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Mental travel into the past: Differentiating recollections of nostalgic, ordinary, and positive events

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Abstract

This research examined construal differences evoked by mental travel to nostalgic, ordinary, or positive autobiographical events. According to the Construal Level Theory, psychologically distant events are construed with abstract terms, proximal events with concrete terms. We argue that nostalgic recollections are characterized by a unique construal pattern. Nostalgia refers to unusual and meaningful memories that are preserved, if not idealized, across time. As such, nostalgic events involve psychological distance and will be construed with abstract terms. Secondarily, they will also be construed with concrete terms as they reflect relevance to the present or psychological proximity. Two experiments confirmed the hypotheses. The experiments compared narratives of nostalgic, ordinary, and positive recollections, as well as distance of pertinent events in time and location. Recollections of nostalgic (compared with ordinary) events included a greater number of abstract terms and higher-level construal while entailing concrete elements linking past to present. The experiments also identified unique consequences of nostalgic recollections in terms of affect, including a sense of authenticity. Copyright © 2012 John Wiley & Sons, Ltd.

Mental time travel into the past enables individuals to transcend the directly experienced here and now and construe the original event from a distal psychological perspective. Such a perspective involves differential construal of events in terms of abstractness versus concreteness. The present article examines regularities in construal of past events, focusing on nostalgic recollections and their distinctiveness from recollections of ordinary and positive autobiographical events. How do construal-related features of nostalgic mental travel differ from ordinary and positive autobiographical mental travel? Also, are these differences linked to affective consequences? Setting to address these questions in two experiments, we begin with introducing the construct of nostalgia as the focal theme in our research. Next, we review theorizing and research on construal of past events, leading to our hypothesis regarding a unique construal pattern that distinguishes nostalgic autobiographical events from other types of autobiographical events.

NOSTALGIA

The New Oxford Dictionary (1998) defines nostalgia as "a sentimental longing or wistful affection for the past" (p. 1266). Until the late 20th century, nostalgia was conceptualized as a negative emotion with adverse psychological and physiological symptoms (Sedikides, Wildschut, & Baden, 2004). This disconsolate view of nostalgia has recently been challenged and the

construct rehabilitated. Evidence indicates that nostalgia is a predominantly positive emotion, albeit tinged with negative emotionality (Hepper, Ritchie, Sedikides, & Wildschut, in press; Sedikides, Wildschut, Arndt, & Routledge, 2008; Wildschut, Sedikides, & Cordaro, 2011). Indeed, preliminary findings indicate that a crucial function of nostalgia is that it generates positive (rather than negative) in-the-moment affect (Wildschut, Sedikides, Arndt, & Routledge, 2006; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). We will put this presumed function of nostalgia to test by investigating both the valence (positive versus negative) and activation level (general versus activated versus deactivated) of the affect elicited by nostalgic (relative to ordinary and positive) recollections. Do nostalgic recollections elicit predominantly positive or negative affect? Do they elicit general, activated, or deactivated affect? And do they engender feelings of authenticity?

The cognitive aspects of nostalgia remain relatively underexplored. Researchers have theorized that nostalgia draws on distinctly human cognitive abilities, namely to think temporally and self-reflectively (Routledge & Arndt, 2005; Sedikides, Wildschut, Arndt, & Routledge, 2006; Sedikides, Skowronski, & Dunbar, 2006; Skowronski & Sedikides, 2007) and that it is characterized by high-level cognitive appraisal and propositional content (Johnson-Laird & Oatley, 1989). Here, we advance this view by focusing on construal features of nostalgic recollections. On the basis of earlier research on the idiosyncratic defining features of nostalgia (Hepper et al., in press; Wildschut et al., 2006), we propose that

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nostalgic (as opposed to ordinary or positive) recollections are characterized by a unique pattern of mental construal. The next section outlines our reasoning regarding construal regularities in emotionally distinct (i.e., nostalgic) recollections of the past.

CONSTRUAL OF THE PAST

Research on construal of the past suggests that temporally distal (versus proximal) events are linked to more abstract linguistic representation (Semin & Smith, 1999). The Construal Level Theory (CLT; Kyung, Menon, & Trope, 2010; Liberman, Trope, & Stephan, 2007; Trope & Liberman, 2010) provides a comprehensive framework for understanding psychological causes and consequences of distance from events or objects. According to the theory, distal events are construed on relatively abstract level, whereas proximal events are construed on relatively concrete level. Stated otherwise, psychological distance (versus proximity) from an event, that is, the subjective experience that something is far away from the self, here and now, entails abstract, coherent, and super-ordinate mental representations of the event (higher-level construal).

We would like to provide a few examples for CLT. Thinking about a (past or future) birthday party from a psychologically distal perspective involves abstract general representations (e.g., socializing, entertaining), whereas thinking about the same event from a psychologically proximal perspective involves concrete contextualized representations (e.g., foods, presents). Alternatively, moving from a concrete representation of an event (e.g., laughing with ones' friends at a birthday party) to an abstract representation of the event (e.g., socializing) is accompanied not only by the retention of central event features (with the simultaneous omission of specific, idiosyncratic, and incidental information) but also by the ascription of new meaning that is deduced from stored knowledge (e.g., friends' reunion).

