

This document is downloaded from DR-NTU, Nanyang Technological University Library, Singapore.

Title	Slowing down in the good old days : the effect of nostalgia on consumer patience
Author(s)	Huang, Irene Xun; Huang, Tak Zhongqiang; Wyer Jr., Robert S.
Citation	Huang, I. X., Huang, T. Z., & Wyer Jr., R. S. (2016). Slowing Down in the Good Old Days: The Effect of Nostalgia on Consumer Patience. <i>Journal of Consumer Research</i> , 43(3), 372-387. doi:10.1093/jcr/ucw033
Date	2016
URL	<a href="http://hdl.handle.net/10220/46343">http://hdl.handle.net/10220/46343</a>
Rights	© The Author 2016. Published by Oxford University Press on behalf of Journal of Consumer Research, Inc. This paper was published in <i>Journal of Consumer Research</i> and is made available as an electronic reprint (preprint) with permission of Oxford University Press on behalf of Journal of Consumer Research, Inc. The published version is available at: [ <a href="http://dx.doi.org/10.1093/jcr/ucw033">http://dx.doi.org/10.1093/jcr/ucw033</a> ]. One print or electronic copy may be made for personal use only. Systematic or multiple reproduction, distribution to multiple locations via electronic or other means, duplication of any material in this paper for a fee or for commercial purposes, or modification of the content of the paper is prohibited and is subject to penalties under law.

# Slowing Down in the Good Old Days: The Effect of Nostalgia on Consumer Patience

XUN (IRENE) HUANG  
ZHONGQIANG (TAK) HUANG  
ROBERT S. WYER JR.

Nostalgia, which is induced by reminiscing about a positive past experience, can counteract loneliness and promote prosocial behavior. However, the *process* of recalling and thinking about a nostalgic experience can have quite different effects. Because nostalgic experiences rarely reoccur, people are motivated to savor them by prolonging the time they reminisce about them. The tendency to savor these experiences generalizes to situations that participants encounter later, thus increasing consumer patience. For this effect to emerge, however, consumers must be aware that waiting will be beneficial to the attainment of a benefit. Moreover, the relationship between nostalgia and consumer patience is diminished when people perceive a nostalgic experience to be repeatable or when they intensify their memory of the experience rather than prolonging it. Eight studies confirmed these effects and processes that underlie them.

*Keywords:* nostalgia, consumer patience, savoring, behavioral priming

---

Nostalgia, a sentimental longing for the past (Sedikides, Wildschut, and Baden 2004; Zauberman, Ratner, and Kim 2009), is a nearly universal phenomenon. Many

---

Xun (Irene) Huang (huangxun@ntu.edu.sg) is an assistant professor of marketing at Nanyang Business School, Nanyang Technological University, 50 Nanyang Avenue, 639798 Singapore, and an ACI Fellow at the Institute on Asian Consumer Insight, hosted by Nanyang Technological University; Zhongqiang (Tak) Huang (tak.huang@polyu.edu.hk) is a postdoctoral researcher in marketing at Faculty of Business, Hong Kong Polytechnic University, Hung Hom, Hong Kong; Robert S. Wyer Jr. (mkwyer@ust.hk) is a visiting professor of marketing at The Chinese University of Hong Kong, Shatin, Hong Kong.

Please address all correspondence to Zhongqiang (Tak) Huang. The authors thank the editor, associate editor, and three anonymous reviewers for their very helpful and insightful comments. They would also like to thank Gerry Gorn for his helpful feedback on earlier drafts of this article. The preparation of this manuscript was supported by the NTU Start-Up Grant (M4081651.010), awarded to the first author, and the Hong Kong SAR RGC research grant (GRF 640011, GRF 452813 and GRF 493113), awarded to the third author.

*Darren Dahl served as editor, and Sharon Shavitt served as associate editor for this article.*

*Advance Access publication July 8, 2016*

marketing campaigns feature nostalgic themes. For example, McDonald's and Coca-Cola once jointly launched a campaign in which they gave away old-style Coca-Cola glass bottles. In 2011, Domino's Pizza ran a marketing campaign in which they brought back the Noid, its pesky character from the 1980s, to celebrate its 25th anniversary, presumably leading customers to reminisce about the taste of the Domino's pizzas they had eaten in their younger years. The prevalence of nostalgic marketing campaigns calls for research on how nostalgia can influence consumer behavior.

Nostalgia is a bittersweet emotion: a mixture of both joy and sadness (Batcho 2007; Sedikides et al. 2004). Most nostalgic memories include elements of love, pride, and joy (Davis 1979; Holak and Havlena 1998; Wildschut et al. 2006). However, sadness can also accompany nostalgia when people realize that they cannot really reexperience their cherished past and that some desirable aspects of the experience are lost forever (Hertz 1990; Johnson-Laird, Nicholas, and Oatley 1989; Peters 1985). The mixed emotions that characterize nostalgia distinguish it from both pure happiness and pure sadness (Barrett et al. 2010).

Nostalgia can serve a variety of functions. It can induce feelings of being loved and protected (Juhl et al. 2010) and thus can counteract feelings of loneliness (Wildschut et al.

2006; Zhou et al. 2008). In addition, it can increase prosocial behavior (Zhou et al. 2012) and decrease antisocial acts (Turner et al. 2013). The increase in social connectedness induced by nostalgia can also enhance self-esteem (Baldwin and Landau 2014) and optimism about the future (Cheung et al. 2013). Furthermore, it can provide a sense of meaning in life (Baldwin, Biernat, and Landau 2015) and can serve as a buffer against threats of mortality salience (Routledge et al. 2008).

The effects of nostalgia are obviously diverse. Note, however, that the beneficial functions of nostalgic memories are typically driven by the *content* of these memories. Nostalgia could also have effects that go beyond these functions. The present research examined the influence of nostalgia on a motive that is activated during the *process* of recalling a nostalgic experience. We hypothesized that nostalgia, which is induced by recalling a happy experience that is unlikely to reoccur, disposes people to savor this experience (i.e., to enjoy and prolong it). We expected that this disposition, once activated, would affect behaviors that are unrelated to the conditions that gave rise to it. In particular, it would increase individuals' tolerance for waiting. This hypothesis was confirmed using several different indexes of consumer patience. In the following sections, we first summarize the determinants of consumer patience identified in previous research and then consider how the feelings of nostalgia can come into play.

## THEORETICAL BACKGROUND

### Determinants of Consumer Patience

Although having to wait is annoying, it is an inevitable aspect of daily life. We wait for web pages to download, for dishes to be served at a restaurant, and for the delivery of a new model of smartphone. In general, consumers hate to wait (Grewal et al. 2003). Thus the time that consumers have to wait for service is often negatively correlated with their satisfaction with the provider (Hui and Tse 1996; Taylor 1995; Taylor and Claxton 1994).

Consumer patience can be manifested in many ways. It can be reflected in subjective feelings (Chen, Ng, and Rao 2005; House, DeVoe, and Zhong 2013; Rudd, Vohs, and Aaker 2012), in estimates of waiting time (Gorn et al. 2004; House et al. 2013), in preferences for large delayed options versus small ones that are available immediately (Bartels and Urminsky 2011; Hoch and Loewenstein 1991; Kim and Zauberan 2013; Kim, Zauberan, and Bettman 2012; Li 2008; Van den Bergh, Dewitte, and Warlop 2008) and in preferences for expedited versus standard shipping methods (Chen et al. 2005; May and Monga 2014). Although the various behaviors appear different on the surface, they have in common a willingness to wait patiently in order to obtain a benefit (Chen et al. 2005; Kim and

Zauberan 2013; May and Monga 2014). In the research to be reported, we examined all of these behaviors.

Many situational factors can influence consumer patience. For example, the mere exposure to fast-food brand logos such as McDonald's and KFC can lead people to prefer small immediately available options over large options that are available later (DeVoe, House, and Zhong 2013; House et al. 2013). Appetitive stimuli (e.g., dessert) and sexual cues (e.g., women with bikinis) can have similar effects (Kim and Zauberan 2013; Li 2008; Van den Bergh et al. 2008).

Situational factors can sometimes affect patience by influencing perceptions of time. For example, lighter colors (e.g., blue) can lead consumers to perceive web pages as more quickly downloadable and make them feel more patient (Gorn et al. 2004). Finally, individual differences can also play a role. Members of Western cultures are more inclined to prefer expedited shipping than Asians are (Chen et al. 2005). People are also more likely to exhibit impatience when their perception of themselves in the future differs from their perception of themselves in the present (Bartels and Urminsky 2011).

Thus numerous situational and perceptual factors can influence patience. However, the possibility that the experience of specific emotions can exert this influence has rarely been considered (Rudd et al. 2012 offers an exception). We proposed that consumer patience can be affected by emotions that are incidental to the situation in which patience is required. In the current research, we investigated one such emotion: nostalgia.

### Characteristics of Nostalgia

Nostalgia is experienced when one reminisces about positive events in the past that are unlikely to reoccur. Although nostalgia can be the result of loneliness and homesickness, people who feel good about the present can feel nostalgic as well. Nostalgia can motivate social interaction (Holak and Havlena 1998; Vess et al. 2012; Wildschut et al. 2006). Thus individuals with a chronic tendency to feel nostalgic express more favorable attitudes toward social activities and prefer songs that have a social relationship theme (Batcho 1998). Reminiscing about a nostalgic event can also lead people to feel more loved and protected and to report greater interpersonal competence (Wildschut et al. 2006). The enhanced social connectedness that results from feelings of nostalgia can counteract loneliness (Zhou et al. 2008) and increase prosocial behavior (e.g., responses to donation appeals; Zhou et al. 2012).

In the present research, however, we were not concerned with the social functions of nostalgia. We hypothesized that by inducing a motive to savor the past, recalling a nostalgic experience might influence how patiently consumers wait for products or services in an unrelated situation. The basis for this hypothesis is elaborated next.

## Nostalgia and Goal-Directed Processing

Our hypothesis assumes that people are motivated to prolong their memory for a cherished past experience that is unlikely to reoccur. Several studies confirm this possibility (Davis 1979; Routledge et al. 2011; Sedikides et al. 2004). The nonrepeatability of a happy event can strengthen the motivation to savor it (Areni and Black 2015; Kurtz 2008; Rozin et al. 2003). The awareness of the fleeting nature of a positive past experience can motivate people to spend a longer time reminiscing about it (Bryant and Veroff 2007). To this extent, individuals who recall a nostalgic experience are likely to savor their memory of it and to prolong the time they spend thinking about it.

