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From nostalgia, through communion, to psychological benefits: the moderating role of narcissism

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ABSTRACT

Nostalgia, a sentimental longing for one's past, is a social, self-relevant, and ambivalent (albeit predominantly positive) emotion. It fosters tenderness, social connectedness, life meaning, self-continuity, self-esteem, optimism, and inspiration. In two experiments, we manipulated nostalgia and examined mechanisms underlying its psychological benefits. Two communal mechanisms emerged consistently: love-friendship and unity-togetherness. The findings establish the sociality of nostalgia, identifying the communion mechanisms of love-friendship and unity-togetherness as mediators of nostalgia's benefits. The findings also identified narcissism as a moderator of nostalgia's benefits: although both high and low narcissists gained benefits via increased communion, high narcissists also experienced a reduction in some benefits due to decreased agency.

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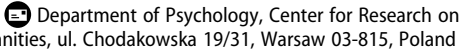
KEYWORDS

Nostalgia; communion; agency; psychological benefits; narcissism

The emotion of nostalgia, a sentimental longing for one's past, has been garnering empirical and theoretical attention in psychology and behavioral sciences. Nostalgia confers psychological (i.e., well-being) benefits. But how and for whom? We define nostalgia, review its benefits, propose mechanisms through which these benefits might be conferred, and ask whether this process is moderated by narcissism. We then report two experiments that address these issues.

Defining nostalgia

Research has sketched out the complex conceptual and empirical terrains of nostalgia. The emotion is social in its content. Prototype approaches (i.e., analyses of lay conceptualizations) have revealed that the construct "nostalgia" encompasses central features which are imbued with sociality, such as memories from one's childhood or youth that are tethered to important persons in one's life (Hepper et al., 2012). Likewise, content analyses of nostalgic (vs. control) narratives have uncovered recurrent mentions of such persons (e.g., family, friends, partners), and an emphasis on social interactions (i.e., higher frequency of first-person plural pronouns, lower frequency of first-person singular pronouns;

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Abeyta et al., 2015; Wildschut et al., 2018). At the same time, the emotion is self-relevant. In their nostalgic narratives, while describing meaningful experiences involving close others, participants mention the self as being at the center of action and the main agent of it (Wildschut et al., 2006; see also Van Tilburg et al., 2018). Moreover, the emotion is predominantly positive, albeit ambivalent. It entails warmth, comfort, and joy, but also tinges of longing and sadness for the unattainable past (Sedikides & Wildschut, 2016). An integrative data analysis revealed that, overall, nostalgia inductions increased positive and ambivalent affect, but had no discernible impact on negative affect (Leunissen et al., 2021), although a small-scale meta-analysis showed that nostalgia inductions increased both positive and negative affect (Frankenbach et al., 2021). Finally, nostalgic events are perceived as unique (Van Tilburg et al., 2019) or atypically representative of the past (Morewedge, 2013). In all, nostalgia is a social, self-relevant, and bittersweet (but more sweet than bitter) emotion about unique or momentous events in one's life. These characteristics are observed across age boundaries (Hepper et al., 2021; Madoglou et al., 2017) and cultures (Hepper et al., 2014; Sedikides & Wildschut, 2022).

Benefits of nostalgia: underlying mechanisms

The literature has identified seven key psychological benefits of nostalgia. They are: (1) *tenderness*, a sense of gentility and kindness (Juhl et al., 2020; Zhou et al., 2012); (2) *social connectedness*, a sense of acceptance and belongingness (Sedikides & Wildschut, 2019; Wildschut et al., 2006); (3) *life meaning*, a sense of life as meaningful and purposeful (Routledge et al., 2011; Sedikides & Wildschut, 2018); (4) *self-continuity*, a sense of connection between one's past and one's present selves (Sedikides et al., 2016; Sedikides et al., 2015); (5) *self-esteem*, a sense of liking and valuing of the self (Reid et al., 2015; Wildschut et al., 2006); (6) *optimism*, a sense of hopefulness and confidence about one's future (W. Cheung et al., 2013; Dennis & Ogden, 2022); and (7) *inspiration*, a sense of moving away from the mundane, gaining an awareness of better possibilities, and feeling an urge to enact them (Evans et al., 2021; Stephan et al., 2015). How does nostalgia confer these benefits? What are the mechanisms that intervene between nostalgia inductions and the benefits? To address these questions, we turn to the constructs of communion and agency.

In describing themselves (Paulhus & John, 1998), personal memories (Gebauer et al., 2013), interpersonal problems (Horowitz et al., 1988), social situations (Fournier et al., 2008), interpersonal behaviors (Wiggins, 1991), other persons (Abele & Wojciszke, 2007), groups (Fiske et al., 2002), social values (Trapnell & Paulhus, 2012), and cultures (Oyserman et al., 2002), individuals rely on two remarkably similar sets of psychological attributes. These two dimensions have been labeled communion and agency (Bakan, 1966; for a review, see; Abele & Wojciszke, 2014), or the Big Two. Communion reflects concern with interdependence, agreeableness, relatedness, and intimacy, whereas agency reflects concern with independence, competence, ambition, and status. Communion and agency are generally considered orthogonal dimensions of social perception (Abele et al., 2018; cf.; Imhoff & Koch, 2017). We propose that nostalgic recollections also comprise communal and agentic elements.

To examine this, we drew on the Coding System for Themes of Agency and Communion (McAdams, 2001; McAdams et al., 1996). Using this system, a researcher

can code narratives for expressions of four communal and four agentic themes. The communal themes are love-friendship, unity-togetherness, dialogue, and caring-help. Love-friendship refers to an experience of romantic love or friendship; unity-togetherness to a sense of belongingness or oneness with a group of people or community; dialogue to an experience of mutual, nonhostile conversation with another person; and caring-help to providing support for another person. Agentic themes are self-mastery, status-victory, achievement-responsibility, and empowerment. Self-mastery refers to success in strengthening the self that results in a feeling of power; status-victory to gaining recognition among others thanks to success; achievement-responsibility to the experience of achieving something or being in charge; and empowerment to self-improvement through contact with someone or something larger such as authority, nature, or deity. We offer broader definitions for these themes in [Table 1](#) (for a more detailed account, see [McAdams, 2001](#)).

Judging by its content, nostalgia is a social emotion, suggesting that its benefits derive from communion. However, also judging by its content, nostalgia is a self-relevant emotion, suggesting that its benefits derive from agency. Nostalgic narratives disproportionately reflect content about others (e.g., more first-person plural pronouns) than content about the self (e.g., fewer first-person singular pronouns; [Wildschut et al., 2018](#)), but nostalgia also entails unique and atypical events with the self as a protagonist ([Wildschut et al., 2006](#)). We reasoned that induced nostalgia can confer benefits via either communion or agency, and we opted for an exploratory approach to the issue.