OVERVIEW AND HYPOTHESES

We extend understanding of the association between mental representation and past temporal perspective by examining, in two experiments, construal of emotionally distinct recollections of the past. We asked participants to bring to mind and describe in writing either a nostalgic, ordinary, or positive event from their past, and we subsequently measured abstractness-related and distance-related features in participants' narratives. In Experiment 1, we requested participants to describe either a nostalgic or an ordinary event in their life, and we checked for differences in their level of construal as reflected in abstractness of linguistic terms in narratives (using the Linguistic Category Model; Semin & Fiedler, 1988) and in implementation of cognitive processes in narratives (using the Linguistic Inquiry and Word Count software program (LIWC; Pennebaker, Booth, & Francis, 2007; Pennebaker & King, 1999). Additionally, judges estimated temporal and spatial distances from the recalled event on the basis of narrative content. In Experiment 2, we requested participants to describe a nostalgic, ordinary, or positive event from their past and to indicate when and where it occurred. Participants then completed self-report

scales that assessed in-the-moment affective consequences of past recollections (e.g., positive and negative affect, authenticity). Narrative coding, as mentioned previously, followed.

We apply the distance-dependent construal principle offered by CLT to the examination of construal regularities in recollections of past events. We hypothesize that nostalgic recollections differ from other types of autobiographical recollections (ordinary, positive) in terms of a unique construal pattern. Nostalgia refers to relatively unusual or atypical (Morewedge, 2012) and meaningful (Routledge et al., 2011) events. Memories of those events are preserved, if not idealized, across time implying a distal psychological perspective. As such, nostalgic recollections will be characterized by higher-level construal (consisting of more abstract terms and higher-level psychological processes) compared with ordinary or positive recollections. Simultaneously, above and beyond their reference to the past, nostalgic recollections entail relevance to the present or psychological proximity: nostalgic reverie is characterized by current longing for the past, by comparisons (implicit or explicit) of past with the present, or by implications of the past for the present (Hart et al., 2011; Hepper et al., in press; Sedikides et al., 2008). Thus, nostalgic (compared with ordinary or positive) recollections will also be construed with concrete terms.

Let us elaborate on these hypotheses. Distinctly from other types of autobiographical recollections, nostalgic recollections will involve two themes that display differential construal patterns. One theme will address the core event as it is represented in memory (e.g., a family vacation, an anniversary), whereas the other theme will address the relevance or connection of the event to the present experience (e.g., smiling when seeing a photo, calling home). As these themes encompass divergent psychological perspectives (i.e., the past and the present), the nostalgic event will be correspondingly construed with both abstract and concrete elements. Along with a more abstract or meaningful interpretation of the past, nostalgic (compared to ordinary and positive) recollections will be rich in concrete descriptive terms pertinent to the present.

Additionally, we wondered about the differing affective consequences of nostalgic recollections as opposed to ordinary or positive recollections. Most of past research has shown that nostalgic reverie induces positive affect (PA) (Hepper et al., in press; Wildschut et al., 2006, 2010; Zhou, Wildschut, Sedikides, Shi, & Feng, in press, Study 1; for null findings, see Zhou et al., in press, Studies 2–4) and does not induce negative affect (NA). Yet, this research has differentiated affect solely in terms of valence (positive versus negative). Affect, however, can be further distinguished in terms of activation versus deactivation (Barrett & Russell, 1998). Hence, we set to address this limitation of past research by exploring whether nostalgia differs from other types of autobiographical recollections not only in terms of its induction of general PA and general NA but also in terms of its induction of activated PA versus deactivated PA and activated NA versus deactivated NA.

Moreover, we tested the possibility of another affective consequence of nostalgia, namely a sense of authenticity. This construct is defined as "unobstructed operation of one's true self or core self in one's daily enterprise" (Kernis & Goldman, 2006, p. 294) or as the expression of core characteristics of the self (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Turner &

Billings, 1991). Given that nostalgia activates personally relevant episodes of the past and infuses one with meaning (Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010; Routledge et al., 2011; Routledge, Sedikides, Wildschut, & Juhl, in press), we hypothesize that nostalgia will bolster a sense of authenticity.

In all, we hypothesize that nostalgic narratives, compared with ordinary or positive narratives, will be more meaningful (involving abstract construal) and vivid (incorporating concrete elements in the part connecting the event to the present). Further, we explore whether nostalgia differs from recollection of ordinary and positive events in terms of a fuller range of affective consequences (i.e., general PA and NA, activated PA and NA, deactivated PA and NA). Finally, we hypothesize that nostalgia will engender a sense of authenticity.