When people savor an experience, they take their time in the course of enjoying it. For example, they eat more slowly when they have been told that they will only receive two of six displayed pieces of chocolate than when they have been told that they will receive all six (Areni and Black 2015). This is apparently because they savor the chocolate more in the former case. In other words, savoring leads people to prolong their enjoyment of positive experiences, resulting in greater patience in processing these experiences. To this extent, recalling a nostalgic experience should motivate people to slow down and reminisce about it patiently in order to prolong their enjoyment of the memory.

However, the slow processing style that results from reminiscing about a nostalgic experience patiently might carry over to unrelated domains. Research on behavioral priming (DeVoe et al. 2013; Fitzsimons, Chartrand, and Fitzsimons 2008; Shen, Wyer, and Cai 2012; Wyer, Xu, and Shen 2012) indicates that goal-related thoughts and behavior in one situation activate more general concepts and that these concepts, once accessible in memory, can influence behavior in a later situation in the pursuit of an unrelated goal to which they are applicable. For instance, exposing consumers to names of stores that have an image of thrift (e.g., Wal-Mart) can increase their disposition to choose thrifty options in an unrelated situation (Chartrand et al. 2008). Subliminally priming the logo of Apple (vs. IBM) can lead people to perform more creatively in a subsequent task (Fitzsimons et al. 2008). Analogously, exposure to a fast-food logo can increase people's reading speed (Zhong and DeVoe 2010), and shadowing a speech that is delivered at a slow speed decreases the speed at which participants complete an unrelated product evaluation questionnaire (Shen et al. 2012).

We expected that analogous effects would occur in the conditions of concern in this article. Recalling a nostalgic experience might dispose participants to prolong the time they spend reminiscing about it. This behavioral disposition, or *mindset*, may activate more general concepts associated with prolonging experiences that, once accessible in memory, induces a mindset that influences the behavior

performed in later, unrelated situations (DeVoe et al. 2013; Parkins 2004; for an elaboration of the processes underlying these effects, Wyer and Xu 2010; Wyer et al. 2012). Thus it may lead people to be tolerant of waiting in other, unrelated situations (House et al. 2013; Jenkins, Zyzanski, and Rosenman 1979). More formally:

**H1:** Nostalgia will increase consumer patience.

**H2:** The effect of nostalgia on consumer patience is mediated by the desire to savor the experience that gives rise to it.

## Qualifications and Constraints

Although these hypotheses are straightforward, there are constraints on their applicability. First, for nostalgia to have an impact on waiting behavior, people must perceive waiting to be relevant to the attainment of a benefit that they desire. If this is not the case, its effect on consumer patience should not be evident.

Second, our hypotheses assume that people savor nostalgic experiences because they perceive the experiences to be unlikely to reoccur (Bryant and Veroff 2007; Kurtz 2008). Therefore, if participants are directed to think about how they might have a similar experience in the future, the impact of the experience on consumer patience should decrease.

In a related vein, our hypotheses assume that the concepts activated by a nostalgic experience are associated with prolonging the experience. However, savoring an experience can involve intensifying the experience as well as prolonging it (Bryant, Smart, and King 2005; Bryant and Veroff 2007; Quoidbach et al. 2010). Intensifying, unlike prolonging, does not lead people to spend time reminiscing (Bryant et al. 2005). Thus if recalling a nostalgic experience activates concepts associated with intensifying the experience than prolonging it, the effects we predicted should not occur.

In addition to confirming these qualifications on our hypotheses, we evaluated a number of alternative explanations of our findings. For example, nostalgic experiences are typically relaxing, and feelings of relaxation may increase tolerance for waiting independently of other effects of nostalgia. However, our results invalidated both this and other possible interpretations of the phenomena we hypothesized, as we indicate in the context of the experiments we report.

## The Current Research

Eight studies tested the hypothesis that nostalgia increases consumer patience. We demonstrated the effect of nostalgia on consumer patience using several different indicators of consumer patience of the sort employed in previous research, including (1) subjective feelings of

patience, (2) estimates of waiting time, (3) preferences for large delayed options versus small immediate options, and (4) preferences for expedited versus standard shipping methods. We found that nostalgia made people more patient while (1) anticipating a large but delayed reward, (2) waiting for a web page to download, (3) waiting for a purchased item to be delivered, and (4) waiting for long-term health benefits. The effects of nostalgia on consumer patience were also evident in a field setting in which consumers who were incidentally exposed to a nostalgic stimulus estimated that they had waited for a shorter period of time. These findings are elaborated in the pages that follow.

## STUDY 1

Our first study provided initial evidence of the effect of nostalgia on consumer patience involving real behavior. After recalling either a nostalgic or a neutral experience, participants were asked to choose between a small cash reward that was available immediately and a larger reward that was not available until a month later. We predicted that inducing nostalgia would make people more patient and consequently more likely to choose the large delayed reward.

### Method

Eighty undergraduate students at Nanyang Technological University (41 males,  $M_{\text{age}} = 20.77$ ) participated for an opportunity to win a lucky draw. They were randomly assigned to one of two conditions (nostalgia vs. control). Participants were told that they would participate in a “Daily Experience Study” that was collecting samples of students’ personal experiences, and that they would be randomly assigned an experience to write about. On this pretense, participants in *nostalgia* conditions were asked to recall and write about “a past event in your life that makes you feel nostalgic whenever you think about it” (Routledge et al. 2008, 2011; Wildschut et al. 2006; Zhou et al. 2008, 2012). In *control* conditions, they wrote about an ordinary event in their life. After that, participants completed two manipulation check items for nostalgia: (a) “Right now, I am feeling quite nostalgic” and (b) “Right now, I am having nostalgic feelings” along a scale from 1 (Strongly disagree) to 9 (Strongly agree) (Wildschut et al. 2006; Zhou et al. 2012). Responses to these two questions were averaged ( $r = .87$ ).

Participants were then told that they would be entered into a lucky draw and that if they won, they could choose one of two rewards. One reward was a payment of S\$20 (about US\$14) that could be collected immediately, and the second was a payment of S\$30 (about US\$22) that could only be collected in one month. Choice of the large delayed reward reflects a willingness to wait (Bartels and

Urminsky 2011; Kim et al. 2012; Li 2008). Participants indicated their choice and were informed by email of the list of winners after they completed the online survey.

## Results

*Manipulation Checks.* Participants who had recalled a nostalgic experience ( $M = 6.97$ ,  $SD = 1.72$ ) felt more nostalgic than those who had recalled an ordinary event ( $M = 4.66$ ,  $SD = 2.27$ ),  $F(1, 78) = 26.61$ ,  $p < .001$ ,  $\eta^2 = .25$ .

*Choice of Reward.* Priming nostalgia had the expected effect on the choice of lucky draw reward, Wald  $\chi^2(1) = 8.20$ ,  $p < .005$ . Specifically, nostalgic participants were more likely to choose the large delayed reward (93.0%) than control participants were (64.9%).

## STUDY 2

Nostalgia is a bittersweet emotion. However, the effect we predicted is theoretically not driven by this emotion per se but rather results from an increased tendency to savor past experiences and do things patiently. Thus experiencing a bittersweet emotion without feeling nostalgic should not lead to greater patience. We confirmed this prediction in study 2.

### Method

*Participants and Design.* A total of 124 participants (65 males,  $M_{\text{age}} = 36.27$ ) were recruited from Amazon’s Mechanical Turk (MTurk) for a reimbursement of US\$0.50. Participants were randomly assigned to one of the three types of emotional experiences (nostalgia vs. bittersweet vs. control).

*Procedure.* Participants were told that the researchers were collecting information about life events in general and that a computer had randomly selected the types of events being surveyed. The instructions in *nostalgia* and *control* conditions were the same as those employed in study 1. In *bittersweet* conditions, participants wrote about an experience they “would characterize as engendering bittersweet (both positive and negative) feelings” (Aaker, Drolet, and Griffin 2008).

Participants then proceeded to an ostensibly unrelated task conducted by a different researcher. They were told that an online shopping website would like to understand consumers’ experience of using a product search engine. They were asked to search for a passport case and to enter their customized keywords in an input box. After doing so, the participants were forwarded to a page on which they were asked to wait while the system finished searching for suitable items. Unbeknownst to the participants, the waiting time was fixed at eight seconds. When the items were

displayed, participants indicated which ones they would like to explore further.

To measure patience, participants were asked to indicate how patient they felt as they waited for the webpage to be loaded, along a scale from 1 (Very impatient) to 9 (Very patient) and the extent to which they waited patiently for the search results along a scale from 1 (Not at all) to 9 (Very much). The average response to these items ( $r = .86$ ) provided an index of consumer patience. This measure of subjective patience directly reflects willingness to wait (Chen et al. 2005; Rudd et al. 2012).

Finally, participants rated the two manipulation check items for nostalgia employed in the first study. Responses to these two items were averaged ( $r = .96$ ). In addition, to check bittersweet feelings (Aaker et al. 2008), participants indicated the extent to which they experienced positive (happy, elated, upbeat, good, favorable, satisfied;  $\alpha = .95$ ) and negative feelings (unhappy, disappointed, depressed, bad, unfavorable, dissatisfied;  $\alpha = .97$ ) as they thought about the experience along a scale from 1 (Not at all) to 9 (Very much).

## Results and Discussion

**Affective Reactions.** As shown in table 1, emotion conditions significantly affected not only feelings of nostalgia,  $F(2, 121) = 28.14, p < .001, \eta^2 = .32$ , but also positive feelings,  $F(2, 121) = 8.66, p < .001, \eta^2 = .13$ , and negative feelings,  $F(2, 121) = 5.35, p < .01, \eta^2 = .08$ . However, between-cell comparisons (shown in the table) indicate that writing about a nostalgic experience made participants feel more nostalgic ( $M = 7.64$ ) than writing about either bittersweet experiences or control experiences (5.93 and 3.88, respectively; in each case,  $t(121) > 3.84, p < .001$ ). The effects of writing about nostalgia and bittersweet experiences on either positive or negative feelings did not differ (in each case,  $p > .05$ ).

