periodical *Nostalgia* revealed that nostalgia primarily elicits positive affect (Wildschut et al., 2006). Additionally, nostalgia has been shown to exhibit an array of functional effects, including self-concept enhancement (Baldwin et al., 2015; Vess et al., 2012), increased social connectedness (Stephan et al., 2014; Turner et al., 2012; Zhou et al., 2012), and heightened perceptions of meaning and purpose in life (Juhl et al., 2010; Routledge et al., 2011). The current work builds upon this contemporary perspective on nostalgia, but with a different focus. Here, we examine how nostalgia influences feelings about the self in both the past and present, and we attempt to illuminate the temporal locus of mood that is associated with nostalgic reverie.

Temporal comparison and nostalgia

In a conceptual translation of Festinger's (1954) social comparison theory, Albert (1977) argued for the ubiquity of *temporal-past* comparisons: people regularly compare their current standing to their past standing. Indeed, temporal comparison processes are inherent to autobiographical memory recall (Brunot & Sanitioso, 2004; Sanitioso et al., 2006; Wilson & Ross, 2003). Further, research suggests that people engage in temporal-past comparisons more often than they compare themselves to others (Summerville & Roese, 2008; Wilson & Ross, 2000).

People engage in temporal comparisons because doing so is rewarding to one's current self. For instance, comparing one's current self to a past self can facilitate perceptions of self-improvement over time (e.g., Gürel et al., 2020; Ross & Wilson, 2000), and contemplating a future self can aid in motivation and pursuit of long-term goals (Peetz & Wilson, 2013). As such, when people engage in temporal comparison, they typically do so in ways that improve their evaluations of their present selves (Ross & Wilson, 2003). If a past self is evaluated positively, people often try to *assimilate* toward it by construing their past self as similar to their present self. By contrast, if a past self is evaluated negatively, people often try to *contrast* away from it by construing their past self as dissimilar to their present self (e.g., Ross & Wilson, 2002; Wilson et al., 2009; Wilson & Ross, 2001). To illustrate, the results of one study showed that participants reported feeling closer (i.e., in time) to the academic course in which they had received their best grade than to the course in which they had received their worst grade (Ross & Wilson, 2002). Moreover, participants rated their present selves more favorably after recalling their best-grade course than after recalling their worst-grade course.

The benefits of a positive past-self for the present-self are not unconditional. If one cannot assimilate their present-self to a positive past event, then recalling such an event can make the present-self suffer by comparison. In one study, researchers either

instructed participants to psychologically distance themselves (inducing contrast) or draw themselves closer (inducing assimilation) to a positive past event. Those who distanced themselves from a positive past rated their present selves more unfavorably than did those who drew themselves closer (Wilson et al., 2009). In another study, participants described positive or negative events that occurred in either their past or present lives (Strack et al., 1985). Reaping positive benefits through assimilation, participants evaluated themselves as happier and more satisfied when they recalled positive as opposed to negative events in their present lives. When they recalled past events, however, the opposite occurred: participants evaluated themselves as unhappier and less satisfied when they recalled positive as opposed to negative events.

Why does recalling a positive past sometimes make the present-self feel positive, and at other times negative? The Inclusion-Exclusion Model (IEM; Schwarz & Bless, 1992) of social judgment suggests that the relationship between one's past-self and present-self is key. When contextual information (e.g., "my life then") is *included* in a target category (e.g., "my life now"), that contextual information exerts an assimilative effect on judgments about the target category – positive past events boost present self-views. By contrast, when contextual information is *excluded* from a target category, the information exerts a contrastive effect – positive past events diminish present self-views (Bless & Schwarz, 2010; see also McMullen, 1997). Thus, because past events are more likely to be excluded from the category "my life now," they should more readily exert contrastive effects on self-evaluations – if they are negative (e.g., memories of one's folly) they should bolster present self-evaluations, but if they are positive they should attenuate present self-evaluations instead.

Although relationships between memory valence, subjective closeness, and assimilative and contrastive judgments have been well-researched (see Peetz & Wilson, 2008 for a review), little is known about how assimilation and contrast effects emerge within the context of nostalgia. Neither research on nostalgia nor temporal comparison has examined how nostalgic recollection influences the processes that guide temporal comparisons. Likewise, the role that temporal comparisons might play in shaping the emotional consequences of nostalgic recollection remains uninvestigated. We believe that such an examination may shed light on some of the more nuanced aspects of nostalgic experience.

Because nostalgia typically involves recalling pleasant memories (Wildschut et al., 2006), it follows that reflecting on those memories would elicit predominately positive emotions (Markman & McMullen, 2003; Sedikides & Wildschut, 2019; Strack et al., 1985). Notably, however, nostalgia often involves the recall of *distant* memories – of momentous life events and relationships that have since changed or passed (Peters, 1985; Van Tilburg et al., 2019; Wildschut et al., 2006). Thus, while it is possible that nostalgic memories function like all positive memories – in the sense that they elicit assimilative processes that enhance present self-evaluations – it is also conceivable that nostalgic recollection can backfire. That is, if highlighting a positive past indeed elicits contrastive processes, this could in turn diminish present self-evaluations (Broemer et al., 2008).

The present work

In two studies, participants were directed to recall either an ordinary or a nostalgic memory, after which they provided evaluations of their past and present selves. We generated two main hypotheses about how nostalgic (as compared to ordinary) recollections would influence temporal self-evaluations. First, because people often construe their past self-evaluations in a manner that allows them to create and maintain favorable appraisals of their present selves (e.g., Wilson & Ross, 2003), we predicted that participants would evaluate their present selves more positively than their past selves after recalling ordinary memories (*Hypothesis 1*). However, given that recalling a distant positive past has been shown to diminish perceptions of the present (e.g., Strack et al., 1985), we predicted that recalling nostalgic memories would eliminate this effect, or even reverse it (*Hypothesis 2*).

Study 1 aimed to demonstrate the primary effects of interest by manipulating nostalgia directly and examining past and present self-evaluations as well as current mood. Study 2 extended Study 1 by examining whether the obtained effects stemmed primarily from considering any positive temporal self (i.e., a past- or future-self), as opposed to a past-self exclusively.

A note about mood

The present research examined how recalling nostalgic events influences affect toward temporal selves (i.e., how participants evaluate the positivity of past and present self-descriptions). We also explored whether and how these temporal self-appraisals influence current mood. Specifically, we examined whether changes in positive and negative mood stem from enhanced or diminished evaluations of past selves, present selves, or some combination of the two. In so doing, we sought to examine the temporal locus of mood elicited by nostalgic reverie without making specific a priori predictions about how temporal selves might contribute to mood.