EXPERIMENT 1: CONSTRUAL DIFFERENCES BETWEEN RECOLLECTIONS OF NOSTALGIC AND ORDINARY EVENTS

Experiment 1 examined construal differences between nostalgic and ordinary recollections. Nostalgic recollections, pertaining to relatively atypical (Morewedge, 2012) and meaningful (Routledge et al., 2011) events, will involve a distal perspective and thus higher-level construal compared with ordinary recollections. However, we posit that nostalgic engagement has implications for the present: it entails psychological proximity that will be reflected in concrete construals. In addition, to probe further the uniqueness of nostalgia, we assessed temporal and spatial distance from the recalled nostalgic and ordinary events. Because of their relative unusualness and meaningfulness, we expected for nostalgic events to be associated with greater temporal and spatial distance than ordinary events.[1]

METHOD

Participants and Design

Participants were 76 (54 women, 22 men) University of Southampton undergraduate volunteers ($M_{age} = 20.02$, $Range_{age} = 18$–28, $SD_{age} = 1.42$). They were randomly assigned to the conditions of a one-factor design (nostalgic event, ordinary event) and completed the experimental booklet in a lecture room.

Procedure

We induced nostalgia with a validated method (Hepper et al., in press; Routledge, Arndt, Sedikides, & Wildschut, 2008; Routledge et al., 2011; Wildschut et al., 2006, 2010; Zhou

Table 1. Means (standard deviations) and significance tests in Experiment 1

Dependent variable	Ordinary event	Nostalgic event	Nostalgia versus ordinary: t
Felt nostalgia	2.96 (1.56)	4.60 (0.86)	5.68**
DAV			
Overall	5.56 (4.48)	5.23 (2.92)	−0.42
Core event	5.30 (4.40)	4.48 (3.10)	1.00
Present	0.26 (0.49)	0.75 (1.32)	1.98*
IAV	2.48 (1.41)	3.82 (2.73)	2.63**
SV	4.54 (2.51)	7.82 (2.76)	5.38**
ADJ	0.44 (0.61)	0.86 (1.3)	1.76†
Cognitive processes	18.04 (4.45)	20.90 (4.90)	2.64*
Temporal distance	1.04 (0.26)	1.94 (1.17)	4.39**
Spatial distance	1.03 (0.12)	2.61 (1.12)	5.08**

DAV, descriptive action verbs; IAV, interpretive action verbs; SV, state verbs; ADJ, adjectives.
Degrees of freedom for temporal ($df = 68$) and spatial ($df = 43$) distance are reduced because of missing values.
†$p = .10$; *$p = .05$; **$p = .01$.

et al., 2008, in press). In particular, we instructed participants to bring to mind either a nostalgic or ordinary event in their lives, to list four event-relevant keywords, and to write a narrative describing the event (Appendix). A nostalgia manipulation check followed (Routledge et al., 2008; Wildschut et al., 2006; Zhou et al., 2008). Participants responded to three items (*alpha* = .97): "Right now, I am feeling quite nostalgic," "Right now, I am having nostalgic feelings," and "I feel nostalgic at the moment" (1 = *strongly disagree*, 6 = *strongly agree*). As intended, participants reported higher levels of nostalgia in the nostalgic event condition than in the ordinary event condition (Table 1; Felt nostalgia). Debriefing concluded the session.

Measures

Inter-rater reliabilities for construal level of verbs (describing both the core event and the part reflecting connection to the present), and for coding of temporal and spatial distances, ranged from 0.87 to 0.99.

Construal Level of Verbs. Two judges relied on the Linguistic Category Model (Coenen, Hedebouw & Semin, 2006) to classify verbs and adjectives that participants used in their narratives. In particular, judges classified linguistic terms with respect to the following categories of increasing abstractness: (i) Descriptive Action Verbs (DAV); (ii) Interpretive Action Verbs (IAV); (iii) State Verbs (SV); and (iv) Adjectives (ADJ).[2] DAV are concrete, that is, they refer

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[1]We would like to clarify the link between nostalgia and objective (i.e., temporal and spatial) distance. We suggest that nostalgic reverie, although implying psychological perspective (i.e., longing for something previously experienced), may not necessarily require a longer passage of time than ordinary or positive events. Rather, we suggest that the higher *average* temporal and spatial distance that may be associated with nostalgic events is due, to a great degree, to their relative unusualness or atypicality (Morewedge, 2012) and high meaningfulness (Routledge et al., 2011). In all, we argue that construal differences do not necessarily stem, per se, from greater objective distance. In fact, in both experiments, the effect of recollection type on use of abstract linguistic terms remained significant after controlling for objective distance (Footnotes 5 and 7).

[2]Definitions for coding linguistic terms according to the Linguistic Category Model were as follows. (i) *DAV* refer to a specific action with a clear beginning and end, involving a physically invariant feature (i.e., describing directly observable action); examples: call, meet. (ii) *IAV* refer to a multitude of different actions with a clear beginning and end that have the same meaning but do not share a physically invariant feature (i.e., interpretation: going beyond the mere description is involved); examples: help, cheat. (iii) *SV* refer to an enduring cognitive or emotional state with no clear definition of beginning and end; examples: admire, hate. (iv) *ADJ* refer to a psychological (i.e., inferred) characteristic or feature qualifying a person; examples: honest, reliable.

to highly contextualized physical actions. IAV, SV, and ADJ are increasingly more abstract, that is, they refer to less contextualized actions and involve more subjective interpretations.