The role of narcissism

We explored the moderational role of narcissism in Experiment 2. (In Experiment 1, we did not assess this individual difference.) Grandiose – and in particular agentic – narcissism reflects a self-aggrandizing, entitled, and dominant interpersonal orientation ([Sedikides & Campbell, 2017](#)). As such, narcissists are high on agency and low on communion

Table 1. Communal and agentic themes and descriptions used in experiments 1–2.

Themes	Descriptions
Communion	
Love-Friendship	Experiencing romantic love or friendship toward another person, typically involving peers or relative equals.
Unity-Togetherness	Being surrounded by friends and family, being part of a larger community, experiencing a sense of oneness, unity, synchrony, togetherness, belongingness, or solidarity with a group of people, a community, or even all of humankind.
Dialogue	Experiencing reciprocal and non-instrumental form of communication or dialogue or conversation with another person or group of others.
Caring-Help	Providing care, assistance, nurturance, help, aid, or support for another, providing for the physical, material, social, or emotional welfare or well-being of the other.
Agency	
Self-Mastery	Striving successfully to master, control, enlarge, or perfect the self to become a larger, wiser, or more powerful.
Status-Victory	Attaining a heightened status or prestige among peers, through receiving special recognition or honor or winning a contest or competition.
Achievement-Responsibility	Achieving tasks, jobs, instrumental goals, or taking on major responsibilities for other people and assuming roles that require the person to be in charge of things or people.
Empowerment	Being enlarged, enhanced, empowered, ennobled, built up, or made better through the association with someone or something larger and more powerful than me (nature, God, highly influential teacher, parent, authority figure).

(W. K. Campbell et al., 2002; Czarna et al., 2022). Do high and low narcissists, then, experience the benefits of nostalgia differently?

Hart et al. (2011) examined the relation between narcissism and nostalgia. In nostalgic narratives, level of narcissism was positively associated with the proportion of agentic words but was unrelated to the proportion of communal words (Study 1). Further, following a nostalgia induction, narcissism was positively associated with nostalgia for agentic objects (e.g., past successes/achievement, overcoming challenges) but not for communal objects (e.g., family, friends). In addition, nostalgia was positively associated with self-esteem among high (relative to low) narcissists, yet it was unassociated with social connectedness among high (relative to low) narcissists (Study 2).

It is difficult to determine whether Hart et al. (2011) findings ought to be used as a basis for deriving hypotheses. To date, theirs is the only research on the topic. In addition, their reported null association between narcissism and nostalgia-related communion contradicts a substantial body of evidence indicating that narcissism is negatively associated with communion (and positively with agency; Morf et al., 2011; Roberts et al., 2018; Thomaes et al., 2018). It is for these reason that we approached the role of narcissism exploratorily.

Experiment 1

In Experiment 1, we manipulated nostalgia by instructing participants to narrate a nostalgic or ordinary event from their lives. We proceeded to explore the presence of communal and agentic themes in these narratives and to test the effect of nostalgia on the aforementioned psychological benefits (i.e., tenderness, social connectedness, life meaning, self-continuity, self-esteem, optimism, inspiration).

Method

Participants

We determined a target sample size of 128 participants to detect a medium effect ($f = .25$) in a between-subjects design with power equal to .80, assuming $\alpha = .05$ (two-tailed; Faul et al., 2007). Nostalgia experiments typically report small-to-medium effect sizes (Sedikides et al., 2015). We exceeded our recruitment target to safeguard against attrition. Participants were 196 Amazon Mechanical Turk workers (99 women, 93 men). They ranged in age from 20 to 72 years ($M = 36.47$, $SD = 11.33$). Seventy-eight percent of them identified as White, 10% as Black, 7% as Asian, and 6% as "Other." We randomly assigned participants to the nostalgia ($n = 98$) or control ($n = 98$) condition.

Procedure and materials

We induced nostalgia with the Event Reflection Task (Sedikides et al. 2015). In the nostalgia condition, participants read a dictionary definition of nostalgia ("sentimental longing for the past;" Pearsal & Hanks, 1998, p. 1266), and then brought to mind and described in writing a nostalgic event from their past. In the control condition, participants brought to mind and described in writing an ordinary event from their past. The exact wording for the Event Reflection Task was: "Using the space provided below, for the next few minutes, we would now like you to write about the nostalgic (ordinary) event.

Describe this event and immerse yourself into the thoughts and feelings associated with it. Be as thorough as you can in describing the event and how it made you feel." The manipulation check followed (Hepper et al., 2012; Wildschut et al., 2006). Participants responded (1 = *strongly disagree*, 6 = *strongly agree*) to three statements preceded by the stem "Right now . . ." "I am feeling quite nostalgic," "I am having nostalgic feelings," and "I feel nostalgic at the moment" ($\alpha = .98$).

Psychological benefits. Next, participants responded (1 = *strongly disagree*, 6 = *strongly agree*) to the seven benefits. Each was assessed with four items, preceded by the stem "With this event in mind, I feel . . ." We assessed *tenderness* (e.g., "tender") after Juhl et al. (2020) and Zhou et al. (2012). We assessed *social connectedness* (e.g., "connected to loved ones") after Hepper et al. (2012) and Wildschut et al. (2006). We assessed *life meaning* (e.g., "life is meaningful") after Hepper et al. (2012) and Routledge et al. (2011). We assessed *self-continuity* (e.g., "there is continuity in my life") after Sedikides et al. (2016) and Sedikides et al. (2015). We assessed *self-esteem* (e.g., "I have many positive qualities") after Hepper et al. (2012) and Wildschut et al. (2006). We assessed *optimism* (e.g., "optimistic about my future") after W. Cheung et al. (2013, 2016). Finally, we assessed *inspiration* (e.g., "fills me with inspiration") after Stephan et al. (2015) and Wildschut et al. (2019). Cronbach's reliability alphas exceeded .90 for all seven benefits. Collection of demographic information concluded the experimental session.¹

Coding. Two judges coded independently all narratives on the basis of the Coding System for Themes of Agency and Communion (McAdams, 2001; McAdams et al., 1996). As mentioned previously, this system allows the coding of four communal themes (love-friendship, unity-togetherness, dialogue, caring-help) and four agentic themes (self-mastery, status-victory, achievement-responsibility, empowerment). The coding system instructs judges to determine categorically the presence of each theme (0 = no, 1 = yes). We departed from this by instructing judges to rate the presence of the themes on a continuum (1 = *definitely not*, 3 = *somewhat*, 5 = *definitely yes*) in an attempt to increase rating sensitivity. The judges were trained by the lead author. They read the instructions carefully, engaged in a trial session in which they coded a random subset of 25 nostalgic and 25 control practice narratives retrieved from previous research (Wildschut et al., 2006, Study 2), and clarified any lingering issues via discussion. Spearman-Brown interrater reliability coefficients (Eisinga et al., 2013) exceeded .87 for all eight themes.