Study 1

The primary purpose of Study 1 was to examine how nostalgic recollection influences people's evaluations of their past and present selves. Prior research suggests that people tend to prefer their present selves to their past selves (e.g., Ross & Wilson, 2002; Wilson & Ross, 2001). Study 1 aimed to replicate this finding and examine whether it holds true within the context of nostalgia. We hypothesized that those who recalled nostalgic memories would subsequently evaluate their past selves just as, if not more positively than, their present selves. We also explored whether nostalgia influences current mood indirectly through temporal self-evaluations.

Study 1: Method

Participants

Participants were 126 adults (58.7% Men, 41.3% Women; $M_{age} = 34.75$, Range = 21–70; 74.2% White/European American, 4.8% Black/African American, 7.9% Asian/Asian

American, 8.9% Hispanic/Latinx, 4.2% other) recruited through Amazon Mechanical Turk and paid 1.81 USD for their participation. We excluded from analyses two participants who took an extremely long amount of time to complete the survey (completion time range in hours = 01:04–115:05), twenty-two participants who skipped the primary dependent measures, and one participant who met both exclusionary criteria (completion time in hours = 115:05), leaving a total of 102 participants in the final sample.¹ We allocated 275 USD for the study and collected as much data as possible with those funds (spending a total of 273.67 USD after payment and MTurk fees). This sample provided us with sufficient power to detect a significant effect at $\alpha = .05$ (chosen because of conventional significance norms in psychology) with a small effect size (*Cohen's f* = 0.14) for our primary effect of interest at $1-\beta\alpha = .80$, with

$r_{repeated-measures} = .50$: a 2 (Event-Type: nostalgic vs. ordinary; between-subjects) X 2 (Temporal self-evaluation: past self-evaluation vs. present self-evaluation; within-subjects) mixed-factorial interaction.

Materials

Event-type manipulation

Consistent with prior work (e.g., Routledge et al., 2011) we used the Event Reflection Task (ERT) to manipulate nostalgia. Participants were randomly assigned to recall either a nostalgic (nostalgia condition; $N = 55$) or an ordinary memory (ordinary condition; $N = 47$). Participants in the nostalgia condition were asked to “please bring to mind a nostalgic time in your life. Nostalgia is often defined as a sentimental longing or affection for the past. Specifically, try to think of a time that makes you feel most nostalgic.” Participants were then asked to write down four keywords associated with this memory and described the memory in detail. Participants in the ordinary condition performed the same task but instead recalled an ordinary time in their lives, provided four keywords associated with their ordinary memory, and described the memory in detail.

Manipulation check

Participants indicated the extent to which they felt “sentimental,” “longing,” and “nostalgic” (1 = *very slightly or not at all* to 5 = *extremely*). We combined these items to create a measure of state nostalgia ($\alpha = .90$, $M = 3.22$, $SD = 1.29$).

Temporal selves writing task

Based on earlier work (e.g., Wilson & Ross, 2000), we instructed participants to vividly consider their present selves and “write a description of your present self in your own words. Use whatever information you feel is useful.” In a second prompt, participants were directed to vividly consider and describe their past selves at the time of their recalled memory from the ERT. The order of these prompts was randomized across participants.

Temporal-self-evaluations

Participants rated how positively (1 = *not at all positive* to 7 = *extremely positive*) they felt toward their past selves ($M = 5.18$, $SD = 1.63$) and their present selves ($M = 4.96$, $SD = 1.86$). These measures represented our primary outcome variables of interest, and we refer to them hereafter as “past-self-evaluation” and “present-self-evaluation,” respectively.

Mood

We used Larsen et al. (2001)'s methods to measure current mood. Participants first indicated whether they felt a series of positive (i.e., calm, happy, excited, relaxed) and negative emotions (i.e., depressed, tense, stressed, sad) by choosing either "yes" or "no." If participants indicated that they were experiencing a specific emotion, they were then prompted to indicate the extent to which they felt that emotion (1 = *slightly* to 7 = *extremely*). Conversely, if participants indicated that they were *not* experiencing a given emotion, their responses were coded as 0. Responses were then averaged to create measures of positive ($\alpha = .77$; $M = 3.33$, $SD = 1.54$) and negative mood ($\alpha = .87$; $M = 0.71$, $SD = 1.46$). Ambivalent mood ($M = 0.83$, $SD = 1.96$) was calculated using the MIN score of positive and negative mood items (see Larsen et al., 2017; Schimmack, 2001).

Procedure

After consenting to participate, participants performed the ERT and then completed measures of nostalgia (counterbalanced – completed either directly following the ERT or after completing all other dependent measures). Next, participants performed the temporal selves writing task, provided temporal-self-evaluations, and then responded to the mood measure. Upon completion of these tasks and measures, participants were debriefed, thanked, and compensated for their participation.

Study 1: Results

Manipulation check

The nostalgia manipulation successfully induced nostalgic feelings: participants in the nostalgia condition reported feeling significantly more nostalgic ($M = 3.87$, $SD = 1.02$) than did those in the ordinary condition ($M = 2.47$, $SD = 1.16$), $t(100) = -6.47$, $p < .001$, $d = -1.29$, $CI_{95\%} = -1.82, -.97$. Some participants completed the manipulation check items directly after performing the ERT, while others completed these items after responding to the other dependent measures. This was to control for potential demand characteristics in the nostalgia condition arising from reporting their experienced nostalgia directly following a prompt to think about a nostalgic memory. A 2 (Event Type) X 2 (Order) ANOVA revealed an interaction, $F(1, 98) = 6.91$, $p = .02$, $\eta_p^2 = .06$, indicating that participants' reports of nostalgia were elevated when the manipulation check items were completed prior to responding to all of the other dependent measures. Nevertheless, order did not significantly moderate any of our primary effects. As such, we report the results without controlling for order here (see analyses controlling for order in online supplemental files).

We also had trained independent coders blind to hypotheses and condition rate the recalled memories from the ERT for levels of nostalgia, ordinariness, positivity of memory, and negativity of memory (each measured on a 1 = *not at all* to 7 = *extremely* scale). The coding evaluation aims only to confirm that the memories seem, objectively, as participants report they are. Given the sheer number of memories to process across the two studies, and the tertiary nature of the coding inquiry, each memory had only one coder. Suggesting our manipulation was effective, the coders rated memories from the nostalgia condition as significantly more nostalgic ($M = 5.84$, $SD = 1.85$) than memories from the

ordinary condition ($M = 2.33$, $SD = 1.61$), $t(98) = -9.97$, $p < .001$, $d = 2.27$, $CI_{95\%} = -4.22$, -2.81 .² Accordingly, the coders also rated memories from the ordinary condition as significantly more ordinary ($M = 5.58$, $SD = 1.61$) than memories from the nostalgia condition ($M = 2.89$, $SD = 1.67$), $t(98) = 8.02$, $p < .001$, $d = 1.64$, $CI_{95\%} = 2.02$, 3.35 . Further, coders rated memories from the nostalgia condition as significantly more positive ($M = 5.87$, $SD = 1.62$) than memories from the ordinary condition ($M = 3.07$, $SD = 1.76$), $t(98) = -8.28$, $p < .001$, $d = 1.66$, $CI_{95\%} = -3.49$, -2.13 . However, there were no differences in coder-rated negativity of the memories between nostalgia ($M = 1.84$, $SD = 1.26$) and ordinary conditions ($M = 2.18$, $SD = 1.35$), $t(98) = 1.31$, $p = .20$, $d = -.26$, $CI_{95\%} = -1.78$, $.86$.