**Consumer Patience.** Consumer patience varied significantly over emotion conditions,  $F(2, 121) = 4.88, p < .01, \eta^2 = .08$ . As shown in the last row of table 1, nostalgic participants ( $M = 7.24$ ) reported being significantly more patient while waiting for a service than participants in the bittersweet or control conditions did (5.96 vs. 5.66, respectively; in each case,  $t(121) > 2.35, p < .05$ ).

**Discussion.** These results therefore provide further evidence that feelings of nostalgia increased participants' patience in waiting for a webpage to download. However, although writing about nostalgic and bittersweet experiences had similar effects on positive and negative affect, bittersweet experiences did not increase patience. These results suggest that the observed effect of nostalgia on patience is not based on affect per se.

TABLE 1

EFFECTS OF PRIMING CONDITIONS: STUDY 2

	Nostalgia	Bittersweet	Control
Nostalgic feelings	7.64 <sup>a</sup> (1.75)	5.93 <sup>b</sup> (2.70)	3.88 <sup>c</sup> (2.37)
Positive feelings	7.10 <sup>a</sup> (1.36)	6.38 <sup>a</sup> (1.89)	5.40 <sup>b</sup> (2.28)
Negative feelings	3.12 <sup>ab</sup> (2.56)	4.08 <sup>a</sup> (2.61)	2.37 <sup>b</sup> (1.83)
Consumer patience	7.24 <sup>a</sup> (2.08)	5.96 <sup>b</sup> (2.63)	5.66 <sup>b</sup> (2.69)

NOTE.—Cells with different superscripts differ at  $p < .05$ .

## STUDY 3

In many consumption situations, consumers' patience can also be reflected by their choice of shipping methods that vary in cost and delivery timeline. That is, their choice of standard shipping over expedited shipping reflects their willingness to wait (Chen et al. 2005; May and Monga 2014). In this study, we considered such a situation and examined whether nostalgia increases preferences for standard over expedited shipping.

In addition, we examined two alternative interpretations of the results. First, nostalgia might lead people to think about events in the distant past and thus might activate a high level of temporal construal (Trope and Liberman 2000). If a high level of construal strengthens self-control (Fujita et al. 2006), it could increase patience for this reason. To evaluate this possibility, we added a comparison condition in which participants recalled an ordinary event that happened in the distant past.

Second, nostalgic memories might be typically relaxing. To this extent, nostalgic consumers might be more patient simply because the content of nostalgic experiences makes them feel relaxed, independently of the effects of thinking about these experiences on the motivation to savor experiences. To evaluate this possibility, we asked participants in one condition to recall a nostalgic experience that was particularly exciting. If the effect of nostalgia on patience is driven mainly by its effect on feelings of relaxation associated with the content of nostalgic experiences, we should not observe an increase in patience in this condition. As will be seen, however, this increase occurred.

## Method

**Participants and Design.** A total of 122 participants (60 males,  $M_{\text{age}} = 37.68$ ) were recruited on Amazon's MTurk for a reimbursement of US\$0.50. They were randomly assigned to one of the three conditions (nostalgia vs. exciting nostalgia vs. ordinary past).

**Procedure.** Participants were told that they would complete two unrelated studies for different researchers. The first task followed the same procedure as in the earlier studies. The instruction participants received in the *nostalgia* condition was the same as in the previous studies.

However, participants in the *exciting nostalgia* condition were asked to recall and vividly describe an *exciting* event that made them feel nostalgic whenever they thought about it. Participants in *ordinary past* conditions were asked to think about an ordinary event that had occurred in the distant past.

Next, participants were given an ostensibly unrelated sunglasses choice task, which was actually intended to measure consumer patience (May and Monga 2014). They were shown an assortment of sunglasses in a layout that was similar to an online shopping website and were asked to pick a pair they would like to purchase. On the next screen, they were shown the sunglasses they had chosen, and saw a message that read, "You have made a great selection! It will be some time before you receive the sunglasses. Your waiting time will depend on the shipping option you choose below. Don't you want to spend less time waiting?" Participants indicated how strongly they preferred to use standard shipping (\$2.75 for a 12- to 13-day delivery) or expedited shipping (\$9.75 for a 2- to 3-day delivery) along a scale from 1 (Strongly prefer standard shipping) to 9 (Strongly prefer expedited shipping).

Participants then indicated how long ago (in months) the experience they wrote about in the first task had occurred. Then they completed the manipulation check for nostalgia ( $r = .93$ ). Finally, participants indicated how exciting the event they recalled was and how excited they felt about it along scales from 1 (Not at all) to 9 (Very). Responses to these two questions were averaged ( $r = .75$ ).

## Results

**Manipulation Checks.** As expected, nostalgic feelings varied significantly across conditions,  $F(2, 119) = 10.84$ ,  $p < .001$ ,  $\eta^2 = .15$ . As table 2 indicates, participants reported feeling more nostalgic in both the nostalgia condition ( $M = 6.65$ ) and exciting nostalgia condition ( $M = 6.25$ ) than in the ordinary past condition ( $M = 4.57$ ; in each case,  $t(119) > 3.53$ ,  $p < .001$ ). However, the former two conditions did not differ from each other ( $t < 1$ ,  $p > .40$ ).

Priming also had a significant effect on feelings of excitement,  $F(2, 119) = 11.09$ ,  $p < .001$ ,  $\eta^2 = .16$ . As table 2 indicates, participants perceived a nostalgic event

( $M = 6.37$ ) to be as exciting as an exciting nostalgic event ( $M = 6.64$ ;  $t < 1$ ,  $p > .50$ ). Both of these nostalgic experiences were more exciting than ordinary past events ( $M = 4.58$ ; in each case,  $t(119) > 3.72$ ,  $p < .001$ ).

In addition, priming had no effect on the temporal distance of the events recalled,  $F(2, 119) < 1$ ,  $p > .60$ . The time at which recalled experiences occurred did not differ in nostalgia conditions ( $M = 222.64$  mo.), exciting nostalgia conditions ( $M = 250.95$  mo.), and control conditions ( $M = 211.23$  mo.). Therefore, temporal distance was controlled for in this study.

**Preference for Expedited versus Standard Shipping.** We expected that nostalgic feelings would decrease the preference for expedited shipping, indicating greater consumer patience. As table 2 shows, participants' preference for expedited shipping differed significantly across conditions,  $F(2, 119) = 4.97$ ,  $p < .01$ ,  $\eta^2 = .08$ . Participants' preferences for expedited shipping in the nostalgia and exciting nostalgia conditions did not differ (2.26 vs. 2.35, respectively) ( $t < 1$ ,  $p > .80$ ). However, their preference in both conditions was less than the preference reported by participants in control conditions ( $M = 3.63$ ); in each case,  $t(119) > 2.64$ ,  $p < .01$ .

## Follow-up Study

The fact that nostalgic events were described as exciting even in the absence of instructions to recall an exciting event was somewhat surprising. However, it is important to distinguish between the excitement of the nostalgic event that participants recall and the excitement they experience in recalling it. That is, although the *content* of nostalgic memories might often be exciting, the *process* of recalling the experiences might be relaxing. To investigate this possibility, we asked 111 participants (63 males,  $M_{\text{age}} = 36.25$ ) to write about a nostalgic experience or an ordinary one. We then asked them to respond to two questions about the excitement of the experience itself (specifically, "How relaxed or excited did you feel when you experienced the event?" and "To what extent did you think that the content of the experience was relaxing or exciting?") along scales from 1 (Very relaxed/Very relaxing) to 9 (Very excited/Very exciting;  $r = .90$ ). In addition, they

TABLE 2  
EFFECTS OF PRIMING CONDITIONS: STUDY 3

	Nostalgia	Exciting nostalgia	Ordinary past
Nostalgic feelings	6.65 <sup>a</sup> (2.00)	6.25 <sup>a</sup> (2.16)	4.57 <sup>b</sup> (2.31)
Excitement	6.37 <sup>a</sup> (2.01)	6.64 <sup>a</sup> (1.97)	4.58 <sup>b</sup> (2.47)
Temporal distance, months	222.64 <sup>a</sup> (190.19)	250.95 <sup>a</sup> (182.30)	211.23 <sup>a</sup> (176.42)
Preference for expedited (vs. standard) shipping	2.26 <sup>a</sup> (1.65)	2.33 <sup>a</sup> (1.87)	3.63 <sup>b</sup> (2.91)

NOTE.—Cells with different superscripts differ at  $p < .05$ .

responded to two items regarding their perceived feelings induced by *the recalling process* (“How relaxed or excited were you when you mentally processed the recalled event?” and “To what extent was the process of thinking about the experience relaxing or exciting?”) along similar scales ( $r = .93$ ).

As expected, nostalgic participants perceived the *content* of the experience they recalled to be more exciting ( $M = 6.22$ ,  $SD = 2.35$ ) than control participants ( $M = 4.43$ ,  $SD = 2.15$ ),  $F(1, 109) = 17.43$ ,  $p < .001$ ,  $\eta^2 = .14$ . However, they felt that the *process* of recalling the nostalgic experience was more relaxing ( $M = 3.77$ ,  $SD = 2.30$ ) than control participants did ( $M = 4.98$ ,  $SD = 2.58$ ),  $F(1, 109) = 6.87$ ,  $p < .05$ ,  $\eta^2 = .06$ .

## Discussion

Study 3 ruled out two alternative hypotheses. First, it disconfirmed the possibility that nostalgia influences consumer patience because nostalgic experiences are more relaxing. Although the content of nostalgic experiences was more exciting than ordinary past events, nostalgic participants still showed greater consumer patience as indicated by a weaker preference for expedited shipping.

Second, the effects of nostalgia observed in this study cannot be attributed to differences in temporal distance that might affect individuals’ self-control. Recalling a temporally distant but not nostalgic experience did not result in appreciable consumer patience.

## STUDY 4

Study 4 examined the effects of three factors that might compromise our conceptualization of the effects we observed. First, people might be motivated to savor a nostalgic event because they consider the event to be important and the feeling of importance generalizes to situations they consider later. However, important events are not necessarily savored. Therefore, thinking about important experiences should not be sufficient to increase patience as nostalgia does. Second, nostalgia might increase consumer patience by increasing their self-control. To this extent, it might increase consumers’ willingness to forgo immediate gratification (e.g., French fries) in favor of a less attractive option that has greater long-term benefit (e.g., salad).

