

Experiencing Nostalgia Through the Lens of Life Satisfaction

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Abstract

Purpose – This paper examines the role of life satisfaction in consumers' reaction to nostalgic music in an advertisement in terms of attitude toward the brand and purchase intention. It suggests that life satisfaction forms the lens through which individuals interpret and reconstruct past emotional experiences evoked by nostalgia. It further investigates the role of product category involvement in the interplay between life satisfaction and nostalgic music.

Design/ methodology/ approach – Two experiments were conducted. The first study featured a 2 (nostalgic vs. non-nostalgic music) × 2 (high vs. low involvement) between-subjects design and tested the research hypotheses with 208 consumers. The second study featured two involvement conditions (high vs. low) and explored the underlying process behind the hypotheses. Linear regression was used to analyze the data in both studies.

Findings - For the low involvement product category, nostalgic music was more effective than non-nostalgic music for consumers with high life satisfaction, whereas non-nostalgic music was more effective for consumers with low life satisfaction levels. For the high involvement product category, life satisfaction did not moderate consumers' reaction to nostalgic music.

Research limitations/ implications – This research suggests that past experiences evoked through nostalgic music are not static but are subject to bias and interpretation depending on an individual's current mindset. Hence the eventual effect of nostalgia is determined by how past events are reconstructed based on the individual's current state.

Practical implications – This paper warns against blind use of nostalgic appeals in advertising, points to the need to consider the audience’s state of mind, and suggests an opportunity to leverage life satisfaction influencers in designing effective advertising campaigns.

Keywords: Nostalgia, Advertising, Life Satisfaction, Involvement

INTRODUCTION

Advertisers constantly look for creative ways to create favorable attitude toward the advertised brand. Appealing to consumers' sense of nostalgia is one of these ways. Almost every adult is likely to have experienced nostalgia at one point or another (Boym, 2008). It has been shown that exposure to an advertisement with a nostalgic appeal can activate nostalgic thought processes among viewers (Muehling et al., 2004) and lead to positive attitude toward the advertised product (Pascal et al., 2002; Muehling et al., 2004). Thus, it is not surprising that marketing practitioners widely use nostalgic cues such as themes, images, and jingles to develop appealing marketing and advertising messages (Cosgrove and Sheridan 2002; White 2002; Bambauer-Sachse and Gierl, 2009; Elliot, 2009).

Studies outside the field of marketing have highlighted how reaction to nostalgic cues is not uniform but largely depends on psychological factors (e.g., Belk, 1990; Batcho, 2007; Barrett et al., 2010;). For instance, individuals respond positively to nostalgic cues when they feel congruity between their identity and their evoked past (Iyer and Jetten, 2011). Verplanken (2012) found that the degree to which people are habitually worried affects their response to evoked nostalgia. Wildschut et al. (2010) and Juhl et al. (2012) identified individuals' level of avoidance as another important influencer on reaction to nostalgia.

After an extensive review of the advertising literature on nostalgia, it is clear that much remains to be understood about the underlying mechanisms through which nostalgic appeals in advertisements influence consumers. Addressing this gap, the current research proposes that evoking nostalgia through background music of an advertisement does not necessarily lead to positive persuasive outcomes due to the reconstructive nature of past emotions (Seidlitz and Diener, 1993). Specifically, the effectiveness of nostalgic appeals in an advertisement depends

upon one's level of life satisfaction and involvement with the advertised product or service. As life satisfaction reflects one's evaluation of his or her present life, it colors the lens through which one evaluates past life events as positive or negative and subsequently influences the reconstructed emotions evoked by nostalgia. We further argue that this applies more to low-involvement products where peripheral cues such as background music play a more important role in consumers' responses to advertisements.

By examining the role of life satisfaction in nostalgia effects, this research shows that nostalgia is not simply an activation of past memories. Instead it represents potentially complex interactions between the past and the present that eventually determine its effects. This adds to our knowledge about how nostalgia works in advertising and calls for a closer attention to contextual factors surrounding the use of nostalgic appeals. Furthermore, previous research has mostly argued for a positive effect of nostalgic appeals in advertising (Pascal et al., 2002; Muehling et al., 2004). Our research introduces more nuance into this relationship and suggests that nostalgic ads are not always received positively by the target audience. For those not satisfied with their present life, using nostalgic appeals in advertisements can actually backfire, lowering consumers' purchase intention and attitude toward the advertised brand. From a practical standpoint, this warns against the blind use of such tactics in practice and suggests an opportunity to leverage the current state of life satisfaction in certain societies or cultures to increase the effectiveness of advertisements.

