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AN ANTIDOTE TO SELF-UNCERTAINTY

Nostalgia Prevents Self-Uncertainty from Lowering Self-Continuity

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We are concerned with self-uncertainty, nostalgia, and self-continuity. We begin by defining these constructs. Then, we discuss the relations among them. Subsequently, we argue that nostalgia buffers against a negative consequence of self-uncertainty, namely, self-discontinuity. We proceed to present relevant evidence and draw broader implications.

Definitions

Self-Uncertainty

We conceptualize self-uncertainty as ambiguity, doubt, or confusion about major aspects of one's life such as career, close relationships, or financial stability (Yang et al., 2017). Self-uncertainty is generally aversive (Hogg, 2014; Landau et al., in press). It is also highly disruptive to the self-concept. For example, self-uncertainty increases the subjective distance between one's present and past selves (Yang et al., 2020). It is also linked to a lack of direction due to blocking one's ability for decisions and actions (Marigold et al., 2010; McGregor & Marigold, in press), is associated with lower self-esteem (Baumgardner, 1990; Story, 2004), and it conduces to higher pessimism and self-handicapping (Martin et al., 2003).

Self-Continuity

We conceptualize self-continuity as a sense of connection between one's past and present selves (Sedikides, Wildschut, Gaertner, et al, 2008). Self-continuity entails psychological benefits. For example, it facilitates the formation of attitudes and judgments, strengthens motivation and decision-making, and conduces to gains in psychological and physical health (Sedikides et al., 2023). Conversely, we conceptualize self-discontinuity as a sense of disconnect between one's past and future selves (Sedikides et al., 2008). Self-discontinuity is a psychological liability. For example, it is associated with depression, anxiety, stress, and suicidal ideation (Sokol & Eisenheim, 2016).

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Nostalgia

We conceptualize nostalgia as sentimental longing for important aspects of one's past (Sedikides, Wildschut, Arndt, & Routledge, 2008). The emotion is self-relevant, social, and mostly positive (Hepper et al., 2012; Van Tilburg et al., 2018). Nostalgic recollections typically involve personally meaningful events (e.g., graduation ceremony, the birth of a child, wedding) that focus on the self within social contexts (e.g., friends, family, romantic partners; Abeyta et al., 2015; Wildschut et al., 2006). Nostalgic recollections comprise a mixture of positive affect and negative affect, with the former outweighing the latter (Leunissen et al., 2021; Sedikides & Wildschut, 2016).

Relations Among Self-Uncertainty, Self-Continuity, and Nostalgia

Self-Uncertainty and Self-Continuity

As mentioned above, self-uncertainty has several negative consequences. In particular, it magnifies the felt distance between one's present self and past self, which may lower self-continuity (Yang et al., 2020). Also, self-uncertainty undermines the ability for decision-making and relevant action (Marigold et al., 2010; McGregor & Marigold, this volume), which can disrupt self-continuity. In addition, self-uncertainty contributes to an unclear and inconsistent self-view (Kusec et al., 2016), and a fragmented self-view will likely obstruct self-continuity. Similarly, individuals high on self-uncertainty lack a firm sense of who they have been and who they are now (Butzer & Kuiper, 2006; Kusec et al., 2016), thus hindering self-continuity. In all, self-uncertainty is likely to engender lower self-continuity.

Self-Uncertainty and Nostalgia

No research has directly examined the relationship between self-uncertainty and nostalgia. Yet, as stated previously, self-uncertainty is an aversive state (Hogg, 2014; Proulx & Inzlicht, 2012; Van den Bos & Lind, 2002; but see Sweeny & Howell, in press). Aversive states present a psychological threat, which nostalgia is known to counteract. We will review literature indicating that nostalgia can buffer aversive states. If so, nostalgia is likely to buffer self-uncertainty as well.

Let us consider trait nostalgia first. Pondering threatening thoughts about death increases anxiety about death, but only for participants who are low on trait nostalgia, not for those high on it (Juhl et al., 2010). Similarly, thinking about death decreases meaning in life for those low on trait nostalgia, but not for those high on it (Routledge et al., 2008).