Temporal-self-evaluation

We conducted two independent samples t-tests to explore the effect of event-type condition on past- and present-self-evaluation, respectively. Past-self-evaluation was significantly more positive in the nostalgia condition ($M = 5.64$, $SD = 1.59$) as compared to the ordinary condition ($M = 4.64$, $SD = 1.52$), $t(100) = -3.21$, $p = .002$, $d = 1.66$, $CI_{95\%} = -1.61$, $-.38$. There were no differences between nostalgia ($M = 4.82$, $SD = 1.95$) and ordinary conditions ($M = 5.13$, $SD = 1.75$) in the positivity of present-self-evaluation, $t(100) = .84$, $p = .40$, $d = .17$, $CI_{95\%} = -.42$, 1.04 .

We also conducted a 2 (Event-Type: Nostalgia, Ordinary; between-subjects) X 2 (Temporal Selves: past, present; within-subjects) mixed-subjects ANOVA to test the effect of Event-Type on the discrepancy between past- and present-self-evaluation. The predicted 2-way interaction between Event Type and temporal selves emerged as significant, qualifying their main effects, $F(1,100) = 8.09$, $p = .01$, $\eta_{partial}^2 = .08$, $CI_{95\%} = 0.01$, 0.19 (see Figure 1). Separate paired samples t-tests for each Event-Type condition, respectively, revealed that ordinary-condition participants rated their past ($M = 4.64$, $SD = 1.52$) and present ($M = 5.13$, $SD = 1.75$) selves similarly positively, $t(46) = -1.66$, $p = .11$, $dz = -.41$, $CI_{95\%} = -1.08$, $.10$, whereas, and consistent with our hypotheses, nostalgia-condition participants evaluated their past selves ($M = 5.64$, $SD = 1.59$) more positively than their present selves ($M = 4.82$, $SD = 1.93$), $t(54) = 2.39$, $p = .02$, $dz = .46$, $CI_{95\%} = .13$, 1.51 .

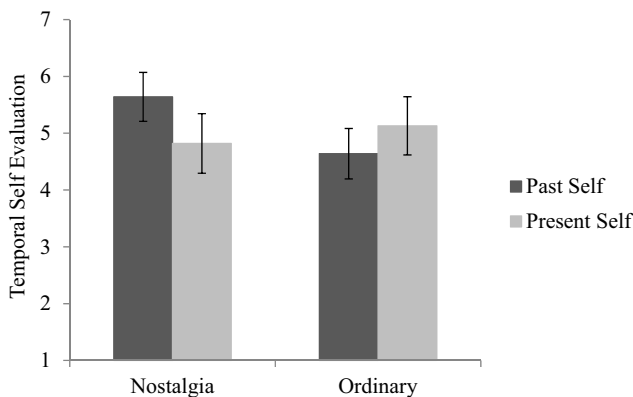


Figure 1. Mean past- and present-self-evaluation by Event-Type condition (Nostalgia, Ordinary) for Study 1. Error bars represent 95% confidence intervals.

Mood

Past-self-evaluation was unrelated to either positive mood, $r(102) = .12, p = .25$, or negative mood, $r(102) = -.05, p = .65$. More positive past self-evaluation did relate slightly, though not significantly, to increased ambivalent mood, $r(102) = .19, p = .06$. Conversely, more positive present-self-evaluation related to greater positive mood, $r(102) = .50, p < .001$, lower negative mood, $r(102) = -.38, p < .001$, and less ambivalent mood, $r(102) = -.40, p < .01$.

We conducted independent samples t-tests examining the effect of Event-Type condition on current mood. There was no effect of Event-Type condition on either positive mood, $t(100) = .35, p = .73, d = .07, CI_{95\%} = -.50, .71$, negative mood, $t(100) = -1.02, p = .31, d = -.20, CI_{95\%} = -.87, .28$, or ambivalent mood, $t(100) = -1.52, p = .13, d = -.27, CI_{95\%} = -1.37, .18$.

To assess whether nostalgia contributed to current mood via temporal self-evaluation, we conducted three bootstrapped (1000 iterations) mediation analyses (using PROCESS macro for SPSS, model 4; Hayes, 2017) predicting positive (Analysis 1) negative (Analysis 2) and ambivalent mood (Analysis 3) via temporal self-evaluation (analyses predicting mood from event-type condition via coders' ratings of self-descriptions for Studies 1 and 2 can be found in online supplemental files).

There were no significant direct effects of Event-Type condition on positive mood, $b = -.07, SE = .28, p = .81, CI_{95\%} = -.63, .49$, negative mood, $b = .25, SE = .29, p = .38, CI_{95\%} = -.31, .82$, or ambivalent mood, $b = .19, SE = .38, p = .63, CI_{95\%} = -.58, .96$. Similarly, there were no indirect effects of Event-Type condition on positive mood via either past-self-evaluation, $b = .09, SE = .12, CI_{95\%} = -.15, .32$, or present-self-evaluation, $b = -.13, SE = .15, CI_{95\%} = -.41, .19$, nor on negative mood via either past-self-evaluation, $b = -.04, SE = .10, CI_{95\%} = -.25, .16$, or present-self-evaluation, $b = .09, SE = .11, CI_{95\%} = -.12, .32$. The picture for ambivalent mood was somewhat different: although there was no indirect effect of Event-Type condition on ambivalent mood via present-self-evaluation, $b = .13, SE = .16, CI_{95\%} = -.16, .50$, there was a significant positive indirect effect via past-self-evaluation, $b = .24, SE = .11, CI_{95\%} = .05, .48$. Those in the nostalgia condition reported significantly more positive past-self-evaluations, which, in turn, related to greater ambivalent mood.

Study 1: Discussion

Study 1 provided initial evidence that nostalgia elicits unique evaluations of temporal selves. Participants evaluated their present selves and past selves similarly positively after recalling an ordinary memory; by contrast, participants evaluated their present selves less positively than their past selves after recalling a nostalgic memory. However, feelings about past and present selves did not appear to lead to downstream changes in positive or negative mood but did explain differences in ambivalent mood.

Study 2

Study 1 revealed the predicted effect of nostalgia on evaluations of temporal selves – nostalgia was associated with more positive evaluations of past than present selves. However, we observed no effects of nostalgia on current mood nor any indirect effects

via differences in evaluations of temporal selves. It is possible that the predicted effects did not emerge because we were underpowered to detect indirect effects given our somewhat-small sample size. Thus, we collected data from more participants (over three-times as many) in Study 2.