CONCEPTUAL BACKGROUND

What is Nostalgia?

Nostalgia's origin can be traced as far back as the mid-seventeenth century in the medical field as a pathological disease involving homesickness (Holak and Havlena, 1998). The word nostalgia is derived from two Greek roots: "nostos" meaning to "return to one's native land" and "algos" referring to "pain, suffering or grief" (Daniels, 1985; Hofer, 1934). However, nowadays nostalgia is rarely characterized as a psychological disorder but is considered to be a mixed emotional experience of looking back or longing for the past containing both cognitive and emotional dimensions (Baumgartner, 1992). Nostalgic experience is an emotional process that accompanies both cognitive and affective memories (Baumgartner, 1992; Leboe and Ansons, 2006; Wildschut et al., 2006; Batcho, 2007; Merchant and Ford, 2008; Ford and Merchant, 2010; Zhao and Muehling, 2014). The cognitive dimension, also called autobiographical memory, refers to circumstances in which recalled remembrances are rich in informational content and can be verbally recounted to others (Eichenbaum and Cohen, 2004). When affective in nature, recalled memories are implicit and can be characterized as an "emotion" that is evoked by that specific impression (Merchant and Ford, 2008; Zhao and Muehling, 2014). Thus, symbolic representations of past events denoted in nostalgic cues are capable of inducing nostalgia (Stern, 1992; Holbrook, 1993).

Previous research classifies nostalgia into several different types. The first type is "personal nostalgia." Baker and Kennedy (1994) used the term "real" for this type of nostalgia. Personal or real nostalgia is characterized as the recollection of good times from one's personal lived past. The second type is "historical nostalgia" or "simulated" nostalgia which takes people back to a time before their births and therefore is not and cannot be personally experienced (Baker and Kennedy, 1994). The third type of nostalgia is "collective nostalgia" which is shown to be the representation of a specific cultural (maybe even generational or national) background.

The idea is that collective nostalgia is shared among a group of individuals with similar cultural backgrounds (Holak and Havlena, 1998; Holak et al., 2006).

Nostalgic feeling is induced by a variety of triggers (Schindler and Holbrook 1993, 2003). These triggers include sensory experiences (pleasurable sensorial experiences from the past), links with an individual's homeland, items reminding an individual of rites of passage, friends and loved ones, objects linked to aspects of continuity and security, and items associated with arts, culture and entertainment (Merchant and Ford, 2008). Studying a variety of sources that can evoke nostalgia, Wildschut et al. (2006) demonstrated three key conditions for evoking nostalgic feelings: "negative affect, social interactions (e.g., conversations with friends) and sensory inputs (e.g., smell or music)."

Effects of Nostalgia

Evoking memories from the past leads to both happy and sad emotions (Berntsen and Rubin, 2002). While most of the previous studies have characterized nostalgia as a positive emotion induced by remembering the good days in the past (e.g., Davis, 1979; Holbrook, 1993; Holak and Havlena, 1998; Leboe and Ansons, 2006; Sedikides et al., 2008), some authors believe that nostalgia often involves negative feelings toward the present and the future (Berntsen and Rubin, 2002). The negative emotions arise from a sense of loss experienced by individuals because they know the past is already gone (Baumgartner, 1992; Batcho, 2007). This feeling has been called a "bittersweet" experience (Wildschut et al., 2006). Therefore, nostalgia is argued to be associated with mixed feelings (Belk, 1990; Sedikides et al., 2004; Hepper et al., 2012).

Positive or negative consequences of these mixed feelings are largely dependent on various psychological factors. One set of such psychological factors are situational. For instance, Iyer and Jetten (2011) investigated how reaction to nostalgia is affected by identity congruity. They found that when identity congruity is high, feeling nostalgic will increase emotional well-being, perception of having the ability to manage life challenges, and finally motivation to follow new opportunities. However, when the past identity and the present identity mismatch, triggering nostalgic feelings could be a painful reminder of what is left behind and hinder one's ability to move forward and face new opportunities.