Induced nostalgia is also known to buffer psychological threat. In an experiment by Vess et al. (2012), participants completed an analytical reasoning test and received bogus feedback indicating that they had either performed well on the test or failed it. Next, participants reflected for a few minutes on a nostalgic or ordinary event from their lives (i.e., Event Reflection Task; Sedikides, Wildschut, Routledge, Arndt et al., 2015; Wildschut et al., 2006) and described this event in writing; this constituted the nostalgia manipulation. Lastly, they indicated the extent to which their test performance was caused by their ability. People typically respond defensively to failure by eschewing internal (i.e., ability-related) attributions for it (Campbell & Sedikides, 1999). Indeed, in the ordinary event condition, those who learned that they had failed the test attributed their performance to their own ability to a lesser extent than those who learned that they had performed well. However, this defensive response was attenuated in the nostalgic event condition. In all, nostalgia thwarted defensive responses to self-threatening information.

In a related line of research, Routledge et al. (2011) examined whether nostalgia curtails defensive responses to meaning threat. They induced nostalgia by having participants think and write about a nostalgic or ordinary event from their lives (i.e., Event Reflection Task). Then, they experimentally threatened meaning by having participants read an essay on the meaninglessness of life (meaning-threat condition) or an essay on the limitations of computers (no-threat condition). Lastly, they assessed participants' views about the essay that they had read and its author. People typically respond defensively to such threatening information by derogating its source (Greenberg et al., 1990). Indeed, Routledge et al. reported that, among participants who recalled an ordinary event, those in the meaning-threat condition derogated the essay and its author to a greater extent than those in the no-threat condition. However, this pattern was not evident among participants who recalled a nostalgic event: they refrained from source derogation. In short, nostalgia warded off defensive responses to meaningful threats. A similar investigation (Routledge et al., 2012) further examined whether induced nostalgia offsets an established effect, namely, drops in meaning caused by viewing absurd art (Proulx et al., 2010). Participants viewed either an absurd painting or a representational painting, were subject to a nostalgia induction (vs. control), and completed a meaning in life scale (i.e., the Presence of Meaning in Life subscale of the Meaning in Life Questionnaire; Steger et al., 2006). Viewing an absurd (vs. representational) painting reduced meaning among participants who recalled an ordinary autobiographical event, but not among those who recalled a nostalgic event.

Conceptually similar results have been reported with other types of threats. Examples are loneliness (i.e., perceived lack of social support due to fewer and less satisfying relationships than desired; Abeyta & Juhl, 2023; Zhou et al., 2008, 2022), disillusionment (i.e., experience of loss, confusion, and hopelessness following the realization that deeply held beliefs have been discredited; Maher et al., 2021), and procedural injustice in the workplace (i.e., perceived unfairness of the decision making or outcome allocation process in the organization; Van Dijke et al., 2015). Nostalgia alleviated the discomfort that accompanied these threats.

Nostalgia and Self-Continuity

Nostalgia fosters self-continuity. Sedikides et al. (2016, Experiment 3) induced nostalgia with the Event Reflection Task. Subsequently, participants indicated their level of self-continuity by responding to such items as "I feel connected with my past" and "I feel there is continuity in my life." Nostalgic participants reported higher self-continuity than control participants. This finding has been replicated in several experiments and across Western, Chinese, and Syrian participants (Jiang et al., 2021; Ju et al., 2016; Sedikides et al., 2016, Experiment 2; Wildschut et al., 2018, 2019).

Further, Sedikides, Wildschut, Routledge, and Arndt (2015, Experiment 3) compared the influence of thinking and writing about a nostalgic event in one's life to thinking and writing about a positive event in one's life (i.e., a time when participants were lucky) on self-continuity. Again, nostalgia (vs. control) increased self-continuity. In replication experiments, nostalgia was induced with features that were prototypical of the construct (e.g., keepsakes, rose-tinted memories) or non-prototypical of it (e.g., daydreaming, wishing; Abakoumkin et al., 2019, Experiment 2), as well as with nostalgic or non-nostalgic song lyrics (Sedikides et al., 2016, Experiment 1), music (Van Tilburg et al., 2019, Experiments 3–4), and scents (Reid et al., 2014).