Results

Manipulation check

Participants in the nostalgia condition reported feeling more nostalgic ($M = 5.22$, $SD = 1.01$) than those in the control condition ($M = 3.38$, $SD = 1.72$), $F(1, 194) = 82.65$, $p < .001$, $\eta^2 = .30$. The manipulation was effective.

Communal and agentic themes

We present descriptive and inferential statistics for communal and agentic themes in Table 2. The communal themes of love-friendship and unity-togetherness were significantly more prevalent in nostalgic than control narratives. Nostalgic and

Table 2. Descriptive and inferential statistics for communion and agency facets in experiments 1–2.

Communion facets	Nostalgia <i>M (SD)</i>	Ordinary <i>M (SD)</i>	<i>F(1, df)</i>	<i>p</i>	η^2
Love-Friendship					
Experiment 1	2.73 (1.39)	1.77 (1.14)	28.18	<.001	.13
Experiment 2	4.98 (1.30)	4.61 (1.46)	5.71	.018	.02
Unity-Togetherness					
Experiment 1	2.81 (1.28)	1.90 (1.19)	26.51	<.001	.12
Experiment 2	5.06 (1.19)	4.47 (1.43)	15.77	<.001	.05
Dialogue					
Experiment 1	1.39 (0.84)	1.28 (0.71)	1.03	.313	.01
Experiment 2	4.21 (1.35)	4.26 (1.35)	0.06	.811	.00
Caring-Help					
Experiment 1	1.37 (0.96)	1.60 (1.11)	2.40	.123	.01
Experiment 2	4.79 (1.28)	4.52 (1.33)	3.59	.059	.01
Agency facets					
Self-Mastery					
Experiment 1	1.31 (0.69)	1.45 (0.91)	1.63	.203	.01
Experiment 2	4.01 (1.49)	4.28 (1.40)	2.32	.129	.01
Status-Victory					
Experiment 1	1.23 (0.69)	1.28 (0.68)	0.22	.639	.00
Experiment 2	2.99 (1.45)	3.17 (1.47)	0.82	.367	.00
Achievement-Responsibility					
Experiment 1	1.36 (0.80)	1.80 (1.14)	9.74	.002	.05
Experiment 2	4.09 (1.48)	4.20 (1.31)	0.31	.579	.00
Empowerment					
Experiment 1	1.19 (0.55)	1.12 (0.56)	0.71	.402	.00
Experiment 2	3.75 (1.64)	3.87 (1.60)	0.23	.635	.00

Note. Communion and agency were coded on a 5-point scale in Experiment 1 and rated on a 6-point scale in Experiment 2. In Experiment 1, $df = 194$. In Experiment 2, $df = 296$. For Experiment 2, inferential statistics pertain to the nostalgia main effect in a Nostalgia \times Narcissism moderated ANCOVA.

control narratives did not differ significantly on the communal themes of dialogue and caring-help. Further, the agentic theme of achievement-responsibility was significantly less prevalent in nostalgic than control narratives. Nostalgic and control narratives did not differ significantly on any of the other agentic themes (Table 2).

The judges' ratings of communal and agentic themes exhibited a pronounced positive skew. That is, for each theme, the judges frequently assigned a rating of 1 (= *definitely not*) and infrequently assigned any rating greater than 1. Although Analysis of Variance is robust to violations of normality when sample size is large and group sizes are approximately equal (Tabachnick & Fidell, 2007), we also carried out non-parametric Wilcoxon-Mann-Whitney tests to compare the nostalgia and control conditions. These tests revealed the same pattern of significant and non-significant condition differences, with one exception; the Wilcoxon-Mann-Whitney test indicated that the agentic theme of empowerment was significantly higher in the nostalgia than control condition, $Z = 2.23$, $p = .026$.

Psychological benefits

We present descriptive and inferential statistics for the benefits in Table 3. Participants in the nostalgia (compared to control) condition reported significantly higher tenderness, social connectedness, life meaning, self-continuity, optimism, and inspiration. The effect of nostalgia on self-esteem was trending in the expected direction (i.e., nostalgia > control).

Table 3. Descriptive and inferential statistics for psychological benefits in experiments 1–2.

Dependent variable	Nostalgia <i>M (SD)</i>	Ordinary <i>M (SD)</i>	<i>F(1, df)</i>	<i>p</i>	η^2
Tenderness					
Experiment 1	5.16 (0.94)	3.89 (1.66)	43.53	<.001	.18
Experiment 2	5.08 (1.01)	3.95 (1.57)	55.10	<.001	.16
Social connectedness					
Experiment 1	4.99 (1.07)	3.79 (1.69)	36.26	<.001	.16
Experiment 2	4.92 (1.14)	3.92 (1.52)	41.84	<.001	.12
Life meaning					
Experiment 1	5.12 (0.99)	4.44 (1.64)	12.38	<.001	.06
Experiment 2	5.13 (1.02)	4.58 (1.32)	17.56	<.001	.06
Self-continuity					
Experiment 1	5.04 (0.97)	4.33 (1.36)	17.41	<.001	.08
Experiment 2	4.94 (0.98)	4.36 (1.18)	21.77	<.001	.07
Self-esteem					
Experiment 1	4.78 (1.13)	4.47 (1.22)	3.11	.079	.02
Experiment 2	4.78 (1.04)	4.55 (1.31)	3.43	.065	.01
Optimism					
Experiment 1	4.71 (1.18)	4.25 (1.42)	6.05	.015	.03
Experiment 2	4.54 (1.26)	4.43 (1.29)	0.91	.341	.00
Inspiration					
Experiment 1	4.70 (1.22)	3.92 (1.63)	14.28	<.001	.07
Experiment 2	4.31 (1.22)	4.06 (1.44)	3.33	.069	.01

Note. In Experiment 1, *df* = 194. In Experiment 2, *df* = 296. For Experiment 2, inferential statistics pertain to the nostalgia main effect in a Nostalgia × Narcissism moderated ANCOVA.

Mediation analyses

Nostalgic (compared to control) narratives included more expressions of love-friendship and unity-togetherness. For the purpose of mediation analyses, we therefore averaged these two communal themes ($r[196] = .51, p < .001$) to form a composite index of communion. We used Hayes’s (2022) PROCESS macro (Model 4) to test a series of mediation models with experimental condition (0 = ordinary event, 1 = nostalgic event) as the predictor variable and the communion composite as mediator. We present the results in Table 4. We obtained significant positive indirect effects (denoted as *ab*) of nostalgia, via communion, on all psychological benefits.