Cognitive Processes. We used LIWC (Pennebaker et al., 2007) to measure the implementation of cognitive processes in the narratives. LIWC's Cognitive Processes category comprises words related to causation and insight, implying higher level of construal. LIWC computes the percentage of words in each narrative that matched the words in each linguistic category. As such, the LIWC results are represented as percentage of total words in the narrative.

Temporal and Spatial Distance. Two judges independently coded the narratives for temporal and spatial distance. Temporal distance values ranged from 1 to 5, with higher values indicating longer distances. In particular, judges coded whether the described event occurred: during participants' time at the university (1 = *recently, this year, or last year*), college[3] (2 = *age 17–18 years*), high school (3 = *age 12–16 years*), elementary school (4 = *age 7–11 years*), childhood (5 = *age 7 years or under*). The judges assigned a missing value to events that were impossible to date (8%). Spatial distance values ranged from 1 to 4, with higher values indicating longer distances. In particular, the judges coded whether the event occurred: in Southampton (1), United Kingdom (2), Europe (3), or Other Places (4). The judges assigned a missing value to unclassifiable locations (40%).[4]

RESULTS AND DISCUSSION

Construal Level of Linguistic Terms

We hypothesized that more abstract terms, and more concrete terms regarding the relevance of the past to the present, would be reflected in nostalgic compared with ordinary recollections. We counted the number of words in each of the four categories of the Linguistic Category Model (DAV, IAV, SV, ADJ) and compared these numbers between the experimental conditions. As hypothesized, nostalgic (relative to ordinary) narratives included more abstract linguistic terms. Specifically, IAV, SV, and ADJ were used more frequently in the nostalgic event condition than in the ordinary event condition (Table 1; IAV, SV, ADJ).[5]

The narratives did not differ with respect to the overall frequency of concrete DAV (Table 1; DAV Overall). We proceeded to count separately (i) the number of DAV pertaining to *the core event in the past* described in the narrative (e.g., "Two years ago, I *went fishing* with my dad") and (ii) the number of DAV addressing the *relevance of the event to the present*, which included an action or a state in the present caused by a past event (e.g., "When I *look* at my family photo on my desk, I *smile*"). The part addressing the relevance of the event to the present (but not the part addressing the core event) included significantly more DAV in the nostalgic (compared with ordinary) event condition (Table 1; DAV Core event,

DAV Present). Thus, consistent with the hypothesis, nostalgic (relative to ordinary) recollections comprised more abstract terms and simultaneously incorporated more concrete terms that addressed the relevance of the past event to the present.

Cognitive Processes

We hypothesized that nostalgic (vis-a-vis ordinary) recollections involve higher-level construal. Consistent with the hypothesis, implementation of Cognitive processes, as coded by LIWC, was significantly more frequent in nostalgic than in ordinary narratives (Table 1; cognitive processes).

Temporal and Spatial Distance

Supporting the notion of relative unusualness of nostalgic events, recollections of nostalgic (compared with ordinary) events referred, on average, to more distant times and remote locations (Table 1; Temporal distance, Spatial distance).

Summary

Nostalgic (versus ordinary) recollections involve higher-level, abstract construal alongside concrete elements that reflect the relevance of the past to the present. Nostalgic mental travel is distinct from ordinary autobiographical mental travel. This preliminary conclusion, though, is in need of validation.

EXPERIMENT 2: CONSTRUAL DIFFERENCES IN RECOLLECTIONS OF NOSTALGIC, ORDINARY, AND POSITIVE EVENTS

The key objective of Experiment 2 was to replicate and extend Experiment 1 findings by (i) comparing the construal of nostalgic recollections to that of both ordinary and positive recollections and (ii) examining the affective states induced by these different types of retrospective time travel. We hypothesize, as before, that, distinctly from ordinary and positive events, recollections of nostalgic events will involve meaningful construal of the event (using abstract terms) alongside vividness in linking the past to the present (using concrete terms). In addition, we explore whether nostalgic recollections will entail a unique affective pattern. For example, given the structural ambivalence of nostalgic recollections (Hepper et al., in press; Wildschut et al., 2006), will they manifest a bittersweet affective signature across the spectrum of general, activated, and deactivated affect? Finally, capitalizing on the high personal relevance and meaningfulness of nostalgic recollections (Juhl et al., 2010; Routledge et al., 2008, 2011, in press), we hypothesize that nostalgic (as opposed to other types of autobiographical) recollections will elicit stronger feelings of authenticity (Kernis & Goldman, 2006; Sheldon et al., 1997; Turner & Billings, 1991).