Nostalgia as a Buffer against Self-Uncertainty

People cope with self-uncertainty in various ways. They may compare themselves (e.g., their attitudes, accomplishments, or possessions) to similar others (Gerber et al., 2018). They may engage

in revision of identity goals (Carroll et al., in press). They may respond positively to events that uphold their cultural worldview (e.g., values, norms) and negatively to events that challenge it (Van den Bos, 2009; Van den Bos & Lind, in press). They may identify strongly with their social group (Choi & Hogg, 2020), especially if they are peripheral group members (Hohman & Kuljian, in press). They may trust, or even support, autocratic leaders (Rast et al., 2013, 2016) while distrusting the public (Pfattheicher & Böhm, 2018). They may become more vocal when in a minority status (Rios et al., 2012). And they may become more materialistic (Martin et al., 2019; Morrison Rios & Johnson, 2011).

We propose that people also cope with self-uncertainty through nostalgia—whether at the trait or state (e.g., experimentally induced) level. Not only does the emotion serve as a psychological refuge in times of crisis, but it also motivates processes that contribute to the re-establishment of intrapersonal equilibrium. The foundational process here is approach motivation. Nostalgia is positively associated with, and activates, approach motivation. For example, in a cross-sectional investigation, Stephan et al. (2014, Study 1) assessed trait nostalgia both with the Southampton Nostalgia Scale (Barrett et al., 2010; Routledge et al., 2008; see also Wildschut & Sedikides, 2022a) and the Nostalgia Inventory (Batcho, 1995). The former scale comprises seven items pertaining to the personal relevance of nostalgia (e.g., "How valuable is nostalgia for you?"), proneness to nostalgia (e.g., "How prone are you to feeling nostalgic?"), and frequency of nostalgizing (e.g., "Generally speaking, how often do you bring to mind nostalgic experiences?"). The latter scale measures nostalgia for 20 objects, persons, or situations from one's past (e.g., "toys," "my family," "the way people were"). Stephan et al. assessed approach motivation with the 13-item Behavioral Activation System (BAS) subscale of the BIS/BAS Scales (Carver & White, 1994); sample items are "I will often do things for no other reason than that they might be fun" (Fun Seeking subscale), "I go out of my way to get things I want" (Drive subscale), and "It would excite me to win a contest" (Reward Responsiveness subscale). The two nostalgia scales were positively associated with BAS. In a follow-up experimental investigation, Stephan et al. (Study 3) induced nostalgia with the Event Reflection Task and assessed state approach motivation with the BAS. Nostalgic participants experienced higher approach motivation (as indicated by their scores on the Fun Seeking and Drive subscales, but not on the Reward Responsiveness subscale) than control participants. We propose that approach motivation underlies nostalgia's capacity to evoke self-continuity.

The dynamic relations among self-uncertainty, self-continuity, and nostalgia are captured by the restorative property of nostalgia (Wildschut & Sedikides, 2023). Self-uncertainty is likely to cause a discomforting state, self-discontinuity (or, to be more precise, drops in self-continuity). Nostalgia, however, at the trait or state (i.e., induced) level, will alleviate the said discomfort by minimizing reductions in self-continuity. More formally, nostalgia—assessed as a trait or experimentally manipulated—buffers aversiveness by weakening its negative consequences. As such, nostalgia will protect against reductions in self-continuity that are caused by self-uncertainty, maintaining homeostasis.

We examined the restorative property of nostalgia in an experiment that we describe below. As an overview, we induced self-uncertainty (vs. self-certainty) and then induced nostalgia (vs. control). Next, we assessed self-continuity. Lastly, following the collection of demographic information, we assessed trait nostalgia. We formulated two hypotheses. First, if nostalgia buffers the adverse impact of self-uncertainty on self-continuity, then self-uncertainty (vs. self-certainty) will reduce self-continuity, but only for participants low (not high) on nostalgia. This hypothesis is tested by the statistical interaction between self-uncertainty and trait nostalgia. Second, self-uncertainty (vs. self-certainty) will reduce self-continuity, but only for participants in the control

(not in the nostalgia) condition. This hypothesis is tested by the statistical interaction between self-uncertainty and induced nostalgia. We also explored the three-way interaction among self-uncertainty, induced nostalgia, and trait nostalgia.