Table 4. Indirect effects of nostalgia on psychological benefits via communion (love-friendship and unity-togetherness) in experiments 1–2.

Benefits	Experiment 1		Experiment 2	
	<i>ab</i>	95% CI	<i>ab</i>	95% CI
Tenderness	0.474	0.278, 0.699	0.239	0.028, 0.490
Social connectedness	0.429	0.238, 0.656	0.217	0.091, 0.367
Life meaning	0.294	0.131, 0.496	0.137	0.055, 0.238
Self-continuity	0.196	0.052, 0.365	0.104	0.035, 0.193
Self-esteem	0.177	0.034, 0.348	0.124	0.042, 0.236
Optimism	0.152	0.001, 0.332	0.124	0.040, 0.238
Inspiration	0.173	0.001, 0.364	0.100	0.027, 0.197

Note. *ab* = unstandardized indirect effect. CI = confidence interval. Results from Experiment 1 are based on a simple mediation model (PROCESS Model 4). Results from Experiment 2 are based on a first-stage moderated mediation model, conditioned at the mean level of narcissism (PROCESS Model 7). The magnitude of the unstandardized indirect effects cannot be compared between experiments, because the mediator (communion) was not assessed in the same metric.

Table 5. Correlations among measures in experiment 1 (lower diagonal for nostalgia condition and upper diagonal for control condition).

Variable	1	2	3	4	5	6	7	8
1. Communion	—	.45***	.45***	.30**	.20	.20*	.17	.15
2. Tenderness	.35***	—	.87***	.76***	.61***	.60***	.61***	.65***
3. Social connectedness	.22*	.80***	—	.69***	.57***	.55***	.58***	.63***
4. Life meaning	.18	.74***	.72***	—	.73***	.70***	.71***	.68***
5. Self-continuity	.19	.74***	.71***	.81***	—	.67***	.60***	.59***
6. Self-esteem	.14	.57***	.73***	.70***	.60***	—	.87***	.78***
7. Optimism	.09	.55***	.57***	.76***	.70***	.71***	—	.84***
8. Inspiration	.12	.52***	.51***	.57***	.56***	.63***	.80***	—

Note. Communion is the average of the love-friendship and unity-togetherness themes.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Nostalgic (compared to control) narratives included fewer expressions of achievement-responsibility and (in the non-parametric analysis) more expressions of empowerment. We therefore repeated the mediation analyses, including these two agentic themes as additional and parallel mediators to the communion theme. All indirect effects via the communion theme remained significant. Moreover, we observed a significant negative indirect nostalgia effect via achievement-responsibility on life meaning (but not on any other benefit). Nostalgia (compared to control) lowered life meaning via a reduction in the achievement-responsibility theme, $ab = -.07$, 95% CI = $[-.184, -.005]$. We present correlations among measures in Table 5.

Discussion

Experiment 1 replicated past findings regarding the influence of nostalgia on psychological benefits. In particular, nostalgia (compared to control) fostered tenderness, social connectedness, life meaning, self-continuity, optimism, and inspiration. The effect of nostalgia on self-esteem was not significant, but trended in the expected direction. Results further revealed that the content of nostalgic (vs. ordinary) recollections reflects to a higher degree the communal themes of love-friendship and unity-togetherness, and to a lesser degree the agentic theme of achievement-responsibility. A non-parametric test suggested that the agentic theme of empowerment was higher for nostalgic (than ordinary) recollections, but judges rarely detected this theme in either condition. A composite index of communion, comprising the themes of love-friendship and unity-togetherness, mediated the effects of nostalgia on the benefits. By relying on love-friendship and unity-togetherness as indicators of communion in mediation analyses, to the exclusion of dialogue and caring-help, we run the risk of capitalizing on chance. It is crucial, therefore, to replicate these findings. We did so in Experiment 2. Another purpose of Experiment 2 was to find out if the effects of nostalgia are contingent upon levels of narcissism.

Experiment 2

A primary objective of preregistered Experiment 2 (see link in the Data Availability Statement) was to test the replicability of Experiment 1's findings. Given that underpowered replication efforts may incorrectly conclude that an original effect is a false

positive (Brandt et al., 2014), we increased substantially (i.e., by 50%) our target sample size. Another change pertained to the measurement of communion and agency. In Experiment 1, the length of an average narrative was approximately 100 words, and coding these brief descriptions for expressions of the communal and agentic themes proved challenging. The judges rarely indicated the presence of these themes and, when they did, it was often with low intensity. Therefore, in Experiment 2, we assessed the importance of communal and agentic themes using self-report items.

Our second objective was to explore whether the effects of nostalgia on the benefits are moderated by narcissism. Low (vs. high) narcissists attach more importance to communion and less importance to agency (W. K. Campbell et al., 2002; Sedikides et al., 2019). Accordingly, we asked two interrelated questions. First, will nostalgia (compared to control) increase the importance ascribed to communion by low narcissists? Such individuals – being more communal – might be disproportionately influenced by nostalgia’s sociality, whereas high narcissists – being more agentic – might be uninfluenced by it. Second, will nostalgia (compared to control) increase the importance ascribed to agency by high narcissists? These individuals – being more agentic – might be disproportionately influenced by nostalgia’s agency, whereas low narcissists – being more communal – might be uninfluenced by it.

Method

Participants

We specified a target sample size of 300 participants (~50% larger than the achieved sample size in Experiment 1). A sensitivity power analysis (Faul et al., 2007) indicated that this sample size provided sufficient power (.80) to detect a small-to-medium effect ($f = .16$). We recruited 301 Prolific workers. We excluded one participant for not following instructions (i.e., copying and pasting text from the Internet instead of writing about a nostalgic event). The remaining 300 participants (149 women, 149 men) ranged in age from 19 to 81 years ($M = 37.53$, $SD = 12.46$). Of them, 73% were White, 18% Black, 4% Asian, and 5% “other.” We randomly assigned them to conditions: nostalgia ($n = 151$) or control ($n = 149$).

Procedure and materials

First, as in Experiment 1, we manipulated nostalgia with the Event Reflection Task and followed it up with the same 3-item manipulation check ($\alpha = .98$). Subsequently, we assessed the subjective importance of communion and agency. We presented participants with a description of the four communal and four agentic themes from the Coding System for Themes of Agency and Communion (McAdams, 2001; McAdams et al., 1996), including a shortened definition for each theme (Table 1). Participants rated the extent to which they considered each theme an important aspect of their life at the current moment (1 = *not important at all*, 6 = *extremely important*). We then assessed the putative benefits as in Experiment 1. Cronbach’s reliability alphas exceeded .83 across them.