Finally, nostalgia might have a restorative effect. That is, it might increase feelings of self-esteem and self-efficacy (Vess et al. 2012) and induce a general approach orientation (Stephan et al. 2014). These factors, in turn, might increase positive affect (Carver and White 1994; Taylor and Brown 1988) and increase patience for this reason (Pyone and Isen 2011). Study 4 ruled out these alternative interpretations of our findings.

## Method

*Participants and Design.* A total of 149 participants (74 males,  $M_{\text{age}} = 38.96$ ) were recruited from Amazon’s MTurk for a reimbursement of US\$0.50. They were randomly assigned to one of three conditions (nostalgia vs. importance vs. control).

*Procedure.* Participants first performed a writing task similar to that used in previous studies. In this case, they were asked to write about (1) a *nostalgic* experience, (2) an *important* experience in their life, or (3) an *ordinary* experience. Afterward, participants completed the manipulation check for nostalgia as in previous studies ( $r = .97$ ). In addition, they indicated how important the recalled event was and the extent to which they thought the recalled experience was important to them along scales from 1 (Not at all) to 9 (Very). Responses to these two items ( $r = .94$ ) were averaged.

Next, participants completed the measure of consumer patience. This study was run on Black Friday (the day following Thanksgiving), which is the busiest shopping day of the year in the United States, and participants were asked to imagine that they had ordered some clothes from an online store that offered two delivery options. Participants were told that the processing of orders was slow because of the surge in orders and that they could choose to use standard shipping (i.e., \$3.95 for a two-week shipping delivery) or expedited shipping (i.e., \$13.95 for two-day shipping delivery). We also asked participants to choose between French fries (vice) or salad (virtue) as a side dish to have with their lunch entrée (Wilcox, Kramer, and Sen 2011). (The order of the patience measure and choice of food was counterbalanced.)

After that, participants responded to an eight-item savoring-the-past subscale of Bryant’s (2003) Savoring Beliefs Inventory (e.g., “I enjoy looking back on happy times,” “I feel good by remembering past,” etc.) along scales from 1 (Strongly disagree) to 9 (Strongly agree). Responses were averaged ( $\alpha = .97$ ) to form an index of savoring the past.

Finally, to evaluate the alternative accounts (i.e., approach motivation, self-esteem) on increased patience, participants responded to the 13-item behavioral activation scale adapted from Carver and White (1994) as a measure of approach motivation ( $\alpha = .96$ ) and the 10-item Rosenberg self-esteem scale ( $\alpha = .95$ ; Rosenberg 1965).

## Results

The results of our manipulations are summarized in table 3 along with between-cell comparisons showing the differences between conditions.

*Manipulation Checks.* As expected, nostalgic feelings and perceptions of importance varied over conditions ( $F(2,$

146) = 31.20,  $p < .001$ ,  $\eta^2 = .30$ , and  $F(2, 146) = 49.23$ ,  $p < .001$ ,  $\eta^2 = .40$ , respectively). Participants reported feeling more nostalgic in the nostalgia condition ( $M = 7.38$ ) than in the importance condition ( $M = 4.63$ ) or control condition ( $M = 3.73$ ; in each case,  $t(146) > 5.55$ ,  $p < .001$ ). Moreover, the events recalled were perceived as more important in the importance condition ( $M = 8.05$ ) and the nostalgia condition ( $M = 7.76$ ) than in the control condition ( $M = 4.53$ ; in each case,  $t(146) > 8.31$ ,  $p < .001$ ).

*Choice of Expedited versus Standard Shipping.* However, the previously mentioned differences in importance cannot account for differences in consumer patience. The results of a logistic regression analysis (table 3) reveal that priming had a significant effect on the choice of shipping method, Wald  $\chi^2(2) = 6.62$ ,  $p < .05$ . As expected, participants were less likely to choose expedited shipping after recalling a nostalgic experience (9.6%) than after recalling either an important experience (28.3%), Wald  $\chi^2(1) = 5.22$ ,  $p < .05$ , or an ordinary one (29.4%), Wald  $\chi^2(1) = 5.90$ ,  $p < .05$ .

*Savoring the Past.* As expected, priming had a significant effect on participants' tendency to savor the past,  $F(2, 146) = 5.70$ ,  $p < .005$ ,  $\eta^2 = .07$ . Nostalgia priming ( $M = 7.41$ ) led to more savoring of the past than did either importance priming ( $M = 6.04$ ) or control priming ( $M = 6.29$ ; in each case,  $t(146) > 2.60$ ,  $p < .05$ ). Bootstrapping analyses (model 4, Hayes 2013) confirmed the mediating effect of savoring on the impact of nostalgia on patience. After coding nostalgia and non-nostalgia conditions as 1 and 0, respectively, the indirect effect of savoring the past was significant (based on 5000 samples, 95% confidence interval [CI],  $-2.0370$  to  $-.4080$ ).

*Other Factors.* In contrast, the other factors we considered were unable to account for our findings. For example, priming nostalgia had no influence on participants' choice of French fries or salad. That is, participants' likelihood of choosing the salad was not significantly different in the nostalgia condition (59.6%) than it was in the importance (71.7%) and control conditions (68.6%), Wald

$\chi^2(2) = 1.76$ ,  $p > .40$ . Thus the effect of nostalgia on waiting behavior was not a consequence of its effects on self-control.

Priming had a significant effect on both participants' approach motivation,  $F(2, 146) = 5.49$ ,  $p < .01$ ,  $\eta^2 = .07$ , and their self-esteem,  $F(2, 146) = 7.56$ ,  $p < .005$ ,  $\eta^2 = .09$ . That is, approach motivation was greater after recalling a nostalgic experience ( $M = 6.55$ ) than after recalling either an important experience ( $M = 5.64$ ) or an ordinary one ( $M = 5.39$ ; in each case,  $t(146) > 2.41$ ,  $p < .05$ ). Self-esteem was also greater after recalling a nostalgic event ( $M = 3.33$ ) than after recalling either an important event ( $M = 2.92$ ) or an ordinary one ( $M = 2.84$ ; in each case,  $t(146) > 2.95$ ,  $p < .005$ ). These effects seem to parallel the effects of priming on patience (table 3). However, bootstrapping analyses analogous to those described earlier indicated that the neither approach motivation nor self-esteem significantly mediated the effects of nostalgia priming on patience; 95% CI,  $-.0903$  to  $.8593$  and 95% CI,  $-.0878$  to  $.9173$ , respectively.

## Discussion

The results of this study show that the effects of nostalgia on patience cannot be attributed to the perceived importance of nostalgic experiences or the effect of these experiences on approach motivation and self-esteem. Moreover, the failure for nostalgia to affect the relative preference for healthy over unhealthy food suggests that the effects on patience were not simply a reflection of its effect on self-control (Hoch and Loewenstein 1991). Rather, nostalgia motivates people to savor the past and consequently leads consumers to become more patient.

## STUDY 5

To reiterate, study 4 showed that nostalgia increased the willingness to wait for the delivery of a desired package, reflecting a greater desire to forgo immediate gratification. At the same time, it did not affect the willingness to forgo eating a gratifying but unhealthy food in the interest of long-term goal attainment. These results might seem

TABLE 3  
EFFECTS OF PRIMING CONDITIONS: STUDY 4

	Nostalgia	Important event	Control
Nostalgic feelings	7.38 <sup>a</sup> (2.24)	4.63 <sup>b</sup> (2.65)	3.73 <sup>b</sup> (2.45)
Perceived importance	7.76 <sup>a</sup> (1.52)	8.05 <sup>a</sup> (1.40)	4.53 <sup>b</sup> (2.69)
Choice of expedited shipping	9.6% <sup>a</sup>	28.3% <sup>b</sup>	29.4% <sup>b</sup>
Savoring the past	7.41 <sup>a</sup> (1.92)	6.04 <sup>b</sup> (2.24)	6.29 <sup>b</sup> (2.36)
Choice of salad (vs. French fries)	59.6% <sup>a</sup>	71.7% <sup>a</sup>	68.6% <sup>a</sup>
Approach motivation	6.55 <sup>a</sup> (1.52)	5.64 <sup>b</sup> (2.10)	5.39 <sup>b</sup> (1.95)
Self-esteem	3.33 <sup>a</sup> (.63)	2.92 <sup>b</sup> (.73)	2.84 <sup>b</sup> (.70)

NOTE.—Cells with different superscripts differ at  $p < .05$ .

contradictory. However, note that the options provided in the first situation were temporally localized, whereas the immediate versus long-term relevance of the second options was not explicitly mentioned. The effect of nostalgia on patience may only be evident when decision alternatives explicitly differ along a temporal dimension and waiting becomes relevant to the benefits. To this extent, making the *immediate* and *long-term* benefits of the options more explicit should increase the effect of nostalgia on the choice of these options.

## Method

**Participants and Design.** A total of 212 participants (132 males,  $M_{\text{age}} = 37.20$ ) recruited from Amazon's MTurk participated for a reimbursement of US\$0.50. They were randomly assigned to cells of a 2 (emotion: nostalgia vs. control)  $\times$  2 (time salience: salient vs. nonsalient) between-subjects design.

**Procedure.** Participants were informed that the study consisted of several unrelated tasks. Nostalgia was manipulated using the writing task employed in previous studies. After that, participants responded to the two nostalgia manipulation check questions used in earlier studies ( $r = .96$ ).

Participants were then asked to imagine that they were choosing between two snacks, an apple versus chocolate (Hong and Lee 2008). In the *time not salient* condition, the apple was described as "a choice for the nutrition" and "meant to provide you with extra nutritional value in your meal" and the chocolate was described as "a choice for the taste" and "meant to provide you with a tasty chocolate experience." In contrast, in the *time salient* condition, the apple was described as "a choice for the future" and "meant to provide you with health benefits in the long run," whereas the chocolate was described as "a choice for the present" and "meant to provide you with indulgent enjoyment at this moment." Participants indicated whether they would choose the apple or the chocolate as a snack.

Next, participants completed the measure of savoring the past ( $\alpha = .94$ ) employed in the previous study. Finally, they indicated their agreement that the descriptions of the snacks (1) made salient the long-term benefits of eating apple compared with eating chocolate and (2) highlighted

the benefits of eating apple (compared with eating chocolate) in the long run along a scale from 1 (Strongly disagree) to 9 (Strongly agree). Responses to these two items ( $r = .91$ ) were averaged.