Description of Methodology

We began by estimating our sample size. Previous experiments on the buffering role of nostalgia reported medium to large effect sizes, ranging from $f = .23$ ($\eta^2 = .05$) to $f = .54$ ($\eta^2 = .21$). However, these experiments were conducted in controlled laboratory environments. Given that we intended for our experiment to be online, and hence in a less controlled environment, we estimated our sample size based on a small to medium effect size ($f = .18$; $\eta^2 = .03$), the typical effect size range in social psychology (Richard et al., 2003). Specifically, we used G*Power (Faul et al., 2009) to conduct an a-priori power analysis with a power of.80, significance level of $\alpha = .05$, and effect size of $f = .18$. This analysis recommended a target sample size of 245. We rounded this to 250 to hedge against attrition. We recruited MTurk workers for $1.00. We excluded eight of them because they failed to complete the experimental manipulations, yielding a final sample of 242 participants (151 women, 88 men, 1 other, 2 unknown; $M_{age} = 32.26$, $SD_{age} = 9.77$, $Range_{age} = 18–70$; one participant did not provide age-related information).

We experimentally manipulated self-uncertainty by randomly assigning participants to either the self-uncertainty ($n = 113$) or self-certainty ($n = 129$) condition. In the *self-uncertainty condition*, we initially provided participants with a few examples such as: "People face a lot of uncertainties in life. For instance, they are typically uncertain about their job or career, relationships, and financial stability." Following this, we instructed them to "make a detailed list of the specific uncertainties you face in your life." Finally, we asked them to "explain in detail your thoughts on these uncertainties and how they make you feel." In the *self-certainty condition*, we initially gave participants examples such as: "People face a lot of certainties in life. For instance, they are typically certain about the hobbies they have, the types of food they generally eat, and the friends they tend to see." Next, we instructed them to "make a detailed list of the specific certainties you have in your life." Lastly, we asked them to "explain in detail your thoughts on these certainties and how they make you feel."

We proceeded to induce nostalgia with the Event Reflection Task (Sedikides, Wildschut, Routledge, Arndt et al., 2015; Wildschut et al., 2006). In particular, we randomly assigned participants to the nostalgia or control condition. In the *nostalgia condition*, we provided them with a dictionary definition of the emotion (i.e., "a sentimental longing for the past;" The New Oxford Dictionary of English, 1998, p. 1266). Then, we instructed them to

> Think of a nostalgic event in your life. Specifically, try to think of a past event that makes you feel most nostalgic. Bring this nostalgic experience to mind. Immerse yourself in the nostalgic experience and spend a couple minutes thinking about how it makes you feel.

Afterward, we asked participants to "type four keywords relevant to this nostalgic event (i.e., words that describe the experience)." In the *control condition*, we instructed participants to "bring to mind the activities of your day yesterday. Specifically, try to think of the series of events that took place throughout your day. Bring these to mind and spend a couple of minutes thinking about them." Subsequently, we instructed them to "type four keywords relevant to yesterday's activities (i.e., words that describe what you did yesterday)." We asked these participants to reflect upon yesterday's activities in order to prevent them from bringing to mind a nostalgic event.

Afterward, we measured self-continuity (Sedikides et al., 2016; Sedikides, Wildschut, Routledge, & Arndt, 2015). We asked participants to indicate the extent to which they agreed (1 = *strongly disagree,* 6 = *strongly agree*) with four statements (e.g., "I feel there is continuity in my life," "I feel important aspects of my personality remain the same across time"). We averaged responses to compute self-continuity scores (α = .76, M = 4.36, SD = 0.96).

Finally, after collecting responses to demographic questions, we requested that participants complete the Southampton Nostalgia Scale; 1 = *not at all*, 7 = *very much*). We averaged responses to compute relevant scores (α = .94, M = 4.45, SD = 1.44). We administered this scale at the end (rather than the beginning) of the experiment to prevent it from activating the construct "nostalgia" among participants in the control condition.

Findings

Preliminary Analyses

To ascertain that trait nostalgia was not influenced by the experimental manipulation, we submitted trait nostalgia scores to a 2 (self-uncertainty vs. self-certainty) × 2 (induced nostalgia vs. control) Analysis of Variance. Neither the main effects of self-uncertainty, $F(1, 238) = 2.41$, $p = .122$, $\eta^2 = .01$, nor that of induced nostalgia, $F(1, 238) = 1.65$, $p = .201$, $\eta^2 = .01$, was significant. The interaction between self-uncertainty and induced nostalgia was not significant either, $F(1, 238) = 0.53$, $p = .469$, $\eta^2 = .002$. Trait nostalgia was not impacted by the manipulations.