We also wanted to explore whether more favorable evaluations of past relative to present selves might result from considering any positive alternative-self. Research examining the downstream consequences of nostalgic recollection typically employs an ordinary memory control condition (see Sedikides, Wildschut, Routledge, Arndt et al., 2015). However, it seems unlikely that contemplating a mundane memory will elicit substantive downstream consequences (e.g., bolstering meaning in life, Routledge et al., 2011; facilitating prosocial interactions, Zhou et al., 2012). Thus, we included another positive temporal-self (i.e., a positive future-self) condition to examine whether the effects of nostalgia on temporal-self-evaluation are uniquely due to reflecting on positive (nostalgic) past selves.

As in Study 1, we hypothesized that those who recalled ordinary memories would evaluate their present selves more positively than their past selves. By contrast, we expected that those who recalled nostalgic memories would evaluate their present selves less positively than their past selves. We also explored whether, consistent with research suggesting that people hold positive views of their future selves (e.g., Pronin & Ross, 2006; Remedios et al., 2010), a similar pattern of results would emerge by comparing those who considered ordinary memories to those who imagined a positive future event (i.e., a positive future-self). Finally, we examined whether event-type (ordinary, nostalgic, positive future) exerted any indirect effects on mood via temporal-self-evaluation.

Study 2: Method

Participants

Participants were 402 adults (58.9% Male, 40.1% Female, .9% Other; $M_{age} = 33.78$, Range = 19–68; 70.2% White/European American, 8.3% Black/African American, 8% Hispanic/Latinx 6.2% Asian/Asian American, 4.6% Mixed, 2.7% other) recruited via Amazon Mechanical Turk and paid 1.81 USD for their participation. Four participants were excluded from analyses for taking an extremely long time to complete the survey (completion times range in hours = 03:38–190:06), and 12 participants were excluded for skipping the primary variables of interest, leaving a total of 384 participants in the final sample. We chose to recruit at least 130 participants in each Event-Type condition (i.e., nostalgia, ordinary, and positive future; $N_{desired} = 390$) to ensure that we would have sufficient power to detect even small interactive effects between Event-Type condition and Temporal Selves on temporal-self-evaluation ($1-\beta\alpha = .80; \alpha\eta_{partial}^2 = .01$; $r_{repeated-measures} = .50$; $\alpha = .05$). We recruited 14 additional participants in case we needed to remove any participants from analyses (e.g., due to computer malfunctions).

Materials

Event-type manipulation

Participants completed the Event Reflection Task (ERT) from Study 1 recalling, writing four keywords, and describing in depth either a nostalgic memory (nostalgia condition;

$N = 128$), an ordinary memory (ordinary condition; $N = 118$), or imagining a positive future event (positive-future condition; $N = 138$).

Manipulation check

Participants indicated the extent to which they felt “sentimental,” “longing,” and “nostalgic” (1 = *very slightly or not at all*, 5 = *extremely*), and these items were combined to create a measure of nostalgia ($\alpha = .88$, $M = 3.16$, $SD = 1.31$).

Temporal selves writing task

As in Study 1, participants completed a writing task involving prompts to vividly consider and describe their present selves as well as their *event selves* – the latter refer to “past selves” in the nostalgia and ordinary conditions, and “future selves” in the positive-future condition. Again, the order of these prompts was randomized across participants.

Temporal-self-evaluation

As part of the temporal selves writing task, participants provided positivity ratings of their event selves (i.e., past or future; $M = 5.57$, $SD = 1.65$) and present selves ($M = 4.97$, $SD = 1.85$; 1 = *not at all positive* to 7 = *extremely positive*). These measures are referred to hereafter as “event-self-evaluation” and “present-self-evaluation,” respectively.

Mood

We assessed current mood using the same scale as in Study 1 (Larsen et al., 2001). Responses were averaged to create composite measures of positive ($\alpha = .78$; $M = 3.35$, $SD = 1.68$) and negative mood ($\alpha = .90$; $M = 0.93$, $SD = 1.67$). Ambivalent mood ($M = 1.36$, $SD = 2.74$) was calculated using the MIN score of positive and negative mood items.

Procedure

After providing consent, participants performed the ERT and then completed measures of nostalgia (counterbalanced). Participants then performed the temporal selves writing task (randomized), followed by temporal-self-evaluation and mood measures. After completing these tasks and measures, participants were debriefed, thanked, and compensated for their participation.

Study 2: Results

Because we were interested in comparisons between the nostalgia and ordinary conditions as well as between the positive-future and ordinary conditions, we report our analyses in two steps. First, we compare the nostalgia and ordinary conditions, and next we compare the ordinary and positive-future conditions as they pertain to temporal-self-evaluations. For analyses of mood states, we compare all three event-type conditions predicting each valence of mood as well as indirect effects from temporal-self-evaluations.

Nostalgia versus ordinary conditions

Event-type manipulation check

As in Study 1, participants in the nostalgia condition reported experiencing significantly more nostalgia ($M = 3.87$, $SD = .96$) than did those in the ordinary condition ($M = 2.74$, $SD = 1.38$), $t(244) = 7.53$, $p < .001$, $d = 0.95$, $CI_{95\%} = .84, 1.43$. As in Study 1, participants completed the manipulation check items either directly after performing the ERT, or after responding to all other dependent measures. A 3 (Event-Type: Nostalgia, Ordinary, Positive-Future) \times 2 (Order: Before, After) ANOVA did not reveal a significant interaction, suggesting that participants' levels of reported nostalgia are unlikely due to the order in which the items were presented, $F(2, 384) = 1.77$, $p = .17$, $\eta_p^2 = .01$ (analyses controlling for order available in online supplemental files).

Additionally, condition-blind independent coders evaluated nostalgia-condition memories to be significantly more nostalgic ($M = 5.97$, $SD = 1.36$) than ordinary-condition memories ($M = 2.73$, $SD = 1.80$), $t(244) = 16.04$, $p < .001$, $d = 2.03$, $CI_{95\%} = 2.84, 3.64$, and ordinary-condition memories to be significantly more ordinary ($M = 5.15$, $SD = 1.28$) than nostalgia-condition memories ($M = 3.32$, $SD = 1.61$), $t(244) = -8.36$, $p < .001$, $d = -1.26$, $CI_{95\%} = -2.26, -1.40$. Further, nostalgia-condition memories were rated as significantly more positive ($M = 5.97$, $SD = 1.98$) than ordinary-condition memories ($M = 3.51$, $SD = 1.79$), $t(244) = 12.48$, $p < .001$, $d = 1.58$, $CI_{95\%} = 2.07, 2.85$, and ordinary-condition memories were rated as significantly more negative ($M = 2.66$, $SD = 1.88$) than nostalgia-condition memories ($M = 1.55$, $SD = .94$), $t(244) = -5.96$, $p < .001$, $d = -.75$, $CI_{95\%} = -1.48, -.75$.