METHOD

Participants and Design

Participants were 55 (42 women, 13 men) University of Southampton undergraduate volunteers (M_{age} = 19.56,

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[3]In the United Kingdom, compulsory high school education lasts 5 years (ages 12–16 years). Students aiming at a university education enter a 2-year preparatory phase (i.e., college; ages 17–18 years).
[4]In Experiment 2, we addressed this missing-data problem by asking explicitly participants about the location where the event occurred.
[5]The effect of recollection type on use abstract verb categories remained significant after controlling for objective distance, $Fs(1, 67) > 4.66$, $ps < .034$.

$Range_{age} = 18–21$, $SD_{age} = 1.05$). They were assigned randomly to the conditions of a one-factor design (nostalgic event, ordinary event, positive event) and were tested individually.

Procedure

We instructed participants to think about a nostalgic, ordinary, or positive event from their lives, list four event-relevant keywords, and write a narrative describing the event (Appendix). After describing the event, participants completed a nostalgia manipulation check, as in Experiment 1. Then, we asked them to date the event as accurately as they could and to indicate its location. Next, participants completed measures assessing their affective states (i.e., positive and negative affect, feelings of authenticity). Debriefing concluded the session.

Measures

Construal Level of Linguistic Terms.   Similar to Experiment 1, participants' narratives were coded by two judges for presence of verbs and adjectives pertaining to categories of increasing abstractness (DAV, IAV, SV, ADJ; Linguistic Category Model). Inter-rater reliability for assigning verbs to distinct abstractness categories, describing both the core event and the part reflecting connection to the present, ranged from 0.85 to 0.88.

Cognitive Processes.   Once again, we used LIWC to assess the implementation of cognitive processes in the narratives.

Temporal and Spatial Distance.   In contrast to Experiment 1, we instructed participants to date the event that they had described and to indicate its geographical location. We calculated the number of years elapsed since the event by deriving the number of days elapsed (e.g., 3 months ago = 90 days) and then dividing by 365.24 (average days per year).[6]

Affective States.   We assessed the extent to which participants experienced several affective states as a result of recollecting the (nostalgic, ordinary, or positive) autobiographical event. To begin with, we assessed PA and NA, but our assessments departed from those used in previous nostalgia research (Hepper et al., in press; Wildschut et al., 2006; Zhou et al., in press). Specifically, we followed Barrett and Russell's (1998) distinction between activation versus deactivation of affect and between positive versus negative valence of affect. Thus, we used two-item scales (Wildschut et al., 2010) to assess general PA ("makes me feel happy," "puts me in a good mood") and general NA ("makes me feel sad," "makes me feel unhappy"). We also used two-item scales to assess activated PA ("makes me feel active," "makes me feel ecstatic") and deactivated PA ("makes me feel calmed," "makes me feel relaxed") and to assess activated NA ("makes me feel disturbed," "makes me feel upset") and deactivated NA ("makes me feel tired," "makes me feel sluggish"). Finally, we assessed feelings of authenticity by asking

participants to indicate the extent to which the described event reflected "the person you truly are" (1 = *not at all*, 7 = *very much*).

RESULTS AND DISCUSSION

We compared features and affective consequences of nostalgic recollections to those of ordinary and positive recollections by using two dummy codes, with the nostalgia condition as reference category. The first dummy code compared the nostalgic and ordinary event conditions, whereas the second dummy code compared the nostalgia and positive event conditions. We present relevant means and significance tests in Table 2.

Manipulation Check

As intended, participants reported experiencing more nostalgia in the nostalgic event condition than in the ordinary or positive event conditions (Table 2, Felt nostalgia).

Construal Level of Linguistic Terms

Consistent with the results of Experiment 1, Linguistic Category Model coding of the narratives showed that participants used the terms pertaining to abstract categories more frequently in the nostalgia condition than in the ordinary or positive conditions. Specifically, IAV were used more in the nostalgia condition than in the ordinary or positive conditions. SV were used more in nostalgia condition than in the positive condition, but the difference between the nostalgia and ordinary condition was not significant. ADJ were used more in the nostalgia condition than in the ordinary condition (significantly) and positive conditions (marginally) (Table 2; IAV, SV, ADJ).[7]

Consistent with Experiment 1 results, the overall frequency of concrete DAV did not differ between the nostalgia and ordinary conditions. However, there were more DAV in the nostalgia than in the positive condition (Table 2; DAV Overall). To explore in depth the pattern for concrete terms, we tested the differences in use of DAV addressing (i) the core past event and (ii) the relevance of the event to the present. Relative to the nostalgia condition, the frequency of DAV pertaining to the core event was marginally higher in the ordinary condition and marginally lower in the positive condition (Table 2; DAV Core event). Further, DAV were used significantly more frequently to address the relevance of the event to the present in the nostalgia condition than in the ordinary or positive conditions (Table 2; DAV Present). In sum, high frequency of abstract terms in nostalgic recollections, coexisting with concrete terms that linked past and present, constitute nostalgia's unique construal pattern.

Cognitive Processes

Corroborating Experiment 1 results, Cognitive processes were (marginally) more frequent in nostalgic than in ordinary narratives. The difference between the nostalgia and positive condition was not significant (Table 1; cognitive processes).