Self-Uncertainty and Trait Nostalgia

Next, we tested the hypothesis that self-uncertainty reduces self-continuity, but only for participants low (not high) on trait nostalgia. We conducted a moderation analysis using model 1 of PROCESS (Hayes, 2017). We entered self-uncertainty (self-certainty = 0, self-uncertainty = 1) as the independent variable, self-continuity as the dependent variable, and trait nostalgia proneness as the moderator. The analysis revealed a significant interaction between self-uncertainty and trait nostalgia, $b = 0.17$, $SE = 0.08$, $t(238) = 2.03$, $p = .043$ (Figure 8.1). The analysis also yielded simple effects of self-uncertainty on self-continuity for participants with low (−1 SD) and high (+1 SD) levels of trait nostalgia. At low levels of trait nostalgia, self-uncertainty decreased self-continuity, $b = -0.42$, $SE = 0.17$, $t(238) = -2.46$, $p = .015$. However, at high levels of trait nostalgia, self-uncertainty did not influence self-continuity, $b = 0.07$, $SE = 0.17$, $t(238) = 0.41$, $p = .684$. Taken together, self-uncertainty decreased self-continuity, but highly nostalgic individuals were buffered from this negative outcome. Trait nostalgia protects against self-uncertainty.

Self-Uncertainty and Induced Nostalgia

In the next step, we tested the hypothesis that self-uncertainty (vs. self-certainty) reduces self-continuity, but only for participants in the control (not in the nostalgia) condition. We submitted the self-continuity scores to a 2 (self-uncertainty vs. self-certainty) × 2 (induced nostalgia vs. control) Analysis of Variance. There was no main effect of self-uncertainty, $F(1, 238) = 0.68$, $p = .409$, $\eta^2 = .003$. There was a trending main effect of induced nostalgia $F(1, 238) = 3.23$, $p = .073$, $\eta^2 = .01$, such that participants in the nostalgia condition (M = 4.46, SD = 0.93) reported higher levels of self-continuity than those in the control condition (M = 4.24, SD = 0.99).

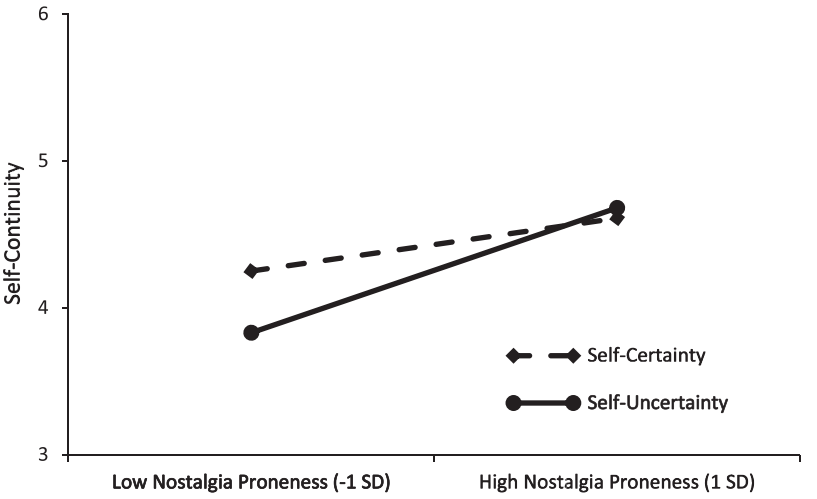

Figure 8.1 Self-uncertainty, self-continuity, and trait nostalgia.