Next, participants completed the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988). Each item consisted of a narcissistic statement (e.g., “I rarely depend on anyone else to get things done”) and a non-narcissistic statement (e.g., “I sometimes depend on people to get things done”). For each item, participants selected the

statement that best described them. We calculated an overall narcissism score for each participant by counting the number of narcissistic statements that they selected. Scores ranged from 0 to 32 ($M = 12.13$, $SD = 6.83$, $\alpha = .86$). Collection of demographic information concluded the experimental session.²

We opted to place the Narcissistic Personality Inventory at the end rather than the beginning of the procedure. Placement at the beginning would have posed risk: exposure to the scale items might interfere with the manipulation, thus influencing the recollected events. For example, high narcissists, being primed by the scale items, might be more likely to nostalgize about agentic than communal events in the control condition, but less so in the nostalgia condition (given the “push back” by nostalgia’s sociality), whereas low narcissists might be equally likely to nostalgize about communal events across condition. On the other hand, placement at the end might risk narcissism level being impacted by the nostalgia manipulation. This, however, was not the case. We observed no significant difference in narcissism level between participants in the nostalgia ($M = 11.93$, $SD = 6.94$) and control ($M = 12.34$, $SD = 6.72$) conditions, $F(1, 298) = 0.27$, $p = .605$, $\eta^2 = .001$.

Results

We examined the moderational role of narcissism with Nostalgia \times Narcissism moderated Analyses of Covariance (ANCOVAs). Nostalgia was a contrast-coded categorical independent variable ($-1/2 = \text{control}$, $1/2 = \text{nostalgia}$) and narcissism was a mean-centered continuous independent variable (i.e., covariate).

Manipulation check

A Nostalgia \times Narcissism moderated ANCOVA on the manipulation check revealed a significant nostalgia main effect only, $F(1, 296) = 124.56$, $p < .001$, $\eta^2 = .30$. Participants in the nostalgia condition reported feeling more nostalgic ($M = 6.15$, $SD = 1.06$) than controls ($M = 4.13$, $SD = 1.95$). The manipulation was effective and unqualified by narcissism.

Communion and agency

Nostalgia \times Narcissism moderated ANCOVAs on the communal and agentic themes yielded several significant nostalgia main effects. Replicating Experiment 1 findings, nostalgia (compared to control) significantly increased the communal themes of love-friendship and unity-togetherness, but not the communal themes of dialogue and caring-help. For caring-help, there was a trend in the expected direction. We did not replicate the Experiment 1 finding that nostalgia (compared to control) reduced achievement-responsibility. We present descriptive and inferential statistics for communal and agentic themes in Table 2. The analyses further yielded significant positive associations between narcissism and all eight communal and agentic themes (Table 6). However, narcissism was more strongly associated with the agentic than communal themes.³

The Nostalgia \times Narcissism interaction was significant for the agentic theme of status-victory, $b = -0.055$, $SE = 0.022$, $F(1, 296) = 6.07$, $p = .014$, $\eta^2 = .02$, and trending for the agentic theme of self-mastery, $b = -0.043$, $SE = 0.024$, $F(1, 296) = 3.26$, $p = .072$, $\eta^2 = .01$. Tests of simple effects revealed that nostalgia (compared to control) reduced

Table 6. Associations of narcissism with communion and agency facets in experiment 2.

	Narcissism main effect				
	<i>b</i>	<i>SE</i>	<i>F</i> (1, 296)	<i>p</i>	η^2
Communion facets					
Love-Friendship	0.027	0.012	5.31	.022	.02
Unity-Togetherness	0.024	0.011	4.63	.032	.02
Dialogue	0.031	0.011	7.69	.006	.03
Caring-Help	0.030	0.011	7.31	.007	.02
Agency facets					
Self-Mastery	0.057	0.012	22.92	<.001	.07
Status-Victory	0.093	0.011	70.06	<.001	.19
Achievement-Responsibility	0.055	0.011	23.26	<.001	.07
Empowerment	0.083	0.013	41.33	<.001	.12

Note. *b* = unstandardized regression coefficient. Table entries pertain to the narcissism main effect in a Nostalgia × Narcissism moderated ANCOVA.

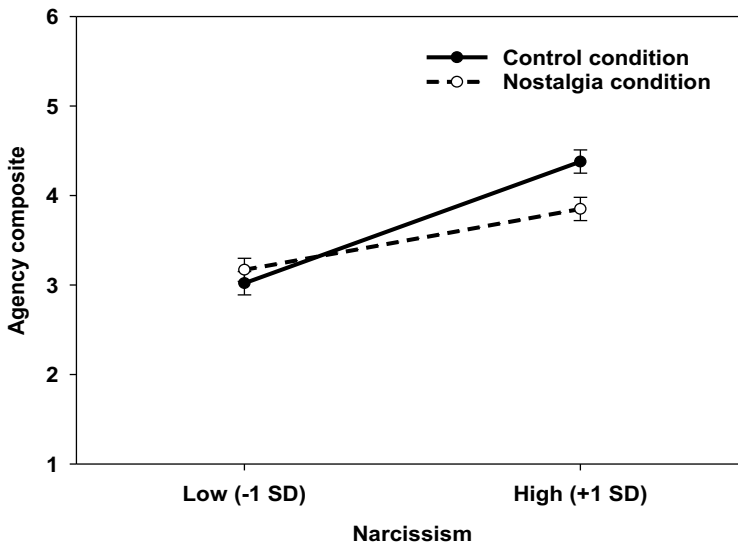


Figure 1. Interaction between nostalgia and narcissism on agency composite in experiment 2. Note. Plotted values are predicted means. Error bars represent standard errors. Agency composite is the average of the status-victory and self-mastery themes.

status-victory, $b = -0.510$, $SE = 0.214$, $F(1, 296) = 5.68$, $p = .018$, $\eta^2 = .02$, and self-mastery, $b = -0.537$, $SE = 0.228$, $F(1, 296) = 5.55$, $p = .019$, $\eta^2 = .02$, for participants who were high (+1 SD) on narcissism, but had no significant effect on either status-victory, $b = 0.237$, $SE = 0.214$, $F(1, 296) = 1.22$, $p = .270$, $\eta^2 = .00$, or self-mastery, $b = 0.046$, $SE = 0.228$, $F(1, 296) = 0.04$, $p = .840$, $\eta^2 = .00$, for participants who were low (-1 SD) on narcissism (Figure 1). Narcissism did not moderate the effect of nostalgia on the agentic themes of achievement-responsibility and empowerment, nor its effect on any of the communal themes.

Summing up, across two experiments, nostalgia increased the love-friendship and unity-togetherness themes of communion. However, nostalgia’s influence on agentic themes was inconsistent. In Experiment 1, nostalgia decreased achievement-

responsibility, whereas, in Experiment 2, it decreased status-victory and self-mastery but only among high narcissists.