Another set of psychological factors revealed in previous studies reflects chronic individual differences. For example, Wildschut et al. (2010) compared low-avoidance and high-avoidance individuals in their response to nostalgic cues. People with high levels of avoidance are mainly self-reliant and show little willingness to become emotionally close to others (Hazan and Shaver, 1987). When involved in a nostalgia-evoking episode, high-avoidance individuals are likely to feel less nostalgic, and nostalgia is likely to amplify the negative feelings these individuals have about their social relationships (Simpson et al., 1992; Collins and Feeney, 2000). As another example, the degree to which people are habitually worried has been found to determine the type of experience that nostalgia will evoke (Verplanken, 2012). Despite the initial positivity that nostalgia creates, it also aggravates feelings of anxiety and depression. Therefore, a tendency to be worried serves as a stimulus that focuses an individual more on the bitter aspect of nostalgia (Verplanken, 2012).

In summary, nostalgia is characterized as an individual's yearning for the past. It can be experienced personally or vicariously. Nostalgic experiences can have both affective and cognitive components and tend to evoke mixed emotions. Whether the final outcome from

experiencing nostalgia will be positive or negative depends on situational and chronic psychological differences among individuals.

Nostalgia and Advertising

Even though investigations of nostalgia first incepted in medical and psychology fields, it has become a topic of interest to marketing scholars due to its relationship with consumption experience and consumer decision-making. For example, previous studies have examined the effect of nostalgia on self-concept extension (Davis 1979; Belk, 1988), brand loyalty (Olsen 1993), brand meaning (Brown et al., 2003), charitable giving (Merchant and Ford, 2008; Ford and Merchant, 2010; Zhou et al., 2012), and consumers' explanatory behavior (Orth and Gal, 2012).

A significant body of research has accumulated on the effectiveness of nostalgia in an advertising context (Muehling and Pascal, 2011). The studies in this area can be classified into four research streams: (1) Studies investigating the different emotions that are evoked by nostalgic advertising (e.g., Muehling et al., 2004; Bambauer-Sachse and Gierl, 2009; Praxmarer and Gierl, 2009); (2) Studies identifying nostalgic triggers that can influence consumer's attitudes (e.g., Muehling and Pascal, 2012), brand attachment (Praxmarer and Gierl, 2009; Lefi and Gharbi, 2011; Muehling, 2013), and purchase intention (Muehling et al., 2014); (3) Studies investigating the psychological functions of nostalgia. For instance, Braun et al., (2002) showed that autobiographical advertisements influence how consumers remember their past such that events seem more likely to have happened to them as children. Muehling and Pascal (2012) further suggested the ability to induce a high level of self-reflection as another important psychological function of nostalgia; (4) Finally, studies examining the role of consumers'

characteristics or affective state (Zhao and Muehling, 2014) on individuals' responses to nostalgic advertising.

Despite significant progress made over the past decades in understanding the role of nostalgia in advertising, surprisingly little empirical research has been done to determine the psychological factors that may moderate consumers' reactions to nostalgic advertising.

Addressing this gap, the current research investigates the possibility that one's satisfaction with his/her life may dictate differential reactions to nostalgia. Drawing upon existing research on the recall of past emotions, we consider how current level of satisfaction with one's life may affect the reconstruction of past emotions evoked through nostalgia. Furthermore, building on the Elaboration Likelihood Model (Petty and Cacioppo 1986), we posit that the role played by life satisfaction depends on the extent to which consumers are involved with the advertised products or services.

HYPOTHESIS DEVELOPMENT

Most of previous studies on nostalgia in advertising have manipulated the construct through an advertisement's text (Muehling et al., 2004; Zhao et al., 2011; Muehling and Pascal, 2012) or images (Reisenwitz, 2003; Holak et al., 2007). We complement these existing studies and examine the much less understood musical trigger of nostalgia in advertising. Nostalgic music can evoke an emotional state that is associated with a specific past event in one's life (Juslin and Vastfjall, 2008), and exposure to a reminder of an emotional past event elicits brain activities similar to those taking place during the original event (Buchanan, 2007). This emotional vividness makes music an even more powerful nostalgia trigger than text and image components. Although nostalgic music can help satisfy consumers' longing for the past (Zhao

and Muehling, 2014), the eventual effect depends on the interpretation of such evoked past. Specifically, we argue that the effectiveness of nostalgic music is contingent on how past emotions are reconstructed through the lens of one's current life.