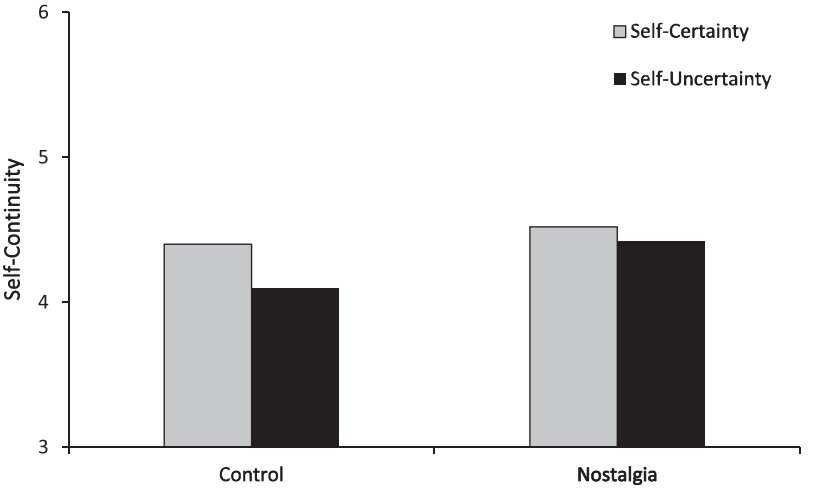

Figure 8.2 Self-uncertainty, self-continuity, and induced nostalgia.

The interaction between self-uncertainty and induced nostalgia was not significant, $F(1, 238) = 2.64$, $p = .106$, $\eta^2 = .01$ (Figure 8.2). Nevertheless, we proceeded to examine whether the pattern of this interaction is consistent with the hypothesis. To do so, we carried out simple effect tests. First, we tested the simple effects of self-uncertainty (vs. self-certainty) for participants in the control and nostalgia conditions. Within the control condition, participants in the self-uncertainty condition tended to exhibit lower levels of self-continuity than those in the self-certainty condition, $F(1, 238) = 2.90$, $p = .090$, $\eta^2 = .01$. However, within the nostalgia condition, there was no difference between participants in the self-uncertainty and self-certainty conditions, $F(1, 238) = 0.33$, $p = .567$, $\eta^2 = .001$. This pattern of results is suggestive. It shows that self-uncertainty likely reduces self-continuity and that induced nostalgia buffers this outcome of self-uncertainty.

Self-Uncertainty, Induced Nostalgia, and Trait Nostalgia

In order to explore the three-way interaction, we conducted a moderation analysis using model 3 of PROCESS macro (Hayes, 2017). We entered self-uncertainty as the independent variable, self-continuity as the dependent variable, induced nostalgia as the first moderator, and trait nostalgia as the second moderator. The three-way interaction was not significant, $b = 0.07$, $SE = 0.17$, $t(234) = 0.39$, $p = .697$.

Summary

The evidence we obtained in this experiment generally aligns with the idea that nostalgia buffers the adverse influence of self-uncertainty on self-continuity. In particular, the results provided strong support for the first hypothesis: self-uncertainty reduced self-continuity, but only for those low on trait nostalgia, not for those high on trait nostalgia. Stated otherwise, individuals chronically high on nostalgia were buffered from the negative impact of self-uncertainty on self-continuity. The results provided weak support for the second hypothesis: self-uncertainty tended to reduce self-continuity, but only for participants who recalled a recent (i.e., yesterday) autobiographical event, not for those who recalled a nostalgic event. The findings have theoretical and practical implications.

Theoretical Implications

Nostalgia appeared to act as a buffer against the negative (i.e., declines in self-continuity) consequences of self-uncertainty. But how so? What is the mechanism of nostalgia that neutralizes the impact of self-uncertainty on self-continuity? There are two likely mechanisms that can act independently of each other. One is the *self-oriented function* of nostalgia (Sedikides, Wildschut, Arndt, Routledge et al., 2015; Wildschut & Sedikides, 2022b). Nostalgic accounts revolve around the self (Brown & Humphreys, 2002; Wildschut et al., 2006). Also, experimentally induced nostalgia increases self-esteem (Hepper et al., 2012; Wildschut et al., 2006), optimism (Cheung et al., 2013, 2016), and inspiration (Evans et al., 2021; Stephan et al., 2015). It is possible, then, that, in the experiment we described, nostalgia bolstered the self, which in turn warded off the impact of self-uncertainty. Another mechanism is the *social function* of nostalgia (Sedikides & Wildschut, 2019; Sedikides, Wildschut, Arndt, Routledge et al., 2015; see also Murray, in press). Nostalgic accounts refer to important people from one's life (Abeyta et al., 2015; Madoglou et al., 2017). Also, in nostalgizing, the person is imbued with social connectedness (i.e., feeling loved, protected, and accepted; Hepper et al., 2012; Wildschut et al., 2006), empathy (Juhl et al., 2020; Zhou et al., 2012), and attachment security (Wildschut et al., 2006, 2010). It is possible, then, that, in the described experiment, nostalgia affirmed the self (cf. Crocker et al., 2008; Kumashiro & Sedikides, 2005), thus withstanding the negative repercussions of self-uncertainty.