Psychological benefits

Nostalgia \times Narcissism moderated ANCOVAs on the psychological benefits also produced several significant nostalgia main effects. Replicating Experiment 1 findings, nostalgia (compared to control) significantly increased tenderness, social connectedness, life meaning, and self-continuity. The effects of nostalgia on self-esteem and inspiration were trending in the hypothesized direction. In contrast to Experiment 1, nostalgia did not significantly increase optimism. We present descriptive and inferential statistics for the benefits in Table 3. The analyses further produced significant positive associations between narcissism and life meaning, self-esteem, optimism, and inspiration (Table 7).⁴ The Nostalgia \times Narcissism interaction was not statistically significant for any of the benefits, $F_s(1, 296) < 1.80$, $p_s > .182$, $\eta^2_s < .006$.

Moderated mediation analyses: the role of narcissism

Next, we tested whether the effects of nostalgia on psychological benefits were mediated by communion and agency themes, and whether these mediated or indirect effects were moderated by narcissism. Nostalgia (compared to control) significantly increased the communal themes of love-friendship and unity-togetherness. We therefore averaged love-friendship and unity-togetherness ($r[300] = .61$, $p < .001$) to form a composite measure of communion, as in Experiment 1. Also, given that nostalgia (compared to control) significantly decreased the agentic themes of status-victory and self-mastery among high narcissists, we averaged these two themes ($r[300] = .47$, $p < .001$) to form a composite measure of agency.

We used the PROCESS macro (Hayes, 2022; Model 7) to test a first-stage moderated mediation model (Edwards & Lambert, 2007).⁵ We ran a series of mediation models with experimental condition as the predictor variable, the communion composite as the mediator, and narcissism as moderator. We present results in Table 4. When the communion composite was the mediator, the index of moderated mediation (Hayes, 2015) was not significant for any of the benefits. Results revealed significant indirect effects of nostalgia (compared to control), via communion, on all benefits irrespective of narcissism. Next, we repeated the moderated mediation analyses with the agency composite as mediator (Table 8). The index of moderated mediation was significant for

Table 7. Associations of narcissism with psychological benefits in experiment 2.

	Narcissism main effect				
	<i>b</i>	<i>SE</i>	<i>F</i> (1, 296)	<i>p</i>	η^2
Tenderness	0.000	0.011	0.00	.992	.00
Social connectedness	-0.004	0.011	0.14	.709	.00
Life meaning	0.033	0.010	11.53	<.001	.04
Self-continuity	0.015	0.009	2.56	.111	.01
Self-esteem	0.034	0.010	12.14	<.001	.04
Optimism	0.050	0.010	23.21	<.001	.07
Inspiration	0.046	0.011	17.75	<.001	.06

Note. *b* = unstandardized regression coefficient. Table entries pertain to the narcissism main effect in a Nostalgia \times Narcissism moderated ANCOVA.

Table 8. Indirect effects of nostalgia on psychological benefits via agency (status-victory and self-mastery) as a function of narcissism in experiment 2.

Benefits	Low narcissism (-1 SD)		High narcissism (+1 SD)	
	<i>ab</i>	95% CI	<i>ab</i>	95% CI
Tenderness	0.002	-0.028, 0.041	-0.008	-0.091, 0.067
Social connectedness	0.003	-0.026, 0.041	-0.010	-0.095, 0.061
Life meaning	0.026	-0.041, 0.102	-0.096	-0.215, -0.014
Self-continuity	0.008	-0.020, 0.043	-0.030	-0.106, 0.019
Self-esteem	0.034	-0.050, 0.131	-0.124	-0.258, -0.024
Optimism	0.042	-0.061, 0.158	-0.156	-0.309, -0.036
Inspiration	0.045	-0.063, 0.172	-0.168	-0.325, -0.034

Note. *ab* = unstandardized indirect effect. CI = confidence interval. Results are based on a first-stage moderated mediation model, conditioned at low (-1 SD) and high (+1 SD) levels of narcissism (PROCESS Model 7).

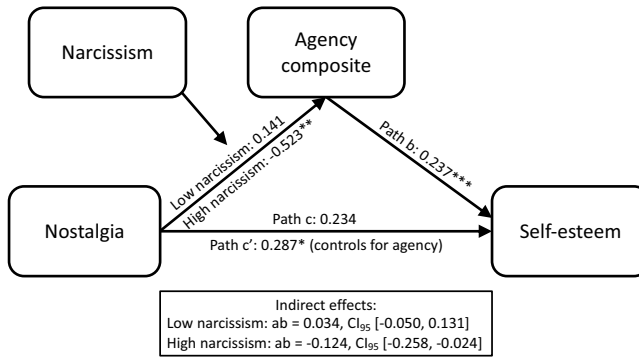


Figure 2. Indirect effect of nostalgia on self-esteem via agency as moderated by narcissism in experiment 2: first-stage moderated mediation (PROCESS model 7). Note. Path a, representing the effect of the nostalgia manipulation on the agency composite, varies as a function of narcissism. Path coefficients are unstandardized regression coefficients. * $p < .05$, ** $p < .01$, *** $p < .001$

four benefits: life meaning (index = -0.009, 95% CI [-0.020, -0.001]), self-esteem (index = -0.012, 95% CI [-0.025, -0.002]), optimism (index = -0.015, 95% CI [-0.029, -0.002]), and inspiration (index = -0.016, 95% CI [-0.031, -0.003]). In particular, nostalgia decreased life meaning, self-esteem, optimism, and inspiration through lowered agency among those who were high (+1 SD) on narcissism (Table 8, rightmost columns). For participants who were low (-1 SD) on narcissism, none of the indirect effects via agency were significant (Table 8, leftmost columns).⁶ For illustrative purposes, we display in Figure 2 the pattern of moderated mediation on self-esteem. We report correlations among measures in Table 9.⁷

Ancillary analyses: total effects of nostalgia for high narcissists

Nostalgia increased all psychological benefits via (increased) communion, and did so for both high and low narcissists. For high narcissists, however, nostalgia also decreased life meaning, self-esteem, optimism, and inspiration via (reduced) agency. This raises the question whether, at high levels of narcissism, the net or total effect of nostalgia on these four benefits was positive, negative, or null. To answer this question, we tested the effect of nostalgia, conditional on high narcissism (+1 SD). For high narcissists, the total effect of nostalgia on life meaning was positive and significant ($F[1, 296] = 5.65, p = .018, \eta^2 = .02$),

Table 9. Correlations among measures in experiment 2 (lower diagonal for nostalgia condition and upper diagonal for control condition).