Temporal-self-evaluation

We conducted two independent samples t-tests to explore the effect of event-type condition on past- and present-self-evaluation, respectively. Past-self-evaluation was significantly more positive in the nostalgia condition ($M = 5.68$, $SD = 1.43$) as compared to the ordinary condition ($M = 4.69$, $SD = 1.94$), $t(244) = 4.60$, $p < .001$, $d = .58$, $CI_{95\%} = .57, 1.42$, and present-self-evaluation was significantly more positive in the ordinary condition ($M = 5.22$, $SD = 1.70$) as compared to the nostalgia condition ($M = 4.70$, $SD = 1.96$), $t(244) = -2.12$, $p = .03$, $d = -.28$, $CI_{95\%} = -.98, -.06$.

Consistent with Study 1, the predicted 2-way interaction between Event-Type and Temporal Selves emerged, $F(1, 244) = 25.05$, $p < .001$, $\eta_{partial}^2 = .09$, $CI_{95\%} = .01, .22$. Paired-samples t-tests revealed that participants in the ordinary condition evaluated their present selves ($M = 5.22$, $SD = 1.70$) significantly more positively than their past selves ($M = 4.70$, $SD = 1.94$), $t(117) = -2.62$, $p = .01$, $dz = -.29$, $CI_{95\%} = -.94, -.13$. By contrast, those in the nostalgia condition evaluated their present selves ($M = 4.70$, $SD = 1.95$) significantly less positively than their past selves ($M = 5.68$, $SD = 1.43$), $t(127) = 4.43$, $p < .001$, $dz = .56$, $CI_{95\%} = .54, 1.41$.

Positive-future versus ordinary conditions

To examine whether the observed effects were unique to nostalgic reverie toward the past as opposed to contemplating positive temporal events more generally, we conducted the same set of analyses comparing the positive-future and ordinary conditions.

Event-type manipulation check

As expected, participants in the positive-future and ordinary conditions reported equivalent levels of nostalgia, $t(254) = -.70$, $p = .49$, $d = -.11$, $CI_{95\%} = -.43, .21$, although somewhat surprisingly – barring the unlikely coincidence coders were all secretly time travelers or theoretical physicists – condition-blind coders evaluated ordinary-condition memories as significantly more nostalgic ($M = 2.73$, $SD = 1.80$) than positive-future-condition events ($M = 1.27$, $SD = 1.02$), $t(254) = 8.14$, $p < .001$, $d = 1.00$, $CI_{95\%} = 1.11, 1.81$. On the other hand, coders rated ordinary-condition memories to be significantly more ordinary ($M = 5.15$, $SD = 1.82$) than positive-future-condition events ($M = 3.58$, $SD = 1.82$), $t(254) = 6.88$, $p < .001$, $d = .86$, $CI_{95\%} = 1.12, 2.02$. Further, positive-future-condition events were rated as significantly more positive ($M = 5.58$, $SD = 1.52$) than ordinary-condition memories ($M = 3.52$, $SD = 1.79$), $t(254) = -9.96$, $p < .001$, $d = -1.24$, $CI_{95\%} = -2.47, -1.65$, and ordinary-condition memories were rated as significantly more negative ($M = 2.66$, $SD = 1.88$) than positive-future events ($M = 1.42$, $SD = .87$), $t(254) = 6.94$, $p < .001$, $d = .84$, $CI_{95\%} = .89, 1.59$.

Temporal-self-evaluation

We conducted two independent samples t-tests to explore the effect of event-type condition on event- and present-self-evaluation, respectively. Event-self-evaluation was significantly more positive in the positive future condition ($M = 6.22$, $SD = 1.20$) as compared to the ordinary condition ($M = 4.69$, $SD = 1.94$), $t(254) = -7.72$, $p < .001$, $d = -.94$, $CI_{95\%} = -1.14, -1.92$. There was no difference between the positive future ($M = 4.96$, $SD = 1.70$) and ordinary conditions ($M = 5.22$, $SD = 1.70$) in the positivity of present-self-evaluation, $t(254) = 1.14$, $p = .26$, $d = .14$, $CI_{95\%} = -.70, .18$.

The predicted 2-way interaction emerged between Event-Type and Temporal Selves, $F(1, 254) = 51.96$, $p < .001$, $\eta_{partial}^2 = .17$, $CI_{95\%} = .05, .31$. Paired-samples t-tests revealed that participants in the ordinary condition evaluated their present ($M = 5.22$, $SD = 1.70$) selves more positively than their past selves ($M = 4.69$, $SD = 1.94$), $t(117) = -2.62$, $p = .01$, $dz = -.29$, $CI_{95\%} = -.94, -.13$. Moreover, and consistent with the effects observed after recalling nostalgic memories, participants in the positive-future condition evaluated their present selves ($M = 4.96$, $SD = 1.88$) less positively than their future selves ($M = 6.22$, $SD = 1.20$), $t(137) = 8.43$, $p < .001$, $dz = .80$, $CI_{95\%} = .96, 1.55$.

Mood

Event (past or future)-self-evaluations positively related to positive mood, $r(384) = .26$, $p = .003$, negatively related to negative mood, $r(384) = -.14$, $p = .01$, and were unrelated to ambivalent mood, $r(384) = .04$, $p = .39$. Present-self-evaluations were significantly positively related to positive mood, $r(384) = .58$, $p < .001$, negatively related to negative mood, $r(384) = -.52$, $p < .001$, and negatively related to ambivalent mood, $r(384) = -.21$, $p < .001$.

A series of one-way between-subjects ANOVAs examined the effect of Event-Type condition (ordinary, nostalgia, positive future) on current mood. There was a marginally significant effect of Event-Type on positive mood, $F(2, 383) = 2.91$, $p = .06$, $\eta_{partial}^2 = .02$, $CI_{95\%} = .001, .05$. Those in the positive-future condition reported greater positive mood ($M = 3.60$, $SD = 1.64$) than those in the nostalgia condition ($M = 3.10$, $SD = 1.71$), $p = .02$, $CI_{95\%} = -.90, -.09$. There were no differences in positive mood between nostalgia and

ordinary conditions, $p = .21$, $CI_{95\%} = -.69, .15$, or between positive-future and ordinary conditions, $p = .28$, $CI_{95\%} = -.19, .65$. There was also a marginally significant effect of Event-Type condition on negative mood, $F(2, 383) = 3.00$, $p = .051$, $\eta_{partial}^2 = .02$, $CI_{95\%} = .001, .05$. Those in the nostalgia condition reported greater negative mood ($M = 1.19$, $SD = 1.82$) than those in the positive-future condition ($M = .71$, $SD = 1.50$), $p = .02$, $CI_{95\%} = .08, .88$. There were no differences in negative mood between nostalgia and ordinary conditions, $p = .09$, $CI_{95\%} = -.05, .77$, or between positive-future and ordinary conditions, $p = .56$, $CI_{95\%} = -.28, .53$. There was a significant effect of Event-Type condition on ambivalent mood, $F(2, 383) = 3.23$, $p = .04$, $\eta_{partial}^2 = .02$, $CI_{95\%} = .001, .05$. Those in the nostalgia condition reported greater ambivalent mood ($M = 1.86$, $SD = 2.86$) than did those in both the positive-future condition ($M = 1.17$, $SD = 2.79$), $p = .04$, $CI_{95\%} = .04, .135$, and ordinary condition ($M = 1.06$, $SD = 2.47$), $p = .02$, $CI_{95\%} = .12, .148$. There were no differences in ambivalent mood between positive-future and ordinary conditions, $p = .75$, $CI_{95\%} = -.79, .56$.