Life Satisfaction and Reaction to Nostalgic Music

Previous research shows that memory and perception of emotional experiences from the past do not remain static but can morph and become biased over time (Diener and Larsen, 1984; Fredrickson and Kahneman, 1993). To understand the influential factors, it is important to distinguish between “episodic” and “semantic” emotions. Episodic emotion knowledge involves recalling the exact emotions that have been experienced in a particular place and time (Tulving, 1984), whereas semantic emotions consist of overall knowledge about past emotional experiences (Tulving, 1984). Over time, people lose their ability to retrieve episodic information and most of the details about the past experiences become inaccessible. Therefore, people mainly rely on their semantic experiences which means they retrieve their belief about their emotions rather than the actual experienced ones (Robinson and Clore, 2002).

An important implication from the above discussion is the reconstructive nature of one's past emotional experience as time passes. That is, emotions evoked in the distant past are often not remembered by people in their original forms. Rather, people tend to come up with a retrospective report of total pleasure or displeasure when it comes to evaluating previously evoked emotions. As a result, there is possible fallibility in the recalled emotions in comparison with the actual experienced emotions (Aaker et al., 2008). This reconstructive nature of past emotional experiences is highly relevant to the effect of nostalgic appeals because nostalgic cues attempt to return individuals to their past (Sierra and McQuitty, 2007). The potentially mixed

emotions and memories evoked through such cues are therefore selective and are subject to current interpretations (Zimbardo and Boyd, 2015). If the interpretations of such past experiences are positive, it can enhance consumers' reaction to the nostalgic cue. But if the current interpretation of such past experiences is not so rosy, using nostalgic cues may lead to undesirable negative reactions.

The current research explores the role of life satisfaction in this reconstructive recall of past experiences and consequently one's subjective experience of nostalgia. Life satisfaction refers to an evaluative process in which people appraise their life based on some specific criteria (Shin and Johnson, 1978). This definition suggests that in evaluating one's life satisfaction, people weigh the good aspects of their life against the bad ones to reach an overall satisfaction level. Although there are some well-established measures of "the good life" such as successful social relationship, health, and a secure job, individuals are likely to set their unique personal standards to assess their current perceived life circumstances against the ideal ones (Pavot and Diener, 1993).

Individuals' level of life satisfaction carries two important consequences relevant to nostalgia effects. First, as recall of past experiences is often selective (Meltzer 1930; Taft 1954), life satisfaction can affect what specific past events one retrieves from memory. Supporting this view, previous research shows that individuals with high life satisfaction are more likely to recall positive events from the past, whereas those with low life satisfaction are more likely to remember negative events (Seidlitz and Diener, 1993; Seidlitz et al., 1997). This is also indirectly supported by existing emotion research based on the network activation model, where happy concepts and memories are believed to be interlinked, and a happy mindset tends to activate memories associated with happiness (Blaney, 1986). Secondly, life satisfaction can also

function as the lens through which one evaluates past experiences. Studies focusing on individual differences in evaluating past events demonstrate that people with high levels of life satisfaction tend to evaluate the past more positively in comparison to the individuals with low levels of life satisfaction (Seidlitz and Diener, 1993). As many life events are not clearly positive or negative, individuals with high vs. low life satisfaction tend to interpret such ambiguous events differently, which leads to different valence being assigned to these events (Aaker, 2008). In fact, Seidlitz and Diener (1993) argue that the tendency to recall more positive events by satisfied individuals may in fact be due to these individuals having “labeled more interpretive events as positive, whereas unhappy subjects may recall more negative events because they have labeled more of these events as negative” (p.645).

Overall, the preceding discussion suggests that for individuals with high life satisfaction, a nostalgic advertisement may lead to reconstruction of past experiences as being more positive, which creates a more favorable nostalgic experience and subsequently positive reactions to the advertised product. In contrast, negative experiences and emotions may result from evoking nostalgia among individuals with low levels of life satisfaction, which explains why individuals who are not happy with their current state of life tend to avoid situations that could evoke nostalgic feelings (Tiedens and Linton, 2001). Using nostalgic music in an advertisement can cause a backlash among these individuals. This leads to our first hypothesis:

***H1:** The level of life satisfaction will moderate the effect of nostalgic music in an advertisement, such that nostalgic music will have a positive impact on purchase intention and attitude toward the brand when life satisfaction is high but will have a negative effect when life satisfaction is low.*

The Role of Product Involvement

We further argue that the importance of life satisfaction in consumers' reaction to nostalgic music in an advertisement depends on the level of product involvement. Involvement refers to "the general level of interest in the object or the centrality of the object to the person's ego structure" (Day, 1970, p.45). It has been found to affect the amount of effort consumers put forward in making a purchase decision (Howard and Sheth, 1969; Clarke and Belk, 1979).