Variable	1	2	3	4	5	6	7	8	9	10
1. Narcissism	—	.13	.54***	.01	-.05	.21***	.07	.20*	.30***	.29***
2. Communion	.16	—	.30***	.43***	.38***	.24**	.24**	.33***	.26**	.19*
3. Agency	.28***	.19*	—	.10	.05	.16*	.00	.24**	.30***	.31***
4. Tenderness	-.02	.49***	-.11	—	.89***	.64***	.53***	.62***	.51***	.59***
5. Social connectedness	.02	.43***	-.03	.72***	—	.63***	.51***	.58***	.46***	.49***
6. Life meaning	.17*	.37***	.24**	.38***	.38***	—	.58***	.79***	.76***	.69***
7. Self-continuity	.12	.23**	.14	.29***	.29***	.64***	—	.58***	.50***	.48***
8. Self-esteem	.20*	.16	.27***	.27***	.32***	.68***	.62***	—	.81***	.75***
9. Optimism	.24**	.22**	.28***	.32***	.30***	.69***	.49***	.76***	—	.82***
10. Inspiration	.18*	.17*	.30***	.24**	.25**	.58***	.43***	.62***	.75***	—

Note. Communion is the average of the love-friendship and unity-togetherness themes. Agency is the average of the status-victory and self-mastery themes.

* $p < .05$, ** $p < .01$, *** $p < .001$.

but its total effects on self-esteem ($F[1, 296] = 0.96, p = .328, \eta^2 = .003$), optimism ($F[1, 296] = 0.02, p = .879, \eta^2 < .001$), and inspiration ($F[1, 296] = 0.12, p = .733, \eta^2 < .001$) were null.

Discussion

Using a larger sample, we replicated in Experiment 2 the key Experiment 1 findings. Specifically, nostalgia fostered tenderness, social connectedness, life meaning, self-continuity, self-esteem, and inspiration. However, contrary to Experiment 1 and past findings (W. Cheung et al., 2013; W. Y. Cheung et al., 2016; Dennis & Ogden, 2022; Evans et al., 2021), nostalgia did not foster optimism. We also replicated and clarified the Experiment 1 findings regarding mechanisms through which nostalgia confers benefits. Nostalgia augmented the perceived importance of two communal themes, love-friendship and unity-togetherness. We averaged these themes to form a composite index of communion. As in Experiment 1, this communion index transmitted (i.e., mediated) the effect of nostalgia to all seven benefits.

Turning to agentic themes, in Experiment 1 nostalgia (compared to control) reduced achievement-responsibility and (in a non-parametric analysis) increased empowerment. We did not replicate these findings in Experiment 2. Here, we found an interaction between nostalgia and narcissism on two agentic themes – status-victory and self-mastery. We proceeded to form a composite index of agency by averaging these two themes. For participants high in narcissism, nostalgia decreased agency, which in turn mediated nostalgia weaker influence on life meaning, self-esteem, optimism, and inspiration. These patterns indicate that, for high narcissists, nostalgia, in addition to augmenting all benefits via higher communion, lessens some benefits via lower agency.

General discussion

In two experiments, we tested the mechanisms through which nostalgia fulfills vital psychological benefits: tenderness, social connectedness, life meaning, self-continuity, self-esteem, optimism, inspiration. In Experiment 1, a foray into the issues, we first derived four communal themes (love-friendship, unity-togetherness, dialogue, caring-help) and four agentic themes (self-mastery, status-victory, achievement-responsibility,

empowerment) from participants' nostalgic and control narratives, and then linked these themes to the benefits. The communal themes of love-friendship and unity-togetherness were more prevalent in nostalgic narratives than in narratives of ordinary past experiences. A composite communion index comprising the average of these two themes mediated the effect of nostalgia on all seven benefits.

In Experiment 2, following a nostalgia induction, participants rated the momentary importance of the four communal and four agentic themes (accompanied by definitions) and completed assessments of the seven benefits. In replication of Experiment 1, nostalgia (compared to control) increased the importance of the communal themes love-friendship and unity-togetherness, which we averaged to form a communion index. Additionally, we explored the role of narcissism. The communion index mediated the effects of nostalgia on all seven benefits, irrespective of narcissism. At the same time, in the case of high narcissists, the agency index formed of the themes of status-victory and self-mastery mediated adverse effects of nostalgia on life meaning, self-esteem, optimism, and inspiration.

Our research replicated previous findings (Sedikides et al. 2015; Wildschut & Sedikides, 2022), namely, that nostalgia fulfills vital psychological benefits (with the exception of optimism in Experiment 2). Our research also showed that nostalgia conferred social connectedness to both high and low narcissists, consistent with Hart et al. (2011). Inconsistent with Hart et al., our research indicated that nostalgia does not confer more self-esteem to high than low narcissists. Testing communion and agency as mediators of the effects of nostalgia was a novel contribution of our work, revealing the consistent mediational role of communion on all benefits regardless of narcissism. However, along with its benefits via communion, in Experiment 2 nostalgia decreased the momentary importance of agency for high narcissists, which in turn decreased some of the benefits.

Broader implications: person × activity fit

Recent evidence for nostalgia's benefits in vulnerable populations has raised the prospect of clinical interventions (Layous et al., 2022; Wildschut & Sedikides, 2023a, 2023b). In their positive activity model, Lyubomirsky and Layous (2013) proposed that interventions aimed at increasing well-being will be successful to the extent that they are suited to the person engaging in them (i.e., if there is optimal person-activity fit; see also Schmader & Sedikides, 2018). Supporting this idea, research indicates that, when an activity feels natural and enjoyable, people are more likely to persist in it beyond the prescribed intervention period (Sheldon & Lyubomirsky, 2006) and to maintain their well-being benefits over time (Proyer et al., 2015). Our findings add weight to this argument. The activity of remembering a nostalgic (compared to ordinary) event from one's past decreased agency to a greater extent among high (than low) narcissists, with ensuing psychological costs to life meaning, self-esteem, optimism, and inspiration. The implication is that interventions should aim to achieve optimal person-activity fit by pre-screening for narcissism, depending on what is the main focus of the intervention: to increase communion (in which case both high and low narcissists will primarily reap benefits) or to decrease agency (in which case low narcissists will primarily reap benefits, but the consequences for high narcissists will be mixed)?

Experiment 2 findings showcase the potential of nostalgia as an intervention for high narcissists. These individuals habitually focus on the self and agency, with relatively little concern for others or communion (Sedikides, 2021; Sheldon et al., 2020). In nostalgizing, high narcissists viewed communion as more important, and agency as less important, while still deriving benefits from nostalgia. The negative effect of nostalgia on life meaning, self-esteem, optimism, and inspiration via decreased agency was offset and, in the case of life meaning, dominated by the positive effect of nostalgia on these benefits via increased communion. Thus, nostalgia seems to be a promising way of enhancing communion and attenuating agency among high narcissists.