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[6]Approximately half of the participants did not date the events. This may have been a result of an unforeseen problem with our wording: the instruction to "date the experience in the blank space below" may have been unclear. Regardless, the response rate (dating the event) was balanced (i.e., similar) for the event-type conditions, Pearson Chi-Square (2, $N = 55$) = 0.84, $p = .657$.

[7]The effect of recollection type on use of abstract verb categories (IAV and SAV) remained significant when controlling for objective distance, $Fs(2, 25) > 3.30$, $ps < .05$.

Table 2.   Means (standard deviations) and significance tests in Experiment 2

Dependent variable	Ordinary event	Positive event	Nostalgic event	Nostalgia versus ordinary: t	Nostalgia versus positive: t
Felt nostalgia	3.48 (1.31)	3.95 (1.41)	4.72 (1.00)	3.27**	2.32*
DAV					
Overall	4.88 (4.37)	0.83 (1.22)	3.65 (2.13)	−1.29	2.74*
Core event	4.73 (4.44)	0.83 (1.22)	2.85 (2.08)	−1.96†	1.95†
Present	0.15 (0.37)	0.00 (0.00)	0.80 (0.80)	3.86**	4.40**
IAV	2.42 (1.54)	2.16 (1.12)	4.52 (2.94)	3.18**	3.31**
SV	4.64 (2.84)	2.52 (0.99)	5.68 (2.24)	1.44	4.08**
ADJ	0.28 (0.49)	0.72 (0.99)	1.30 (1.18)	3.47**	1.78†
Cognitive processes	18.15 (6.48)	18.90 (4.25)	21.36 (6.43)	1.69†	1.22
Temporal distance	1.39 (2.03)	3.26 (3.52)	4.95 (4.89)	2.10*	1.00
Spatial distance	1.60 (0.50)	2.46 (0.99)	2.25 (0.55)	2.79*	−0.93
Affective states					
General PA	4.30 (1.02)	5.40 (0.47)	4.98 (0.82)	2.58*	−1.51
Activated PA	3.13 (0.74)	4.10 (0.71)	3.15 (0.99)	0.09	−3.34**
Deactivated PA	3.85 (1.19)	4.10 (0.76)	4.20 (0.91)	1.12	0.30
General NA	1.70 (0.98)	1.53 (0.81)	2.20 (1.21)	1.54	1.90†
Activated NA	1.20 (0.41)	1.27 (0.46)	1.80 (1.01)	2.72*	2.24*
Deactivated NA	2.33 (1.10)	1.47 (0.58)	1.90 (0.91)	−1.47	1.38
Authenticity	3.80 (1.24)	4.26 (1.33)	4.75 (1.16)	2.56*	2.20*

IAV, interpretive action verbs; SV, state verbs; ADJ, adjectives; DAV, descriptive action verbs; PA, positive affect; NA, negative affect.
Degrees of freedom for temporal distance ($df = 26$) are reduced because of missing values.
†$p = .10$; *$p = .05$; **$p = .01$.

Temporal and Spatial Distance

Nostalgic events were more temporally distant than ordinary events but not significantly more distant than positive events. A similar pattern was observed for spatial distance. Nostalgic events were more spatially distant than ordinary events but not significantly more distant than positive events (Table 2; Temporal distance, Spatial distance).

Affective States

We compared affective states evoked by nostalgic recollections to these of positive and ordinary recollections. The comparisons involved PA and NA as well as a sense of authenticity.

Consistent with previous research highlighting the functional significance of nostalgia (Hepper et al., in press; Wildschut et al., 2006, 2010; Zhou et al., in press, Study 1; but see Zhou et al., in press, Studies 2–4), participants who recalled a nostalgic event scored significantly higher than those who recalled an ordinary event on general PA (Table 2, Affective states). The previously referenced prior nostalgia research, however, has not distinguished between activated and deactivated forms of PA and NA, respectively. By making this distinction in the present research, we arrived at several novel findings. Recalling a nostalgic (compared to ordinary) event significantly increased activated NA. This finding stands in contrast to previous research, which obtained no significant effect of recalling a nostalgic (compared to ordinary) event on general NA. Unexpectedly, the nostalgic and ordinary event conditions did not differ significantly on either activated or deactivated PA, although there was a descriptive trend in the predicted direction for deactivated PA (Table 2, Affective states). Further research is needed to gauge the reliability of these findings. Finally, perhaps unsurprisingly, recalling a positive (compared to nostalgic) event increased PA (in particular, activated PA) and decreased NA (in particular, activated NA; Table 2, Affective states).

Nostalgic events elicited higher levels of authenticity than either ordinary or positive events (Table 2, Authenticity). Thus, nostalgic (compared with other past) events are perceived as reflecting the "gist" of the self. Given that nostalgic memories are seen as more indicative of the core self; they may provide a stronger foundation for authentic well-being across time. Further research is needed to examine if the beneficial effects of recalling nostalgic (as compared to positive) memories are indeed longer lasting.