## Results and Discussion

**Manipulation Checks.** Participants who wrote about a nostalgic experience reported feeling more nostalgic ( $M = 7.75$ ,  $SD = 1.32$ ) than those who recalled an ordinary event ( $M = 3.50$ ,  $SD = 2.13$ ),  $F(1, 208) = 299.72$ ,  $p < .001$ ,  $\eta_p^2 = .59$ , and this effect was independent of the time salience manipulation ( $F < 1$ ,  $p > .90$ ). The descriptions of snacks were perceived to highlight the temporal nature of their benefits to a greater extent when time was salient ( $M = 7.39$ ,  $SD = 1.62$ ) than when it was not ( $M = 4.77$ ,  $SD = 2.59$ ),  $F(1, 208) = 79.51$ ,  $p < .001$ ,  $\eta_p^2 = .28$ , and this was true independently of emotion priming,  $F(1, 208) = 2.09$ ,  $p > .10$ .

**Savoring the Past.** Nostalgic participants ( $M = 7.23$ ,  $SD = 1.79$ ) had a greater tendency to savor the past than control participants ( $M = 6.41$ ,  $SD = 1.49$ ),  $F(1, 208) = 13.38$ ,  $p < .001$ ,  $\eta_p^2 = .06$ . This effect was independent of time salience ( $F < 1$ ,  $p > .60$ ).

**Choice of Food.** We expected that nostalgia would make participants more patient in waiting for the long-term benefits provided by the apple when time was salient than when it was not. A logistic regression analysis of participants' product choice as a function of time salience and emotion priming confirmed this expectation. The interaction of these variables (table 4) was significant, Wald  $\chi^2(1) = 8.37$ ,  $p < .005$ . When time was not salient, the likelihood of choosing the apple did not differ in nostalgia (39.6%) and control conditions (47.3%), Wald  $\chi^2(1) = .62$ ,  $p > .40$ , which is consistent with the results of study 4. When time was salient, however, nostalgic participants were more likely to choose the apple (69.1%) than control participants were (37.0%), Wald  $\chi^2(1) = 10.83$ ,  $p < .005$ .

**Mediation Analysis.** A bootstrapping analysis with 5000 samples (PROCESS model 14; Hayes 2013) confirmed the mediating effect of savoring (bias-corrected 95% CI, .1012 to .9678). The motivation for savoring the

TABLE 4  
EFFECTS OF EMOTION AND TIME SALIENCE: STUDY 5

	Time not salient		Time salient	
	Nostalgia	Control	Nostalgia	Control
Nostalgic feelings	7.85 <sup>a</sup> (1.07)	3.63 <sup>b</sup> (2.02)	7.65 <sup>a</sup> (1.50)	3.38 <sup>b</sup> (2.25)
Perceived time salience	4.67 <sup>a</sup> (2.63)	4.85 <sup>a</sup> (2.58)	7.72 <sup>b</sup> (1.50)	7.06 <sup>b</sup> (1.68)
Savoring the past	7.34 <sup>a</sup> (1.78)	6.40 <sup>b</sup> (1.55)	7.13 <sup>a</sup> (1.80)	6.42 <sup>b</sup> (1.44)
Choice of apple over chocolate	39.6% <sup>a</sup>	47.3% <sup>a</sup>	69.1% <sup>b</sup>	37.0% <sup>a</sup>

NOTE.—Cells with different superscripts differ at  $p < .05$ .

past significantly mediated the effect of nostalgia on patience when the temporal nature of benefits was made salient (95% CI, .0954 to .8478]. However, this mediation was not significant when the benefits were not framed temporally (95% CI,  $-.3309$  to  $.1277$ ).

In conclusion, this study identified an important qualification on the effect of nostalgia on patience. That is, the effect is only evident when waiting is perceived to be relevant to the attainment of a goal. When this is not the case, nostalgia does not have an effect in such situations.

## STUDY 6

We assumed that nostalgia leads to increased patience because it increases the tendency to savor the past, which occurs because people perceive their nostalgic experience will not occur again (Bryant and Veroff 2007; Kurtz 2008). If this is so, inducing people to think that some aspects of the experiences can be relived in the future should decrease their disposition to savor it and consequently should eliminate the effect of nostalgia on consumer patience.

### Method

*Participants and Design.* A total of 186 participants (99 males,  $M_{\text{age}} = 38.53$ ) were recruited from Amazon's MTurk for a reimbursement of US\$0.50. They were randomly assigned to cells of a 2 (emotion: nostalgia vs. control)  $\times$  2 (repeatability: unrepeatable vs. repeatable) between-subjects design.

*Procedure.* Participants were told that the study consisted of several unrelated tasks. Nostalgia was manipulated using the same writing task employed in previous studies. To manipulate perceived repeatability of the recalled experiences, however, we asked participants in the *unrepeatable* conditions to describe "what aspects of the [recalled] event could *no longer* happen again and why you could *not* have similar experiences again." In *repeatable* conditions, we asked the participants to describe "what aspects of the [recalled] event can happen again and how you might have a similar experience again."

After the writing task, participants were asked to imagine that they had won a raffle and could choose to

receive \$100 today or \$150 in 30 days. After indicating their choice, they completed the manipulation check for nostalgia used in previous studies ( $r = .96$ ). Finally, participants reported (1) the likelihood that they would reexperience an event similar to the one they recalled along a scale from 1 (Very unlikely) to 9 (Very likely), and (2) the extent to which they thought a similar event would reoccur along a scale from 1 (Not at all) to 9 (Very much). Responses to these two items were averaged ( $r = .91$ ).

### Results

*Manipulation Checks.* Participants reported having more nostalgic feelings when they had thought about a nostalgic experience ( $M = 6.55$ ,  $SD = 2.07$ ) than when they had recalled an ordinary experience ( $M = 3.78$ ,  $SD = 2.40$ ),  $F(1, 182) = 71.52$ ,  $p < .001$ ,  $\eta_p^2 = .28$ , and this effect was independent of repeatability priming,  $F(1, 182) = 1.01$ ,  $p > .30$ .

Participants perceived that they could experience an event similar to the one they recalled if they had thought about repeatable aspects of the recalled experience ( $M = 6.79$ ,  $SD = 2.36$ ) rather than about its unrepeatable aspects ( $M = 4.46$ ,  $SD = 2.97$ ),  $F(1, 182) = 46.28$ ,  $p < .001$ ,  $\eta_p^2 = .20$ . Moreover, they judged nostalgic experiences to be less repeatable ( $M = 4.14$ ,  $SD = 2.65$ ) than ordinary ones ( $M = 7.31$ ,  $SD = 2.21$ ),  $F(1, 182) = 92.94$ ,  $p < .001$ ,  $\eta_p^2 = .34$ . The interaction of nostalgia priming and repeatability priming was not significant,  $F(1, 182) = 2.21$ ,  $p > .10$ .

*Choice of Reward.* We expected that nostalgic participants would be more likely to choose the larger delayed reward only when they did not perceive the nostalgic experience to be repeatable. This expectation was confirmed. A logistic regression analysis yielded a significant interaction of nostalgia priming and repeatability priming, Wald  $\chi^2(1) = 7.81$ ,  $p < .01$  (table 5). When nostalgic participants thought about the non-reoccurrence of the experience, they were more likely to choose the larger delayed reward (81.3%) than control participants were (53.7%), Wald  $\chi^2(1) = 7.42$ ,  $p < .01$ . When nostalgic participants thought about the recalled event being potentially repeatable, however, their probability of choosing the delayed

TABLE 5

EFFECTS OF EMOTION AND REPEATABILITY: STUDY 6

	Unrepeatable		Repeatable	
	Nostalgia	Control	Nostalgia	Control
Nostalgic feelings	6.66 <sup>a</sup> (2.21)	3.54 <sup>b</sup> (2.26)	6.45 <sup>a</sup> (1.94)	3.99 <sup>b</sup> (2.52)
Perceived repeatability	2.81 <sup>a</sup> (2.20)	6.38 <sup>b</sup> (2.59)	5.47 <sup>b</sup> (2.39)	8.08 <sup>c</sup> (1.44)
Choice of larger-later reward	81.3% <sup>a</sup>	53.7% <sup>b</sup>	50.0% <sup>b</sup>	61.2% <sup>b</sup>

NOTE.—Cells with different superscripts differ at  $p < .05$ .

reward (50%) did not differ from that of control participants (61.2%), Wald  $\chi^2(1) = 1.23, p > .20$ .

## Discussion

Our previous studies showed that nostalgic participants who consider the nostalgic event to be unlikely to reoccur express greater patience in subsequent situations. However, this study showed that when people are induced to focus on the repeatable aspects of the event, its effect on patience disappears. Thus leading nostalgic people to think that the nostalgic event could be repeated can eliminate the effects of nostalgia on the motivation to savor the past and consequently consumer patience.

It is also worth noting that, to induce motivation for savoring, one must perceive the experiences as positive and self-relevant. If a rare event is both negative and self-irrelevant (e.g., an earthquake that occurs in another continent), it should not activate a motivation to savor it. In other words, scarcity is a necessary, but not sufficient, condition for nostalgia to induce savoring.

## STUDY 7

According to our theory, the motivation to savor the past leads nostalgic people to spend time reminiscing about the nostalgic experience and this, in turn, makes them more patient. The majority of prior research on savoring suggests that *prolonging* their enjoyment of the experience is the dominant form of savoring (Areni and Black 2015; Bryant 2003; Bryant and Veroff 2007; Fisher, Rolls, and Birch 2003). However, savoring can also be manifested by *intensifying* the recall of the experience (Bryant, Smart, and King 2005; Butler and Lewis 1982; Lewis and Butler 1974). People who use this strategy to intensify recall of the past would reminisce in a more vivid and engaging way (e.g., by reviewing photographs, scrapbooks, or by making trips back to memorable places from their past; Bryant et al. 2005; Bryant and Veroff 2007). Compared with prolonging, intensification does not lead people to spend more time in reminiscing (Bryant et al. 2005; also Areni and Black 2015). Therefore, if individuals use this strategy to savor a nostalgic experience without trying to prolong it, the effects of recalling the experience on patience should be decreased or eliminated. Study 7 evaluated this possibility.