As in Study 1, we conducted three bootstrapped (1000 iterations) mediation analyses (using PROCESS macro for SPSS, model 4; Hayes, 2017) to examine the direct effects of Event-Type on positive (Analysis 1), negative (Analysis 2), and ambivalent mood (Analysis 3), and indirect effects via event- (past-self, future-self) and present-self-evaluation (see Figure 2 for the full mediation model).

Positive mood. There was no significant omnibus direct effect of Event-Type on positive mood, $F(2, 379) = 1.38$, $p = .25$, $R^2_{change} = .001$, nor were there any significant relative direct effects of Event-Type on positive mood, nostalgia versus ordinary: $b = -.19$, $SE = .18$, $p = .29$, $CI_{95\%} = -.55, .16$; nostalgia versus positive-future: $b = .27$, $SE = .17$, $p = .11$, $CI_{95\%} = -.05, .61$; ordinary versus positive-future: $b = .08$, $SE = .18$, $p = .66$, $CI_{95\%} = -.28, .44$. However, in comparing nostalgia and ordinary conditions, there were opposing indirect effects of Event-Type (0 = ordinary, 1 = nostalgia) on positive mood via event- and present-self-evaluation. A positive indirect effect of Event-Type on positive mood via past-self-evaluation suggested that recalling nostalgic memories increased the positivity of past-self-evaluation, which in turn predicted enhanced positive mood, $b = .18$, $SE = .06$, $CI_{95\%} = .08, .31$. By contrast, a negative indirect effect of Event-Type on positive mood via present-self-evaluation suggested that recalling nostalgic memories decreased the positivity of present-self-evaluation, which in turn diminished positive mood, $b = -.26$, $SE = .12$, $CI_{95\%} = -.49, -.03$.

In comparing nostalgia and positive future conditions, there was also a significant indirect effect of Event-Type (0 = positive future, 1 = nostalgia) on positive mood via event-self-evaluation. A negative indirect effect of Event-Type on positive mood via event-self-evaluation suggested that thinking about a nostalgic memory (relative to a positive future) decreased the positivity of past-self-evaluation, which in turn predicted diminished positive mood, $b = -.10$, $SE = .03$, $CI_{95\%} = -.18, -.03$. However, there was no indirect effect of Event-Type on positive mood via present-self-evaluation, $b = -.13$, $SE = .11$, $CI_{95\%} = -.34, .08$. Similarly, there was an indirect effect of Event-Type (0 = ordinary, 1 = positive future) on positive mood through event-self-evaluation, $b = .28$, $SE = .08$, $CI_{95\%} = .13, .45$. Imagining a positive future event enhanced future-self-evaluation, which in turn predicted increased positive mood. However, there was no indirect effect of Event-Type on positive mood via present-self-evaluation, $b = -.13$, $SE = .11$, $CI_{95\%} = -.35, .09$.

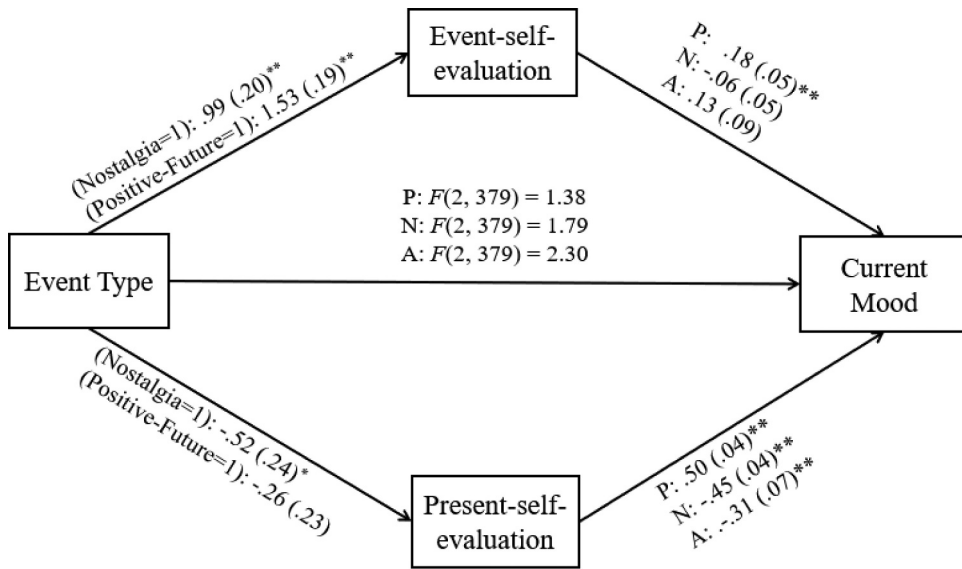


Figure 2. Study 2: Regression coefficients, b (SE), for the relationship between Event Type (0 = Ordinary, 1 = Nostalgia, 2 = Positive Future) and current mood (P = Positive Mood, N = Negative Mood, A = Ambivalent Mood), as mediated by event- and present-self-evaluation. Values from the path from Event Type to Current Mood represent omnibus direct effects. Note: ** $p < .001$, * $p < .05$.

Negative mood. As with positive mood, there was no significant omnibus direct effect of Event-Type on negative mood, $F(2, 379) = 1.79, p = .17, R^2_{change} = .01$, nor were there any significant relative direct effects of Event-Type on negative mood: nostalgia versus ordinary: $b = .19, SE = .19, p = .32, CI_{95\%} = -.18, .56$; nostalgia versus positive-future: $b = -.33, SE = .18, p = .06, CI_{95\%} = -.68, .01$; ordinary versus positive-future: $b = -.14, SE = .19, p = .46, CI_{95\%} = -.52, .24$. In comparing nostalgia and ordinary conditions, there was no evidence for an indirect effect of Event-Type (0 = ordinary, 1 = nostalgia) on negative mood via past-self-evaluation, $b = -.05, SE = .06, CI_{95\%} = -.18, .05$. However, as with positive mood, there was an indirect effect of Event-Type on negative mood via present-self-evaluation, $b = .23, SE = .11, CI_{95\%} = .02, .46$. Those in the nostalgia (versus ordinary) condition experienced diminished present-self-evaluation, which in turn predicted heightened negative mood.