Factors such as costs associated with the product (economic and time), degree of risk involved in using the products, products' symbolic meaning to consumers, the degree of products' socially significant attributes, and the degree of personal relevance or importance have been identified as determinants of the level of involvement (Bloch and Richins, 1983; Park and Young, 1986).

An important application of involvement in the advertising context is the effect it has on how consumers process an advertisement. In particular, the Elaboration Likelihood Model (ELM; Petty and Cacioppo, 1986) states that the extent to which consumers elaborate on an advertising message is partly dependent upon their level of motivation and involvement. When capable of doing so, consumers with a high level of involvement will follow a more central route to persuasion (Petty et al., 1983). In this type of processing, consumers will engage in extensive elaboration of product-related (i.e., central) information. The quality of arguments and the cogency of information provided by the advertisement is the main determinant of consumer attitudes (Petty et al., 1983; Park and Young, 1986; Laczniak et al. 1989). In contrast, consumers with a low level of involvement will follow a more peripheral approach to processing, in which consumers focus more on peripheral aspects of the ad unrelated to the product such as source characteristics and background music (Petty et al., 1983).

Although the role of involvement has been explored extensively in the advertising literature, it is somewhat surprising that the nostalgia literature has paid little attention to how predisposition toward the product category in terms of involvement may affect the effectiveness of nostalgic appeals. The only published research we are aware of that touched upon this issue is the recent work by Chou and Singhal (2017). Studying Indian consumers' reaction to historical versus personal nostalgic ads, these authors found that a historical nostalgic appeal is superior to a personal nostalgic appeal when product involvement is high, and the opposite is true when product involvement is low. We extend this research and compares the effectiveness of nostalgic versus non-nostalgic music in advertisements as a joint function of life satisfaction and product category involvement.

In the last section, we argued that past experiences evoked by nostalgic music may go through a reconstructive process that gives such events interpretive meaning through the lens of current life satisfaction. This reconstruction process is more likely to occur for individuals with low product involvement, as they are more likely to focus on the peripheral background music. The mixed emotions evoked by the nostalgic music will encourage them to reconstruct their memories by considering their level of life satisfaction. In contrast, individuals with high product category involvement are more focused on product-relevant attributes and less on irrelevant background music. Their systematic processing of central information further inhibits the concurrent reprocessing of past experiences, which would have required additional working memory capacity and therefore would have competed with product information processing (Muehling and Pascal 2011). Hence, under high-involvement conditions, the reactions generated by nostalgic music, if any, are more likely to be taken at face value by these individuals, and life satisfaction is less likely to play a role in their responses. This leads to the next hypothesis:

H2: The moderating role of life satisfaction in consumers' response to nostalgic music in an advertisement will be weaker among consumers with high involvement in the product category than among consumers with low product category involvement.

STUDY 1

Procedure

To test the hypotheses, we conducted an experiment featuring a 2 (involvement: high vs. low) \times 2 (music: nostalgic music vs. non-nostalgic music) between-subjects design. To manipulate involvement, we used two product categories: potato chips to represent a low-involvement condition and a restaurant for the high-involvement condition. A pretest showed significant different levels of involvement between the two product categories ($M = 4.19$ for potato chips vs. 5.58 for restaurants; $t = -6.78, p < .001$). For nostalgic appeal, we chose music as the nostalgic cue. We created a commercial for a fictitious brand in each of the two product categories. The commercials mostly featured images of the product and people happily using the product¹. Each commercial had two different versions, one with a nostalgic song as the background music and the other version with a non-nostalgic song as the backdrop. These songs were selected from a series of pretests that are described in the next section. The two versions of the commercial for the same product were otherwise the same.

Participants were recruited from Amazon Mechanical Turk (hereafter MTurk) for a small monetary compensation. As nostalgia and music are both cultural phenomena, we only recruited MTurk workers with a US address. The MTurk panel has been used successfully in academic

¹ In the restaurant ad, we intentionally did not include any location information to make sure that it can be considered relevant to all participants.

research (e.g., Paolacci et al., 2010; Buhrmester et al., 2011; Horton et al., 2011). To ensure the quality of response, we included attention check questions² as recommended by previous research (Meade and Craig, 2012). All participants passed the attention checks in this study. To ensure the relevance of the chosen product categories, we also screened participants by how often they dine out or how often they eat potato chips depending on their assigned product category. Twenty-four participants who reported that they rarely dine out or rarely eat potato chips were excluded from the study. The final sample included 208 participants (mean age = 32.65; 53.37% females).