## Method

**Participants and Design.** A total of 153 participants (69 males,  $M_{\text{age}} = 39.52$ ) from Amazon's MTurk participated in this study for a reimbursement of US\$0.50. They were randomly assigned to cells of a 2 (emotion: nostalgia vs. control)  $\times$  2 (savoring belief: prolonging vs. intensifying) between-subjects design.

**Procedure.** Participants were informed that the study consisted of several unrelated tasks concerned with reading ability and consumption preferences. Participants first completed a reading comprehension task that was ostensibly intended to assess people's understanding of scientific materials. In the *prolonging* condition, the article highlighted prolonging experiences as the best way to savor them; specifically:

Savoring is . . . commonly studied in the domain of positive psychology. . . . In his talk at the American Psychological Association's annual convention held in Washington, D.C., this August, Dr. George Medin presented strong evidence that the best way to savor a positive experience is to prolong it as long as possible. In doing so, people can maintain the good feeling as long as they like. Numerous large-scale laboratory studies consistently show that people's perceived happiness is increased by prolonging the duration of the positive feelings that result from their experiences, rather than by increasing the intensity of these experiences.

In the *intensifying* condition, participants read a similar article, except that it contended that the best way to savor a positive experience is to intensify it as much as possible rather than prolonging it.

After participants finished reading the article, they summarized the article in their own words and then indicated their agreement with the conclusion of the article along a scale from 1 (Strongly disagree) to 9 (Strongly agree).

Participants then completed the same writing task used in previous studies to manipulate nostalgia. They also answered the same questions to check the manipulation of nostalgia as in previous studies ( $r = .98$ ).

Participants' patience was assessed using a measure adapted from May and Monga (2014). Specifically, they were asked to imagine that (a) they were given a gift of imported Swiss cheese and (b) although they would want to eat the cheese now, they knew that waiting would improve its taste. Then, participants reported when they would consume the cheese along a scale from 1 (Right away) to 9 (In the distant future) and the extent to which they preferred to eat the cheese now or wait and eat it later along a scale from 1 (Strongly prefer to eat it now) to 9 (Strongly prefer to eat it later). Responses to these two items ( $r = .74$ ) were averaged to form a single index of consumer patience. A greater preference to eat the cheese later reflects greater willingness to wait. Finally, participants received a funnel debriefing (Chartrand and Bargh 1996). No participant correctly guessed the purpose of this study.

## Results

**Manipulation Checks.** Writing about a nostalgic experience ( $M = 7.55, SD = 1.26$ ) induced more nostalgic feelings than writing about an ordinary one ( $M = 4.05, SD = 2.62$ ),  $F(1, 149) = 115.62, p < .001, \eta_p^2 = .44$ ,

independently of savoring belief priming ( $F < 1, p > .50$ ). In addition, participants reported agreement with both the article they read to a similar extent in both prolonging and intensifying conditions (7.37 vs. 7.04, respectively),  $F(1, 149) = 1.67, p > .20$ .

*Time to Eat the Cheese.* If nostalgic participants believe that the best way to savor an experience is to prolong it, they should try to prolong their reminiscence of the experience, which should affect consumer patience in the way it did in other studies. If, however, they believe the most effective way to savor an experience is to intensify their memory of it, they should be less disposed to prolong their memory of it, and so its effect on patience in a later situation should be less apparent.

This was in fact the case. The time that participants preferred to eat the cheese was significantly influenced by savoring belief,  $F(1, 149) = 13.88, p < .001, \eta_p^2 = .09$ . The effect of nostalgia was marginal,  $F(1, 149) = 2.82, p = .095, \eta_p^2 = .02$ . Moreover, these effects were qualified by a significant interaction,  $F(1, 149) = 5.24, p < .05, \eta_p^2 = .03$ . As shown in table 6, participants who believed they should prolong experiences reported greater intention to delay eating the cheese in nostalgia conditions ( $M = 6.40, SD = 1.96$ ) than in control conditions ( $M = 5.07, SD = 1.82$ ),  $t(149) = 2.90, p < .005$ . However, this difference was eliminated when participants were led to believe that they should intensify feelings rather than prolonging them ( $M = 4.38, SD = 2.25$  vs.  $M = 4.58, SD = 2.27$ , in nostalgia and control conditions, respectively;  $t < 1, p > .60$ ).

## Discussion

This study provided further evidence for our proposed underlying mechanism. Nostalgic participants became more patient only when the linkage between savoring the past and patience in reminiscing was preserved. When this association was broken, nostalgia did not lead to more patience. Moreover, control participants were not motivated to savor the experience they recalled, and so their patience was not affected by either prolonging or intensifying conditions.

## STUDY 8

We conducted a field study to extend our findings to real market settings. Consumers often have to spend time waiting for services. To this extent, making consumers feel nostalgic can increase their patience, which may be reflected in their perception of the time they have waited. We evaluated this possibility under conditions in which customers were waiting to be seated in a restaurant.

## Method

Ninety patrons who had been waiting between 10 and 20 minutes to be seated at a restaurant in Singapore were approached by a research assistant during lunch time (12:45 PM to 2:30 PM) or dinner time (5:30 PM to 8:30 PM) and were asked to participate in a student survey of dining behavior. Respondents who agreed to participate were given a file folder containing the questionnaire on the right and a piece of gray paper on the left. In *nostalgia* conditions, the phrase, "Nostalgia – Memories of our good old days" was placed in the middle of the gray-colored paper, whereas in *control* conditions, this phrase was omitted (for the use of visual stimuli to manipulate nostalgia (Lasaleta, Sedikides, and Vohs 2014; Zhou et al. 2012).

Customers were asked to estimate how long (in minutes) they had been waiting to be seated. All participants indicated that they had not kept track of exactly how much time had passed since they started to wait, and that the responses they gave were based on their best estimates. Shorter perceived waiting time reflects greater patience in waiting (Kim and Zauberan 2013). Participants were also asked to report how often they dined out and how many people they would have the meal with.

## Results and Discussion

Consistent with our conceptualization, patrons estimated that they had waited for a shorter period of time if they had been exposed to the nostalgic stimulus ( $M = 5.80$  min,  $SD = 3.60$  min) than if they had not ( $M = 8.33$  min,  $SD = 6.16$  min),  $F(1, 88) = 5.68, p < .05, \eta^2 = .06$ , indicating that the former customers were more patient than the latter. Moreover, a covariance analysis showed that this effect remained significant,  $F(1, 86) = 5.75, p < .05, \eta_p^2$

TABLE 6  
EFFECTS OF EMOTION AND SAVORING BELIEF: STUDY 7

	Prolonging belief		Intensifying belief	
	Nostalgia	Control	Nostalgia	Control
Nostalgic feelings	7.76 <sup>a</sup> (1.08)	4.39 <sup>b</sup> (2.69)	7.36 <sup>a</sup> (1.39)	3.55 <sup>b</sup> (2.47)
Time to eat the cheese	6.40 <sup>a</sup> (1.96)	5.07 <sup>b</sup> (1.82)	4.38 <sup>b</sup> (2.25)	4.58 <sup>b</sup> (2.27)

NOTE.—Cells with different superscripts differ at  $p < .05$ .

= .06, even after controlling for the frequency of dining out and the number of companions for the meal.

## GENERAL DISCUSSION

Previous research has established that nostalgia, a bitter-sweet emotion, can influence consumer behavior (Lasaleta et al. 2014; Zhou et al. 2012). As noted earlier, however, prior research has mainly focused on the effect of nostalgia on social and personal well-being (Stephan et al. 2014; Zhou et al. 2012), which is typically driven by the content of nostalgic memories. In contrast, the current research identified an effect of incidental nostalgia that goes beyond these psychological functions. That is, feelings of nostalgia can increase consumer patience, which is driven mainly by the motivation triggered in the process of recalling nostalgic memories.

Our conceptualization assumes that recalling a nostalgic experience (a desirable experience that will not reoccur) motivates individuals to savor their memory for the experience and prolong their reminiscence of it. This motive, in turn, activates a more general disposition to prolong experiences that generalizes to situations that participants encounter later, consequently increasing their tolerance for having to wait for the occurrence of events in these situations. Eight studies provided converging support for this effect and demonstrated its generalizability over both real and hypothetical behavior and over several indexes of consumer patience of the sort employed in previous research. That is, feeling nostalgic leads participants to become more patient when waiting for a larger delayed reward, when waiting for a web page to download, and waiting for products to be delivered.

At the same time, there are qualifications on these effects. For example, the effect of nostalgia disappears when the temporal nature of benefits offered by different options is not salient (study 5), when consumers are directed to think about repeatable aspects of the nostalgic event (study 6), or when they believe the goal of savoring a nostalgic event can be fulfilled by intensifying their memory for the event rather than prolonging it (study 7).

### Alternative Explanations and Further Considerations

Several alternative explanations were called into question by our findings. As study 3 indicates, for example, nostalgic people do not become more patient because temporally distant past events heighten their level of construal level (Trope and Liberman 2000). Moreover, their patience does not reflect a tendency for the recall of nostalgic experiences to make people feel more relaxed (study 3). Finally, it does not result from perceptions of the importance of the nostalgic experience, the elevated positive

mood induced by enhanced self-esteem or approach motivation, or enhanced self-control (study 4).

Our findings might initially appear to conflict with those of Lasaleta and her colleagues (2014). In one of their studies, for example, participants were asked to listen to aversive sounds in order to make money. Nostalgic participants were willing to listen for a shorter period of time than control participants were. In another study, people who had recalled a nostalgic event allocated more money to others but not more time. There are important differences between our work and theirs, however. In the first study, for example, it may have been the unpleasant sounds but not the waiting time that made the participants spend less time earning money. In the second study, time was framed as a resource for which participants competed. In our studies, this was not the case. In short, the two sets of studies focus on different variables.

Our research also sheds light on the relationship between patience and self-control. Although self-control may enhance patience (Fujita et al. 2006; Khan and Dhar 2007), an increase in patience does not necessarily lead to more behaviors reflective of self-control. This is true only if the temporal nature of the self-control dilemma is made salient (study 5). Hence salience of temporal nature can help differentiate consumer patience from self-control in general.