Comparisons of nostalgia and positive future conditions revealed no evidence of indirect effects of Event-Type (0 = positive future, 1 = nostalgia) on negative mood via either event-self-evaluation, $b = .03, SE = .03, CI_{95\%} = -.03, .10$, or present-self-evaluation, $b = .12, SE = .10, CI_{95\%} = -.07, .32$. Similarly, comparing ordinary and positive future conditions revealed no evidence for an indirect effect of Event-Type (0 = ordinary, 1 = positive future) on negative mood via either event-self-evaluation, $b = -.09, SE = .08, CI_{95\%} = -.26, .07$, or present-self-evaluation, $b = .11, SE = .10, CI_{95\%} = -.08, .32$.

Ambivalent mood. There was no significant omnibus direct effect of Event-Type on ambivalent mood, $F(2, 379) = 2.30, p = .10, R^2_{change} = .01$, nor were there any significant relative direct effects of Event-Type on ambivalent mood for nostalgia versus ordinary

($b = .51$, $SE = .36$, $p = .15$, $CI_{95\%} = -.19, 1.21$) or ordinary versus positive-future comparisons ($b = -.17$, $SE = .36$, $p = .63$, $CI_{95\%} = -.89, .54$). However, there was a significant direct effect of Event-Type (0 = positive future, 1 = nostalgia) on ambivalent mood suggesting that nostalgia-condition-participants experienced greater ambivalent mood than those in the positive-future condition, $b = .68$, $SE = .33$, $p = .04$, $CI_{95\%} = .03, 1.33$.

In comparing nostalgia and ordinary conditions, there was no evidence for an indirect effect of Event-Type (0 = ordinary, 1 = nostalgia) on ambivalent mood via past-self-evaluation, $b = .13$, $SE = .09$, $CI_{95\%} = -.02, .32$. However, as with positive and negative mood, there was an indirect effect of Event-Type on ambivalent mood via present-self-evaluation, $b = .16$, $SE = .09$, $CI_{95\%} = .01, .35$. Those in the nostalgia (versus ordinary) condition experienced diminished present-self-evaluation, which in turn predicted heightened ambivalent mood. Comparisons of nostalgia and positive future conditions revealed no evidence of indirect effects of Event-Type (0 = positive future, 1 = nostalgia) on ambivalent mood via either event-self-evaluation, $b = -.07$, $SE = .05$, $CI_{95\%} = -.19, .01$, or present-self-evaluation, $b = .08$, $SE = .08$, $CI_{95\%} = -.06, .25$. Similarly, comparing ordinary and positive future conditions revealed no evidence for an indirect effect of Event-Type (0 = ordinary, 1 = positive future) on ambivalent mood via either event-self-evaluation, $b = -.20$, $SE = .14$, $CI_{95\%} = -.49, .04$, or present-self-evaluation, $b = -.07$, $SE = .08$, $CI_{95\%} = -.25, .06$.

Study 2: Discussion

Study 2 provided additional evidence that nostalgia elicits unique evaluations of temporal selves. After recalling an ordinary memory, participants evaluated their past selves less favorably than their present selves. By contrast, after recalling a nostalgic memory or considering a positive future-self, participants evaluated their past or future selves more favorably than they evaluated their present selves.

Nevertheless, our findings suggest that the recollection of nostalgic memories may influence current mood via temporal-self-evaluation differently than does the consideration of positive future selves. Analyses indicated that nostalgic recollections enhanced positive mood through the heightened favorability of past-self evaluations while simultaneously diminishing positive mood (and heightening negative mood and ambivalent mood) through the heightened unfavorability of present-self evaluations. These effects appear to be unique to nostalgic recollection as a similar pattern did not emerge among participants who imagined positive future events.

General discussion

We designed the present research with the goal of examining how nostalgia influences temporal-self-evaluations, and we explored whether those evaluations help account for the positive moods that are typically elicited by nostalgic reverie. Consistent with prior research (e.g., Wilson & Ross, 2001), we hypothesized that recalling nostalgic (vs. ordinary) memories would lead participants to evaluate their present selves less positively than their past selves.

Studies 1 and 2, which directly manipulated nostalgia, supported our hypotheses regarding how ordinary versus nostalgic memory recall should influence temporal-self-

evaluation. After recalling ordinary/non-nostalgic memories, participants either rated their present and past selves equivalently (Study 1) or evaluated their present selves more positively than their past selves (Study 2). By contrast, after recalling nostalgic memories, participants evaluated their past selves more positively than their present selves (Studies 1 and 2).

The present studies also shed light on nostalgia's influence on mood via temporal-self-evaluation. In Study 2, nostalgia enhanced positive mood by heightening positive evaluations of past selves, but also diminished positive mood (and elevated negative mood) by heightening more negative evaluations of present selves. In all, the current work offers insights into the emotional experience of nostalgia and extends our current understanding of the psychological mechanisms that underlie nostalgic experience.

Implications and applications

Study 2 revealed that the effects of nostalgic reflection on evaluations of temporal selves may not be unique to nostalgia after all. Indeed, imagining a positive future event yielded a similar pattern of results (i.e., more positively evaluated future selves than present selves). To be sure, prior research including a positive temporal-self condition as a control has observed downstream consequences that are unique to nostalgia. For example, recalling a nostalgic memory heightened the accessibility of positive self-attributes to a greater extent than did imagining a positive future event (Vess et al., 2012), and recalling a nostalgic memory enhanced perceptions of self-continuity (via social connectedness) that recalling a time when one was lucky in the past did not (Sedikides et al., 2016). Nevertheless, our findings suggest that the favorability of temporal (i.e., non-present) self-evaluations may be enhanced when *any* positive alternative self is considered. Thus, we urge future researchers to consider control conditions involving alternative temporal selves in addition to ordinary memories to better understand the similarities and differences between nostalgic reflection and other forms of positive temporal contemplation (e.g., Newman et al., 2020; Özbek et al., 2017).

A primary goal of the present research was to situate nostalgia within the broader context of temporal comparison processes. Particularly relevant in this regard is Temporal Self-Appraisal Theory (TSAT; e.g., Wilson & Ross, 2000), a temporal comparison framework that focuses on how people construe their past selves in order to improve perceptions of their present selves. According to this framework, positive past selves that stand in contrast to less positive present selves may be derogated to bolster perceptions of the present-self (Wilson & Ross, 2001), whereas past selves may be assimilated toward present selves to heighten the favorability of the latter (Ross & Wilson, 2003). Interestingly, our core findings revealed an asymmetry between past and present self-evaluations that resulted in (relatively) detrimental evaluations of the present self, and is consistent with early theorizing that nostalgia could be experienced negatively (e.g., Castelnuovo-Tedesco, 1980; Peters, 1985). That is, present selves were consistently rated less positively than past selves among those experiencing nostalgia.