Summary

Along with extensive use of abstract terms, nostalgic (compared with ordinary or positive) narratives entail high frequency of concrete terms, especially in the part of narratives linking the past episode to the present. This construal duality, involving the use of both meaning-ascribing abstract terms and vividness-maintaining concrete terms, may underlie the bittersweet affective signature of nostalgia (high PA and NA). We consider these issues in the succeeding text.

GENERAL DISCUSSION

The Construal Level Theory suggests a link between emotions and construal by drawing a distinction between emotions that are associated with lower-level construal or proximal psychological perspective and emotions that are associated with higher-level construal or distal psychological perspective (Trope & Liberman, 2010). Consistent with this suggestion, recent research has shown that love is based on a more general and abstract representation of the target person than lust (Epstude & Förster, 2011; Förster, Özelsel, & Epstude, 2010). In a similar vein, empirical findings addressing the role of emotions in self-control indicate that emotions such as pride, guilt, and shame (which, according to CLT, involve social perspective) are associated with focus on long-term or

abstract goals, whereas emotions such as happiness and sadness (which do not require going beyond the direct, concrete experience) are associated with the pursuit of short-term or specific goals (Eyal & Fishbach, 2010; Katzir, Eyal, Meiran, & Kessler, 2010; Williams & DeSteno, 2008; Zemack-Rugar, Bettman, & Fitzsimons, 2007). Adding to the literature on associations between emotions and construal level, we examined construal patterns that characterize the emotion of nostalgia.

In particular, we investigated construal differences in nostalgic mental travel compared with ordinary autobiographical or positive autobiographical mental travel. Advancing the contemporary view of nostalgia as a predominantly positive, but bittersweet, emotion that entails functional benefits (Barrett et al., 2010; Hepper et al., in press; Sedikides et al., 2008; Sedikides, Wildschut, Routledge, Arndt, & Zhou, 2009), we focused on construal features of nostalgic recollections (compared with ordinary and positive ones) along with corresponding affective states. Our reasoning regarding construal of past recollections was based on a derivation of CLT (Liberman et al., 2007; Trope & Liberman, 2010), namely that emotions that require psychological perspective (e.g., emotions that persist, are temporally expanded, unusual, and meaningful) will be associated with higher-level or abstract construal. We proposed that nostalgia constitutes such an emotion as it comprises unusual (Morewedge, 2012) and meaningful (Routledge et al., 2011) memories that are preserved and potentially augmented across time. Furthermore, we posited that as nostalgic recollections are tightly connected to the present experience (implying psychological proximity), this relevance will be reflected in use of concrete construal features. Hence, we hypothesized that nostalgic recollections, relative to ordinary and positive recollections, would be characterized by a unique construal pattern: abstract construal (reflecting the past event) and concrete construal (reflecting the connection between the past and the present).

Two experiments demonstrated construal related regularities in recollections of the past. In Experiment 1, nostalgic events were construed using more abstract terms compared with ordinary events. Intriguingly, we found no difference in frequency of concrete terms between nostalgic versus ordinary narratives. To explore further this finding, we investigated separately the linguistic patterns used to describe the core past event and the relevance of the past to the present. Concrete linguistic terms (DAV; Coenen et al., 2006) were used more frequently in the nostalgic (compared with ordinary) narratives to describe the relevance of the past to the present. Thus, nostalgic (compared to ordinary) recollections involved more abstract terms and reflected higher-level cognitive processes. Nostalgic recollections, however, go beyond description of the past event in itself, addressing the relevance of the past to the present. Descriptions of present relevance involved higher frequency of concrete terms in the nostalgia (compared with ordinary) condition.

Experiment 2 yielded similar results with respect to construal regularities. Nostalgic (compared with ordinary and positive) recollections involved more abstract terms. Also, nostalgic (compared with ordinary and positive) recollections involved more concrete terms describing the relevance of the past to the present. Thus, construal of nostalgic events uniquely entails abstract meaningful features co-existing with concrete features. In addition, Experiment 2 differentiated

nostalgic, ordinary, and positive recollections in terms of ensuing affective states. Nostalgic (compared with ordinary autobiographical) recollections increased both general PA and activated NA. Yet, nostalgic (compared to positive autobiographical) recollections reduced activated PA and increased activated NA. The findings illustrate the unique, bittersweet, affective signature of nostalgia.

Nostalgic events elicited higher levels of authenticity than either ordinary or positive autobiographical events (Table 2; Authenticity). Thus, nostalgic events are perceived as reflecting the essence or gist of the self. Given that nostalgic memories are seen as more indicative of the core self, they may provide a stronger foundation for authentic well-being across time. We return to this issue in the succeeding text.