### Theoretical Considerations

Nostalgia has both social and nonsocial psychological functions. For example, it evokes social connectedness that fulfills the need for belongingness (Hepper et al. 2014; Seehusen et al. 2013; Wildschut et al. 2006, 2010; Zhou et al. 2008), promotes prosocial behavior (Zhou et al. 2012), and offsets the desire for money (Lasaleta et al. 2014). Nostalgia can also increase self-esteem (Baldwin and Landau 2014) and can provide a buffer against psychological threats (Routledge et al. 2008). Our findings show that the effects of nostalgia on consumer patience are not a consequence of the emotional or social content of nostalgic experiences. Rather, they result from the influence of nostalgia on how this content is processed.

Second, our findings identify a determinant of consumer patience that has not previously been considered. Previous research indicates that consumer patience can be influenced by individual differences (Bartels and Urminsky 2011; Chen et al. 2005) and situational variables such as color (Gorn et al. 2004), sexual cues (Kim and Zauberan 2013), and temporal orientation (Bhattacharjee and Mogilner 2014; Williams and Drolet 2005). To our knowledge, however, our research is among the first to examine whether and how a specific emotion that is activated in one domain can influence consumer patience in other, unrelated domains.

This investigation also has implications for goal-generalization effects. Prior research has shown that goal-directed

activity in one situation can influence subsequent behavior in an unrelated domain (Fitzsimons et al. 2008; Wyer et al. 2012). The present research demonstrates that an emotion, independently of the specific memories associated with it, can also influence people's general motivation and the behavior associated with it. Because a nostalgic experience normally does not reoccur, participants who reminisce about the experience are motivated to savor it, and this disposition, once activated, generalizes to unrelated situations, influencing the disposition to process information patiently in these situations as well. In addition to their consistency with goal-generalization phenomena, these effects can be interpreted in terms of the influence of a behavioral mindset (Wyer and Xu 2010; Wyer et al. 2012). To this extent, they expand our understanding of this influence as well.

### Further Implications

The evidence that nostalgia can be induced by features of an ad as well as by pre-consumption experiences has implications for marketers who want to decrease negative reactions that result from a long waiting time. For example, a restaurant with long lines of customers waiting may benefit by playing nostalgic background music. Similarly, a telecommunications company that takes a long time to deliver new models of cell phones may also benefit from applying a nostalgic theme in the promotion campaign in order to alleviate the negative outcomes of waiting.

Our findings suggest that when consumers are incidentally feeling nostalgic, they are more likely to prefer large delayed options to small options that are immediately available. Thus marketers are likely to benefit from using a nostalgic theme if they wish to encourage the purchase of options that are not available at the time. Finally, supermarkets with an intention to keep customers shopping in the facility may want to take advantage of nostalgic music or decorations. In contrast, restaurants that focus on providing fast service (e.g., fast-food restaurants) may want to avoid playing nostalgic music.

The temporal framing of a decision may affect consumer patience (Malkoc and Zauberan 2006). For example, consumers often request compensation for being required to delay consumption (e.g., for receiving a product one week later than the original delivery date), and, at the same time, are willing to pay more for expedited delivery. However, our findings suggest that nostalgic people may require less compensation in the former case but be less willing to pay for expedited delivery in the second case. Future research could examine how nostalgia might influence decisions that are temporally framed in different ways.

### DATA COLLECTION INFORMATION

The first author managed the data collection for study 1 (October 2015) at Nanyang Technological University. The

second author managed the data collection of study 2 (October 2015), the main study (November 2015), and the follow-up study (April 2016) of study 3, study 4 (November 2015), study 5 (April 2016), study 6 (November 2015), and study 7 (December 2015) on Amazon's Mechanical Turk. The first author supervised the data collection for study 8 (December 2015) by research assistants at the waiting area of the Five Star Western restaurant, Hougang Central, Singapore. The first and second authors jointly analyzed these data.

### REFERENCES

- Aaker, Jennifer, Aimee Drolet, and Dale Griffin (2008), "Recalling Mixed Emotions," *Journal of Consumer Research*, 35 (2), 268-78.
- Areni, Charles S. and Iain Black (2015), "Consumers' Responses to Small Portions: Signaling Increases Savoring and Satiation," *Psychology & Marketing*, 32 (5), 532-43.
- Baldwin, Matthew, Monica Biernat, and Mark J. Landau (2015), "Remembering the Real Me: Nostalgia Offers a Window to the Intrinsic Self," *Journal of Personality and Social Psychology*, 108 (1), 128-47.
- Baldwin, Matthew and Mark J. Landau (2014), "Exploring Nostalgia's Influence on Psychological Growth," *Self and Identity*, 13 (2), 162-77.
- Barrett, Frederick S., Kevin J. Grimm, Richard W. Robins, Tim Wildschut, Constantine Sedikides, and Petr Janata (2010), "Music-Evoked Nostalgia: Affect, Memory, and Personality," *Emotion*, 10 (3), 390-403.
- Bartels, Daniel M. and Oleg Urminsky (2011), "On Intertemporal Selfishness: How the Perceived Instability of Identity Underlies Impatient Consumption," *Journal of Consumer Research*, 38 (1), 182-98.
- Batcho, Krystine Irene (1998), "Personal Nostalgia, World View, Memory, and Emotionality," *Perceptual and Motor Skills*, 87 (2), 411-32.
- (2007), "Nostalgia and the Emotional Tone and Content of Song Lyrics," *American Journal of Psychology*, 120 (3), 361-81.
- Bhattacharjee, Amit and Cassie Mogilner (2014), "Happiness from Ordinary and Extraordinary Experiences," *Journal of Consumer Research*, 41 (1), 1-17.
- Bryant, Fred B. (2003), "Savoring Beliefs Inventory (SBI): A Scale for Measuring Beliefs about Savoring," *Journal of Mental Health*, 12 (2), 175-96.
- Bryant, Fred B., Colette M. Smart, and Scott P. King (2005), "Using the Past to Enhance the Present: Boosting Happiness Through Positive Reminiscence," *Journal of Happiness Studies*, 6 (3), 227-60.
- Bryant, Fred B. and Joseph Veroff (2007), *Savoring: A New Model of Positive Experience*, Mahwah, NJ: Erlbaum.
- Butler, Robert N. and Myrna I. Lewis (1973), *Aging and Mental Health: Positive Psychosocial Approaches*, St. Louis, MO: Mosby.
- Carver, Charles S. and Teri L. White (1994), "Behavioral Inhibition, Behavioral Activation, and Affective Responses to Impending Reward and Punishment: The BIS/BAS Scales," *Journal of Personality and Social Psychology*, 67 (2), 319-33.

- Chartrand, Tanya L. and John A. Bargh (1996), "Automatic Activation of Impression Formation and Memorization Goals: Nonconscious Goal Priming Reproduces Effects of Explicit Task Instructions," *Journal of Personality and Social Psychology*, 71 (3), 464-78.
- Chartrand, Tanya L., Joel Huber, Baba Shiv, and Robin J. Tanner (2008), "Nonconscious Goals and Consumer Choice," *Journal of Consumer Research*, 35 (2), 189-201.
- Chen, Haipeng (Allan), Sharon Ng, and Akshay R. Rao (2005), "Cultural Differences in Consumer Impatience," *Journal of Marketing Research*, 42 (3), 291-301.
- Cheung, Wing-Yee, Tim Wildschut, Constantine Sedikides, Erica G. Hepper, Jamie Arndt, and Ad J. J. M. Vingerhoets (2013), "Back to the Future: Nostalgia Increases Optimism," *Personality and Social Psychology Bulletin*, 39 (11), 1484-96.
- Davis, Fred (1979), *Yearning for Yesterday: A Sociology of Nostalgia*, New York: The Free Press.
- DeVoe, Sanford E., Julian House, and Chen-Bo Zhong (2013), "Fast Food and Financial Impatience: A Socioecological Approach," *Journal of Personality and Social Psychology*, 105 (3), 476-94.
- Fisher, Jennifer Orlet, Barbara J. Rolls, and Leann L. Birch (2003), "Children's Bite Size and Intake of an Entree Are Greater with Large Portions Than with Age-Appropriate or Self-Selected Portions," *American Journal of Clinical Nutrition*, 77 (5), 1164-70.
- Fitzsimons, Gráinne M., Tanya L. Chartrand, and Gavan J. Fitzsimons (2008), "Automatic Effects of Brand Exposure on Motivated Behavior: How Apple Makes You 'Think Different,'" *Journal of Consumer Research*, 35 (1), 21-35.
- Fujita, Kentaro, Yaacov Trope, Nira Liberman, and Maya Levin-Sagi (2006), "Construal Levels and Self-Control," *Journal of Personality and Social Psychology*, 90 (3), 351-67.
- Gorn, Gerald J., Amitava Chattopadhyay, Jaideep Sengupta, and Shashank Tripathi (2004), "Waiting for the Web: How Screen Color Affects Time Perception," *Journal of Marketing Research*, 41 (2), 215-25.
- Grewal, Dhruv, Julie Baker, Michael Levy, and Glenn B. Voss (2003), "The Effects of Wait Expectations and Store Atmosphere Evaluations on Patronage Intentions in Service-Intensive Retail Stores," *Journal of Retailing*, 79 (4), 259-68.
- Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, New York: Guilford.
- Hepper, Erica G., Tim Wildschut, Constantine Sedikides, Timothy D. Ritchie, Yiu-Fai Yung, Nina Hansen, Georgios Abakoumkin, Gizem Arikan, Sylwia Z. Cisek, Didier B. Demassosso, Jochen E. Gebauer, Jonathan P. Gerber, Roberto González, Takashi Kusumi, Girishwar Misra, Mihaela Rusu, Oisín Ryan, Elena Stephan, Ad J. J. Vingerhoets, and Xinyue Zhou (2014), "Pancultural Nostalgia: Prototypical Conceptions Across Cultures," *Emotion*, 14 (4), 733-47.
- Hertz, Dan G. (1990), "Trauma and Nostalgia: New Aspects on the Coping of Aging Holocaust Survivors," *Israel Journal of Psychiatry and Related Sciences*, 27 (4), 189-98.
- Hoch, Stephen J. and George F. Loewenstein (1991), "Time-Inconsistent Preferences and Consumer Self-Control," *Journal of Consumer Research*, 17 (4), 492-507.
- Holak, Susan L. and William J. Havlena (1998), "Feelings, Fantasies, and Memories: An Examination of the Emotional Components of Nostalgia," *Journal of Business Research*, 42 (3), 217-26.
- Hong, Jiewen and Angela Y. Lee (2008), "Be Fit and Be Strong: Mastering Self-Regulation Through Regulatory Fit," *Journal of Consumer Research*, 34 (5), 682-95.
- House, Julian, Sanford E. DeVoe, and Chen-Bo Zhong (2013), "Too Impatient to Smell the Roses: Exposure to Fast Food Impedes Happiness," *Social Psychological and Personality Science*, 5 (5), 534-41.
- Hui, Michael K. and David K. Tse (1996), "What to Tell Consumers in Waits of Different Lengths: An Integrative Model of Service Evaluation," *Journal of Marketing*, 60 (2), 81-90.
- Jenkins, C. David, Stephen J. Zyzanski, and Ray H. Rosenman (1979), *Jenkins Activity Survey*, New York: Psychological Corporation.
- Johnson-Laird, Philip Nicholas, and Keith Oatley (1989), "The Language of Emotions: An Analysis of a Semantic Field," *Cognition and Emotion*, 3 (2), 81-123.
- Juhl, Jacob, Clay Routledge, Jamie Arndt, Constantine Sedikides, and Tim Wildschut (2010), "Fighting the Future with the Past: Nostalgia Buffers Existential Threat," *Journal of Research in Personality*, 44 (3), 309-14.
- Khan, Uzma and Ravi Dhar (2007), "Where There Is a Way, Is There a Will? The Effect of Future Choices on Self-Control," *Journal of Experimental Psychology: General*, 136 (2), 277-88.
- Kim, B. Kyu and Gal Zauberman (2013), "Can Victoria's Secret Change the Future? A Subjective Time Perception Account of Sexual-Cue Effects on Impatience," *Journal of Experimental Psychology: General*, 142 (2), 328-35.
- Kim, B. Kyu, Gal Zauberman, and James R. Bettman (2012), "Space, Time, and Intertemporal Preferences," *Journal of Consumer Research*, 39 (4), 867-80.
- Kurtz, Jaime L. (2008), "Looking to the Future to Appreciate the Present: The Benefits of Perceived Temporal Scarcity," *Psychological Science*, 19 (12), 1238-41.
- Lasaleta, Jannine D., Constantine Sedikides, and Kathleen D. Vohs (2014), "Nostalgia Weakens the Desire for Money," *Journal of Consumer Research*, 41 (3), 713-29.
- Lewis, Myrna I. and Robert N. Butler (1974), "Life-Review Therapy: Putting Memories to Work in Individual and Group Psychotherapy," *Geriatrics*, 29 (11), 165-69.
- Li, Xiuping (2008), "The Effects of Appetitive Stimuli on Out-of-Domain Consumption Impatience," *Journal of Consumer Research*, 34 (5), 649-56.
- Malkoc, Selin A. and Gal Zauberman (2006), "Deferring Versus Expediting Consumption: The Effect of Outcome Concreteness on Sensitivity to Time Horizon," *Journal of Marketing Research*, 43 (4), 618-27.
- May, Frank and Ashwani Monga (2014), "When Time Has a Will of Its Own, the Powerless Don't Have the Will to Wait: Anthropomorphism of Time Can Decrease Patience," *Journal of Consumer Research*, 40 (5), 924-42.
- Parkins, Wendy (2004), "Out of Time: Fast Subjects and Slow Living," *Time & Society*, 13 (2-3), 363-82.
- Peters, Roderick (1985), "Reflections on the Origin and Aim of Nostalgia," *Journal of Analytical Psychology*, 30 (2), 135-48.
- Pyone, Jin Seok and Alice M. Isen (2011), "Positive Affect, Intertemporal Choice, and Levels of Thinking: Increasing Consumers' Willingness to Wait," *Journal of Marketing Research*, 48 (3), 532-43.