Notably, however, the present findings extend work on temporal-comparison processes by demonstrating that the emotional experience of nostalgia involves diminishing the positivity of present selves in comparison to past selves. This pattern is consistent with the conjecture that nostalgia is a mixed emotional experience and it may shed light on

what it means for a nostalgic memory to feel “bittersweet.” Perhaps, feeling bittersweet arises from shifting attention between one’s past- and present-self – the latter of which seems diminished in comparison to the former. This notion is consistent with recent work (Van Tilburg et al., 2019) that identifies “irretrievable loss” as a prominent aspect of the emotional appraisal profile of nostalgia.

Limitations and future directions

Three main limitations of the present work inform future directions for research. First, although the current studies demonstrate conditions under which nostalgia is associated with various mood-states (i.e., as a function of evaluations of past and present selves), it remains untested how long these effects persist. Future investigations might assess how quickly self-evaluations elicited by nostalgic recollection fade or change over time. Moreover, although in the current work nostalgia influenced mood through temporal self-evaluation, we would like to note our surprise at the lack of consistent direct effects of nostalgic reflection on mood across all studies, as is typically common in studies using the ERT (particularly in terms of positive mood, Sedikides & Wildschut, 2018). A potential explanation may hinge upon the general restriction of affective range – mean mood levels were surprisingly low (below the scale-midpoint) across both studies, particularly for negative mood. That is, participants did not report substantial levels of positive or negative moods on average, which may suggest an important caveat to conclusions drawn about nostalgia’s influence on mood via temporal selves and should be investigated in the future.

Second, the present work does not examine the functional utility of nostalgia. An important extension, therefore, would be to examine whether the effects of nostalgia on temporal self-evaluation influence other downstream outcomes of nostalgia (e.g., as a resource for social connectedness and existential meaning). For example, research has demonstrated that nostalgia can offset self-discontinuity – a feeling of disjointedness between one’s past- and present-self – by enhancing the perceived connectedness between one’s past- and present-self (Sedikides, Wildschut, Routledge, Arndt et al., 2015). The current work might inform whether self-appraisals align with perceptions of self-continuity or self-discontinuity. We found consistently that nostalgia related more strongly to (positive) past self-evaluation than to present self-evaluation – but the question remains: how does this asymmetry influence self-continuity?

Third, although our studies provided consistent evidence for the predicted temporal self-evaluation pattern – nostalgic (as opposed to ordinary) memory recall elicited preferences for past selves over present selves – moderators of this effect remain unidentified. One possibility might be one’s subjective (or actual) temporal distance from the memory recalled.³ As mentioned previously, subjective distance has been shown to influence temporal self-appraisals such that the recall of distant (positive) pasts induces contrast effects: when a positive past-self is perceived to be temporally distant, the present-self tends to pale by comparison (Bless & Schwarz, 2010; Wilson et al., 2009). In turn, we suspect that perceptions of temporal distance from nostalgic event memories might exert moderating effects that take the following form: present selves might be evaluated more unfavorably in comparison to distant past selves, whereas present selves might be evaluated more favorably in comparison to close past selves. We encourage

researchers to examine how subjective closeness influences temporal self-appraisals within nostalgic contexts.

Another potential moderator of nostalgia's effect on temporal self-evaluations is one's developmental stage. Reflecting back to our opening example of campaign slogans, Americans typically believe that their country was at its best when they were young (i.e., under 20 years old; Taylor et al., 2017; see also Lammers & Baldwin, 2018), a preference that is consistent with research on the "reminiscence bump" – people's tendency to retain more detailed memories of their young adulthoods (e.g., Bernstein & Rubin, 2002) – as well as work showing that people nominate their most personally-significant and life-shaping moment as having occurred during early adulthood (Bohn, 2010). It follows that the relationship between nostalgia and temporal self-evaluations could look very different for young as compared to older adults. Both samples in the present work were obtained via Amazon's Mechanical Turk, and as such age ranges in both samples were positively skewed with most participants in the young adult age range, which is consistent with concerns about the generalizability of Mechanical Turk samples (e.g., Walters et al., 2018). Though recent evidence suggests that nostalgia experienced by older adults may be transferred intergenerationally (Wildschut et al., 2018) it remains untested whether nostalgia's impact on temporal self-evaluations influences younger and older adults uniquely. For instance, it may be that for younger (versus older) adults, nostalgia produces beneficial consequences from temporal-self-evaluation (e.g., goal pursuit; Peetz & Wilson, 2013) and we encourage future research to address this possibility.

We also wonder whether alternative moderators might shed further light on the emotional profile of nostalgic experience. For instance, it may be useful for future work to consider the level of abstraction at which nostalgic memories are recalled (Trope & Liberman, 2010), as well as the content domain of those memories within a given level of abstraction. At present, the most commonly used paradigm for examining nostalgia involves instructing participants to "recall a nostalgic time in your life" (i.e., the ERT; Routledge et al., 2011). Although the procedure itself is both reasonable and straightforward, the instructions are also broad enough to elicit memories that vary in terms of both abstraction and content. For instance, participants might elect to recall a concrete and specific memory (e.g., "the first time I heard *Waterfalls* by TLC"), or a more abstract and general memory (e.g., "what the 90s were like"). Likewise, participants might choose to remember an event involving domains ranging from personal relationships (e.g., a past romance) to achievement (e.g., receiving a college acceptance letter). Because we currently know little about whether (and how) differences in both abstraction level (c.f., Stephan et al., 2012) and content influence the downstream consequences of nostalgia, we believe that it would be fruitful to consider other potential moderating factors in future work.

Conclusion

The current research investigated how nostalgia influences affect toward past and present selves. Our findings suggest that nostalgia tends to elevate appraisals of past selves relative to present selves. In demonstrating these effects, our work provides a novel lens through which to better understand the nature and consequences of nostalgic reverie: that of temporal comparison. To apply these findings to our opening observations

about Presidents Trump and Reagans' campaign slogans: if they did incite nostalgia for the past, they likely made people feel, at least temporarily, that their past selves were better than their present selves.

Notes

1. Analyses reporting statistical assumptions of all tests and with all participants included for Studies 1 and 2 can be found in supplemental files at <https://osf.io/hmbwn/>
2. Two memories were not coded by raters due to insufficient detail about the memory. Nevertheless, the difference between self-reported nostalgia between conditions remained significant when these cases were excluded, $t(98) = -6.41$, $p < .001$, $d = -1.28$, $CI_{95\%} = -1.85, -.98$.
3. In the original thesis on which this manuscript is based, the first author considered self-reported subjective closeness as a potential moderator of these effects. However, results were inconsistent and were problematic due to a lack of information about *actual* temporal distance from the memories recalled. Nevertheless, this full report is available at <https://osf.io/hmbwn/>

Disclosure statement

No potential conflict of interest was reported by the authors.

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