Given that nostalgia buffers the adverse influence of self-uncertainty on self-continuity, nostalgia may directly render self-uncertainty (and the downstream consequence of self-discontinuity) more tolerable. As a result of this, nostalgia may increase the likelihood that people will choose to place themselves in uncertain or risky situations. For example, nostalgia may strengthen people's willingness to pursue a further educational degree, despite uncertainty about their capacity to fund it or complete it. Similarly, nostalgia may fortify people's resolve to initiate midlife career changes despite some uncertainty about monetary consequences for their family. Further, nostalgia may provide the spark needed to end a dissatisfying relationship, notwithstanding the uncertainty of

a single life or the availability of desirable partners. Generally speaking, nostalgia may, in some circumstances, provide the impetus needed to take risks.

Consistent with the above assertion, research indicates that nostalgia increases financial risk-taking (Zou et al., 2019). In a cross-sectional study, trait nostalgia was positively related to the proclivity for risk-taking (e.g., "What is your preferred way of running your business?") among business owners. Further, in experimental studies, nostalgia increased risk-taking. In one experiment, risk-taking was assessed with the Automatic Balloon Analogue Risk Task (Pleskac et al., 2008), in which risk is operationalized as the number of pumps that participants choose for each of the 30 virtual balloons. Participants do not know when each balloon will pop. They receive a small monetary reward for each pump but lose all their earnings if the balloon pops. The more pumps participants choose, the riskier they are considered. In the said experiment, nostalgic participants chose a higher number of pumps than control participants. Nostalgic participants took more financial risks than controls. These findings were replicated in two additional experiments with a different operationalization of risk-taking (i.e., a stock market investment task; but see Lilleholt & Zettler, 2023).

Nostalgia buffered the adverse influence of *self-uncertainty*, that is, uncertainty about major aspects of life such as one's career, relationships, and financial stability. This raises the question of whether nostalgia could also protect against uncertainty more generally, not just self-uncertainty. There are several domains about which people can be uncertain, and not all of these uncertainties concern major aspects of life. For example, people can be uncertain about the meaning of an ambiguously worded sentence, whether to bring snacks instead of drinks to a party, or whether it is best to purchase a gas weed trimmer or an electric one. Does nostalgia also buffer the effects of these relatively minor uncertainties? The literature does not offer a definitive answer. On the one hand, empirical efforts have focused on nostalgia's capacity to buffer the impact of existential threats (e.g., meaning in life, mortality awareness). Given that nostalgia largely refers to meaningful life events and time periods (Abeyta & Pillarisetty, 2023; Sedikides & Wildschut, 2018), and that nostalgia affords the opportunity to reflect more broadly on one's life (providing, for example, self-continuity; Sedikides et al., 2023; Zou et al., 2018), there are solid grounds to expect that nostalgia buffers the effects of more serious psychological threats. However, there is less reason to advocate that nostalgia will buffer more minor uncertainties. They do not pose serious threats to self-continuity. They can, however, arouse negative affect (Bar-Anan et al., 2009) and, because nostalgia can foster positive affect (Leunissen et al., 2021; Wildschut et al., 2006), the emotion may help circumvent this negative affect (Sedikides, Wildschut, Routledge, Arndt et al., 2015; Wildschut & Sedikides, 2023). Future research may address whether nostalgia buffers the effects of more minor uncertainties.

Practical Implications

The work we reported is relevant to the developmental periods of late adolescence and early adulthood. These periods are marked by changes and self-uncertainty in several life domains, including relationships, education, and career. Being nostalgic may contribute to the maintenance of self-continuity during this transformative time. For example, nostalgia may facilitate coping with career-related uncertainty.