- Quoidbach, Jordi, Elizabeth W. Dunn, Konstantin V. Petrides, and Moira Mikolajczak (2010), "Money Giveth, Money Taketh Away: The Dual Effect of Wealth on Happiness," *Psychological Science*, 21 (6), 759-63.
- Rosenberg, Morris (1965), *Society and the Adolescent Self-Image*, Princeton, NJ: Princeton University Press.
- Routledge, Clay, Jamie Arndt, Constantine Sedikides, and Tim Wildschut (2008), "A Blast from the Past: The Terror Management Function of Nostalgia," *Journal of Experimental Social Psychology*, 44 (1), 132-40.
- Routledge, Clay, Jamie Arndt, Tim Wildschut, Constantine Sedikides, Claire M. Hart, Jacob Juhl, Ad J. J. M. Vingerhoets, and Wolff Schlotz (2011), "The Past Makes the Present Meaningful: Nostalgia as an Existential Resource," *Journal of Personality and Social Psychology*, 101 (3), 638-52.
- Rozin, Paul, Kimberly Kabnick, Erin Pete, Claude Fischler, and Christy Shields (2003), "The Ecology of Eating Smaller Portion Sizes in France Than in the United States Help Explain the French Paradox," *Psychological Science*, 14 (5), 450-54.
- Rudd, Melanie, Kathleen D. Vohs, and Jennifer Aaker (2012), "Awe Expands People's Perception of Time, Alters Decision Making, and Enhances Well-Being," *Psychological Science*, 23 (10), 1130-36.
- Sedikides, Constantine, Tim Wildschut, and Denise Baden (2004), "Nostalgia: Conceptual Issues and Existential Functions," in *Handbook of Experimental Existential Psychology*, ed. Jeff Greenberg, Sander L. Koole, and Tom Pyszczynski, New York: Guilford, 200-14.
- Seehusen, Johannes, Filippo Cordero, Tim Wildschut, Constantine Sedikides, Clay Routledge, Ginette C. Blackhart, Kai Epstude, and Ad J. J. M. Vingerhoets (2013), "Individual Differences in Nostalgia Proneness: The Integrating Role of the Need to Belong," *Personality and Individual Differences*, 55 (8), 904-8.
- Shen, Hao, Robert S. Wyer, and Fengyan Cai (2012), "The Generalization of Deliberative and Automatic Behavior: The Role of Procedural Knowledge and Affective Reactions," *Journal of Experimental Social Psychology*, 48 (4), 819-28.
- Stephan, Elena, Tim Wildschut, Constantine Sedikides, Xinyue Zhou, Wuming He, Clay Routledge, Wing-Yee Cheung, and Ad J. J. M. Vingerhoets (2014), "The Mnemonic Mover: Nostalgia Regulates Avoidance and Approach Motivation," *Emotion*, 14 (3), 545-61.
- Taylor, Shelley E. and Jonathon D. Brown (1988), "Illusion and Well-Being: A Social Psychological Perspective on Mental Health," *Psychological Bulletin*, 103 (2), 193-210.
- Taylor, Shirley (1995), "The Effects of Filled Waiting Time and Service Provider Control over the Delay on Evaluations of Service," *Journal of the Academy of Marketing Science*, 23 (1), 38-48.
- Taylor, Shirley and John D. Claxton (1994), "Delays and the Dynamics of Service Evaluations," *Journal of the Academy of Marketing Science*, 22 (3), 254-64.
- Trope, Yaacov and Nira Liberman (2000), "Temporal Construal and Time-Dependent Changes in Preference," *Journal of Personality and Social Psychology*, 79 (6), 876-89.
- Turner, Rhiannon N., Tim Wildschut, Constantine Sedikides, and Mirona Gheorghiu (2013), "Combating the Mental Health Stigma with Nostalgia," *European Journal of Social Psychology*, 43 (5), 413-22.
- Van den Bergh, Bram, Siegfried Dewitte, and Luk Warlop (2008), "Bikinis Instigate Generalized Impatience in Intertemporal Choice," *Journal of Consumer Research*, 35 (1), 85-97.
- Vess, Matthew, Jamie Arndt, Clay Routledge, Constantine Sedikides, and Tim Wildschut (2012), "Nostalgia as a Resource for the Self," *Self and Identity*, 11 (3), 273-84.
- Wilcox, Keith, Thomas Kramer, and Sankar Sen (2011), "Indulgence or Self-Control: A Dual Process Model of the Effect of Incidental Pride on Indulgent Choice," *Journal of Consumer Research*, 38 (1), 151-63.
- Wildschut, Tim, Constantine Sedikides, Jamie Arndt, and Clay Routledge (2006), "Nostalgia: Content, Triggers, Functions," *Journal of Consumer Research*, 33 (5), 975-93.
- Wildschut, Tim, Constantine Sedikides, Clay Routledge, Jamie Arndt, and Filippo Cordero (2010), "Nostalgia as a Repository of Social Connectedness: The Role of Attachment-Related Avoidance," *Journal of Personality and Social Psychology*, 98 (4), 573-86.
- Williams, Patti and Aimee Drolet (2005), "Age-Related Differences in Responses to Emotional Advertisements," *Journal of Consumer Research*, 32 (3), 343-54.
- Wyer, Robert S. and Alison Jing Xu (2010), "The Role of Behavioral Mindsets in Goal-Directed Activity: Conceptual Underpinnings and Empirical Evidence," *Journal of Consumer Psychology*, 20 (2), 107-25.
- Wyer, Robert S., Alison Jing Xu, and Hao Shen (2012), "The Effects of Past Behavior on Future Goal-Directed Activity," in *Advances in Experimental Social Psychology*, Vol. 46, ed. James M. Olson and Mark P. Zanna, San Diego, CA: Academic Press, 237-83.
- Zauberman, Gal, Rebecca K. Ratner, and B. Kyu Kim (2009), "Memories as Assets: Strategic Memory Protection in Choice over Time," *Journal of Consumer Research*, 35 (5), 715-28.
- Zhong, Chen-Bo and Sanford E. DeVoe (2010), "You Are How You Eat: Fast Food and Impatience," *Psychological Science*, 21 (5), 619-22.
- Zhou, Xinyue, Constantine Sedikides, Tim Wildschut, and Ding-Guo Gao (2008), "Counteracting Loneliness: On the Restorative Function of Nostalgia," *Psychological Science*, 19 (10), 1023-29.
- Zhou, Xinyue, Tim Wildschut, Constantine Sedikides, Kan Shi, and Cong Feng (2012), "Nostalgia: The Gift That Keeps on Giving," *Journal of Consumer Research*, 39 (1), 39-50.