Limitations and directions for future research

Love-friendship and unity-togetherness emerged as potent carriers of nostalgia's benefits in both experiments. When nostalgizing, participants galvanize the belief that love-friendship and unity-togetherness are important themes, and, partly due to this belief, derive benefits from nostalgia. Prior work has pointed to the relevance of these two communal themes. In particular, a loving-friendship interpersonal orientation is linked to better subjective well-being (Diener & Seligman, 2002; Diener et al., 2018) and, through social support, to improved psychological and physical health (Cohen, 2004; Uchino et al., 1996, 2018). Likewise, unity-togetherness predicts psychological (Haslam et al., 2018) and physical (Holt-Lunstad et al., 2015; Uchino et al., 2018) health. Also, prior work has shown that nostalgia through empathy increases prosocial intentions and behavior (Zhou et al., 2012). The findings reinforce the effectiveness of nostalgia as a social emotion, not only in terms of its content and benefits, but also in terms of its evoked mechanisms.

Yet, neither experiment found an effect of nostalgia on the other communal themes, dialogue and caring-help. Whereas the null findings in Experiment 1 could be attributed to the relative sparsity of the coded narratives, this does not account for the lack of evidence in Experiment 2. A possible explanation is that our single-item measures were not sufficiently reliable, although this did not prevent effects on love-friendship and unity-togetherness. Replications with improved measures should be high on the research agenda. Such measures need not rely exclusively on the Coding System for Themes of Agency and Communion (McAdams, 2001; McAdams et al., 1996) but, following the logic of multiple convergent operations (D. T. Campbell & Fiske, 1959), can be complementary to it. Higher ecological validity studies would also be desirable.

Also, in contrast to research by Hart et al. (2011), we found that nostalgia did not confer more self-esteem to high than low narcissists. Future research will need to test the replicability of this results pattern before examining reasons for it.

The operationalization of communal and agentic themes differed across experiments. In Experiment 1, judges coded the presence or absence of a theme in participants' nostalgic narratives, whereas, in Experiment 2, participants rated the personal importance of each theme following nostalgia induction. We obtained a generally consistent results pattern, suggesting that nostalgia can impact benefits through either the availability of communion themes in reflections on one's meaningful past (Experiment 1) or consideration of the value of communion in one's current life (Experiment 2). Follow-up research could test the replicability of these findings as well as assess communion themes in complementary ways (e.g., rank-ordering method).

An agenda for future research should also include the exploration of additional moderators. What other traits besides narcissism might be relevant to benefits (and potential costs) of nostalgia? For example, nostalgia may not promote communion for individuals with an avoidant (as opposed to a secure) attachment style (Wildschut et al., 2010), and nostalgia may not boost agency for individuals who are low (rather than high) in dispositional resilience (Wildschut et al., 2019). Such efforts will further inform the question of person-activity fit. Finally, future research should move beyond cross-sectional design in addressing, through longitudinal designs, how the relevant processes unfold over time.

Concluding statement

Replicating prior findings, nostalgia generally conferred psychological benefits, and in particular, tenderness, social connectedness, life meaning, self-continuity, self-esteem, optimism, and inspiration. In addition, we found that the emotion did so by raising the perceived importance of two communal themes, love-friendship and unity-togetherness, regardless of level of narcissism. That is, both high and low narcissists benefited from nostalgia due to communion: Nostalgia is a positive experience for both high and low narcissists. Yet, some of the benefits (i.e., life meaning, self-esteem, optimism, inspiration) were attenuated for high narcissists, due to their decreased level of agency (i.e., status-victory, self-mastery) elicited by nostalgia.

Notes

1. For exploratory purposes, we also assessed trait nostalgia with the Southampton Nostalgia Scale (Barrett et al., 2010; Sedikides, Wildschut, Routledge, & Arndt, 2015) administered after the psychological benefits measures but before the demographic questions. We did not analyze the corresponding data.
2. For exploration, we administered the Southampton Nostalgia Scale, as in Experiment 1, right before the demographic questions. We did not analyze these data.
3. The correlation between narcissism and the average of the four agentic themes was $r(300) = .41, p < .001$. The correlation between narcissism and the average of the four communal themes was $r(300) = .17, p < .001$. The difference between these correlations was statistically significant, Steiger's $z = 4.12, p < .001$.
4. The pattern of associations between narcissism and psychological functions suggests that narcissism was more strongly associated with relatively agentic functions (self-esteem, optimism, inspiration) than with relatively communal functions (tenderness, connectedness). The correlation between narcissism and the average of the three agentic functions was $r(300) = .25, p < .001$. The correlations between narcissism and the average of the two communal functions was $r(300) = -.02, p = .710$. The difference between these correlations was statistically significant, Steiger's $z = 4.81, p < .001$. We did not include life meaning and self-continuity in this analysis, because they cannot be clearly designated as relatively more agentic or communal.
5. We did not model direct-effect moderation, because the Nostalgia \times Narcissism interaction was not statistically significant for any of the benefits. We also did not model second-stage moderation, after initial analyses (PROCESS Model 58) revealed that the paths from agency and communion to the benefits were not significantly moderated by narcissism.
6. First-stage moderated mediation analyses in which we entered the communion composite and agency composite as parallel mediators (PROCESS Model 7) yielded nearly identical

results. For communion, the indices of moderated mediation were not statistically significant in any analysis. For agency, the indices of moderated mediation were significant in the analyses of self-esteem, optimism, and inspiration (but no longer in the analysis of life meaning).

7. In analyses without mediators, the main effects of nostalgia on self-esteem and inspiration were trending (Table 3). In analyses with the agency composite as mediator, these nostalgia main effects were significant. That is, controlling for agency rendered the positive effects of nostalgia on self-esteem ($F[1, 296] = 4.67, p = .031, \eta^2 = .02$) and inspiration ($F[1, 296] = 4.85, p = .028, \eta^2 = .02$) significant. The change in p -values occurred around the .05 boundary (from .065 to .031 for self-esteem; from .069 to .028 for inspiration) and can be attributed to the fact that the agency composite was numerically lower in the nostalgia (than control) condition, and was positively associated with self-esteem and inspiration. Accordingly, controlling for the nominally lower agency score in the nostalgia (than control) condition strengthened slightly the nostalgia effect on self-esteem and inspiration.

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Data availability statement

All data and materials are publicly available via Open Science Framework and can be accessed at https://osf.io/jv8pu/?view_only=ea630311f5e647a5acc9f08e3aac438a

Ethics approval statement

The experiments reported in this article received ethics approval from the Research Ethics Committee of SWPS University of Social Sciences and Humanities.

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