Career uncertainty can plague some individuals, necessitating the need for career counselors. High levels of career uncertainty, characterized by greater indecision about one's self and future, can be harmful to well-being (Meldahl & Muchinsky, 1997). Individuals facing career uncertainty often express fears of failing, making the wrong choices, or displeasing close others (Serling &

Betz, 1990). These individuals are also more likely to be pessimistic about their career opportunities as well as their control over the employment and career in which they eventually find themselves (Saka et al., 2008). To overcome these discomforting states, people often accept the first available career opportunity, rather than tolerating a period of uncertainty that could lead to more valuable career opportunities (Trevor-Roberts, 2006). The findings of the experiment we reported suggest that nostalgia may increase tolerance for this uncertainty and thus enable individuals to pursue optimal professional prospects.

This possibility seems likely in light of evidence that people who struggle to maintain a stable self-concept are more vulnerable to career uncertainty. Specifically, those with lower self-esteem (Lin et al., 2015), and ill-defined self-concepts (Saka et al., 2008) or vocational self-concepts (Garrison et al., 2017) are more likely to manifest career indecision. Unsurprisingly, one of the main goals of career counseling programs is to help people who struggle with career uncertainty to reconnect with their life values, interests, and goals, and subsequently to script their own personal and career stories, thus strengthening self-continuity (Bright & Pryor, 2011; Mitchell et al., 1999). Given that nostalgia prevents self-uncertainty from disrupting self-continuity, career counselors could utilize nostalgia to assist with this process.

The findings of our experiment have clinical relevance as well. Maintaining self-continuity contributes to well-being. Specifically, self-continuity is related to greater self-esteem (Sheldon et al., 1997; Usborne & Taylor, 2010), more self-concept clarity (Jiang et al., 2020), enhanced self-acceptance (Diehl & Hay, 2011), and increased self-efficacy (Mattingly & Lewandowski, 2013). Moreover, self-continuity is associated with increased positive affect (Diehl & Hay, 2011), greater meaning in life (Shin et al., 2016), lower stress, anxiety, and depression (Anderzén & Arnetz, 1999; Sheldon et al., 1997) as well as augmented satisfaction with life (Ritchie et al., 2011; Zou et al., 2018). In addition, reducing uncertainty contributes to well-being. Specifically, uncertainty can be detrimental to well-being, as it is associated with decreased self-esteem (Baumgardner, 1990; Story, 2004) and greater pessimism (Martin et al., 2003). Furthermore, people who struggle with uncertainty report more negative affects (Carleton et al., 2010), worry (Dugas et al., 2004), anxiety (Wright et al., 2016), and rumination (de Jong-Meyer et al., 2009). Lastly, uncertainty is related to several mental disorders, such as generalized anxiety disorder (Sexton et al., 2003), social anxiety (Carleton et al., 2010), panic disorder (Carleton et al., 2014), obsessive-compulsive disorder (Gentes & Ruscio, 2011), and depression (Boswell et al., 2013). Given the undesirable consequences of uncertainty, clinicians have developed treatments to reduce uncertainty or increase tolerance for it (Dugas & Ladouceur, 2000; Ladouceur et al., 2000).

Nostalgia's capacity to maintain self-continuity in the face of self-uncertainty suggests that nostalgia could complement and enhance therapeutic approaches. For instance, Layous et al. (2022; see also Layous & Kurtz, 2023) carried out an intervention to assess the psychological well-being benefits of nostalgia. These researchers induced nostalgia (vs. control) weekly, for six weeks. They assessed well-being at baseline, mid-intervention (after three weeks), post-intervention, and one-month post-intervention. At mid-intervention, nostalgic (vs. control) participants reported more positive affect, satisfaction with life, and eudaimonic well-being, but less negative affect. These well-being benefits, however, did not persist at the two post-intervention points. Additional research has shown that nostalgia can evoke behavioral changes (i.e., increased physical activity) when it is induced repeatedly (Kersten et al., 2016; see also Kersten & Cox, 2023), raising the possibility that the effects of nostalgia in the Layous et al. study would be stronger had the nostalgia induction been repeated throughout. Taken together, the implementation of nostalgia in clinical environments, perhaps in the face of self-uncertainty, appears promising.

Concluding Remarks

We set to understand the relations among self-uncertainty, self-continuity, and nostalgia. We hypothesized that the emotion buffers the negative consequences (i.e., declines in self-continuity) of self-uncertainty. We provided initial support for this hypothesis in an experiment and considered broader theoretical and practical implications. In all, preliminary evidence indicates that nostalgia serves as an antidote to the perils of self-uncertainty.

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