BROADER IMPLICATIONS

Nostalgia and Psychological Distance

The findings indicate that nostalgic recollections are construed with more abstract terms in comparison with ordinary and positive recollections. In addition, for nostalgic (compared with ordinary and positive) recollections, descriptions addressing the relevance of the past event to the present were more likely to be construed with concrete terms. It is interesting to consider the potential psychological antecedents of coexistence of abstract and concrete elements in the nostalgia narratives. For example, although nostalgic events were associated with comparably high temporal and spatial distances, previous research reported that nostalgic recollections frequently refer to one's significant others, that is, socially proximal (frequently internalized) meaningful persons (Hepper et al., in press; Wildschut et al., 2006, 2010). It may be the case that, although distance in terms of temporal and spatial dimensions is involved, nostalgic events imply psychological proximity in terms of the social dimension. Research on the interrelations of mental construal and psychological distance has yet to address the relative effect of conflicting psychological perspectives. For example, it is possible that a more defining, central dimension of distance would dominate construal level. Thus, complex patterns of perception of psychological distance from the event (e.g., interaction between distance dimensions such as temporal and social distance) may be linked to simultaneous multilevel construal.

The findings are consistent with the notion that memories for emotions summarize the relevance of the past experience to the present (Levine & Safer, 2002; Skowronski et al., 2007). Indeed, people's current interpretations of the past can influence considerably its construal (Alicke & Sedikides, 2009; Loftus, 1992; Ross, 1989; Sedikides & Gregg, 2008).

Interestingly, as nostalgic narratives include a high number of abstract terms and simultaneously concrete terms, both "cool" and "hot" representations may be enacted in nostalgia (Kross, Ayduk, & Mischel, 2005). Cool representations elicit cognitively driven, reflective, "cool" system responses whose functioning requires effortful and conscious control. Hot representations elicit emotionally driven, reflexive, "hot" system responses that are predominantly under stimulus

control and generate automatic approach-avoidance behaviors (Stephan et al., 2011). It may be the case that nostalgic events are represented in terms of their idiosyncratic meaning while being emotionally immersing.

Nostalgia and Functional Benefits

Nostalgic recollections had a bittersweet affective signature. It is intriguing that nostalgic recollections, despite their markedly lower hedonic tone relative to positive recollections, entailed higher levels of authenticity. It is perhaps this ambivalent signature (and structure; Hepper et al., in press; Wildschut et al., 2006) of nostalgia that contributes to a sense of authenticity. Nostalgia is a rough-and-tumble emotion, not a rosy one, and its rocky structure and consequences may capture rather convincingly the vicissitudes of life. Indeed, evidence indicates that the unbridled pursuit of positivity can have detrimental consequences (Gruber, Mauss, & Tamir, 2011) and that optimal functioning requires a mix of positivity and negativity (Fredrickson & Losada, 2005), a mix that nostalgia offers.

Authenticity is associated with psychological benefits such as higher life satisfaction and self-esteem (Goldman & Kernis, 2002), greater subjective well-being and lower stress (Wood, Linley, Maltby, Baliousis, & Joseph, 2008), and increased mindfulness and reduced verbal defensiveness (Lakey, Kernis, Heppner, & Lance, 2008). It is worth considering, then, whether nostalgia confers these benefits via authenticity. Does authenticity mediate the effect of nostalgia on psychological benefits?

Past research has shown that nostalgia serves pivotal psychological functions. In particular, it bolsters social connectedness (Turner, Wildschut, & Sedikides, in press Wildschut et al., 2006, 2010), fosters positive self-regard (Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012; Wildschut et al., 2006), and fortifies perceptions of meaning in life (Routledge et al., 2008, 2011). Future research will do well to explore whether the higher-level, abstract construal of nostalgic recollections, alongside its bittersweet structure and affective signature, are primarily responsible for these functions.

IN CLOSING

Nostalgic mental travel is distinct from ordinary autobiographical and positive autobiographical mental travel. Nostalgia, an emotion that comprises unusual and meaningful memories preserved and perhaps augmented across time, evinces a unique multilevel construal pattern (i.e., abstract construal reflecting past perspective and concrete construal reflecting present relevance), bittersweet affective signature, and elicitation of authenticity. These features of nostalgic recollections may be key contributors to psychological benefits and functions.

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APPENDIX: INSTRUCTIONS TO PARTICIPANTS FOR WRITING RECOLLECTION-BASED NARRATIVES

EXPERIMENT 1

Nostalgic-event condition

Please bring to mind a nostalgic event in your life. Specifically, try to think of a past event that makes you feel nostalgic. Please write down four keywords relevant to this nostalgic event.

Using the place provided below, for the next few minutes, we would now like you to write about this nostalgic event. Describe the experience and how it makes you feel. Be as thorough as possible in describing how you are feeling.

Ordinary-event condition

Please bring to mind an ordinary event in your life. Specifically, try to think of a past event that is ordinary. Please write down four keywords relevant to this ordinary event.

Using the place provided below, for the next few minutes, we would now like you to write about this ordinary event. Describe the experience and how it makes you feel. Be as thorough as possible in describing how you are feeling.

EXPERIMENT 2

Instructions for the ordinary and nostalgic conditions were identical to the ones above (Experiment1).

Positive-event condition

Please bring to mind a positive event in your life. Specifically, try to think of a past event that makes you feel positive. Please write down four keywords relevant to this positive event.

Using the place provided below, for the next few minutes, we would now like you to write about this positive event. Describe the experience and how it makes you feel. Be as thorough as possible in describing how you are feeling.