Participants were randomly assigned to one of the four experimental conditions. In each condition, participants were shown the commercial for the corresponding condition in its entirety. They then answered a few questions about the advertised product and the song, including intention to purchase the advertised product, attitude toward the advertised brand, evoked nostalgia, and how much they like the song in the commercial. Participants also rated their level of life satisfaction and their involvement with the assigned product category. All scales used in the study are described in the “Measures” section. Finally, participants answered a few demographic questions such as age, gender, and income.

Pretests for Song Selection

We conducted three pretests to choose the songs to include in the main study. In the first pretest, forty undergraduate students (mean age=25.01, 42.5% females) from a public university in the United States participated in the study for course credit. We asked the participants to list five songs that reminded them of "happy memories of your childhood which were spent

² The exact attention check questions used are available upon request from the authors.

surrounded by your family." From all of the songs listed, we picked five songs that were listed most frequently by the participants to be used in the second pretest.

In the second pretest, we recruited 85 Mturk participants (mean age=34.8, 64.7% Female) with a small monetary compensation. The purpose was to select a nostalgic song from the list of five songs from the first pretest to use in the main study. We asked the participants to listen to the five songs from the first study in a random order. After listening to each song, the participants indicated the extent to which they liked the song and how much it made them feel nostalgic (see measure information in the next section). The song that received the highest liking and the highest evoked nostalgia was chosen for the next step.

We conducted a third pretest to select a non-nostalgic song to pair with the nostalgic song. 81 individuals from MTurk (Average age = 32.40; 54% females) participated in the study in exchange for a small monetary compensation. We included the nostalgic song identified in the last pretest and four recent pop songs as potential candidates for the non-nostalgic song. Participants listened to the song and rated the level of nostalgia each song made them feel. Based on the results, we selected a song that was uniformly rated low on nostalgia ($M = 2.28$), which was significantly lower than the mean nostalgia rating for the chosen nostalgic song ($M = 5.08$; $t = -7.35, p < .001$). We used these two songs in the commercials for the main study.

Measures

Purchase Intention. We adopted the purchase intention measure from Roy and Sharma (2015). It asked participants how likely it is that they would buy the advertised product if they were planning to make a purchase in that product category. The scale contained three 9-point semantic differential items anchored at unlikely/likely, definitely would not/definitely would,

and improbable/probable. The three items were averaged to create the purchase intention score for each individual (Cronbach's $\alpha = 0.98$).

Attitude Toward the Brand. Participants rated their attitude toward the advertised brand on five 9-point semantic differential items anchored at unfavorable/favorable, unlikable/likable, not appealing/appealing, undesirable/desirable, and bad/good. These items were adopted from Kirmani and Zhu (2007). Each participant's brand attitude score equaled the average of his/her responses to the five items (Cronbach's $\alpha = 0.96$).

Evoked Nostalgia. We measured the level of nostalgia evoked by the music using the 10-item evoked nostalgia scale developed by Pascal et al. (2002). Table 1 shows all the items. Participants were asked to indicate their level of agreement with each of the ten statements on a 7-point scale anchored at strongly disagree/strongly agree. The ten items were averaged to create the evoked nostalgia score for each participant (Cronbach's $\alpha = 0.99$).

INSERT TABLE 1 ABOUT HERE

Life Satisfaction. The life satisfaction scale was adopted from Diener et al. (1985) and included five items: (1) In most ways my life is close to my ideal; (2) The conditions of my life are excellent; (3) I am satisfied with my life; (4) So far, I have gotten the important things I want in life; and (5) If I could live my life over, I would change almost nothing. Participants' agreement with each of the statements was captured on a 7-point scale anchored at strongly disagree/strongly agree and was averaged across the five items to derive each person's life satisfaction score (Cronbach's $\alpha = 0.92$).

Product Category Involvement. We used the personal involvement inventory developed by Zaichkowsky (1994) to capture participants' involvement with their assigned product

category. The ten 7-point semantic differential scale items were anchored at unimportant/important, boring/interesting, irrelevant/relevant, unexciting/exciting, means nothing/means a lot to me, unappealing/appealing, mundane/fascinating, worthless/valuable, uninvolving/involving, and not needed/needed. Responses to the ten items were averaged to form the involvement score (Cronbach's $\alpha = 0.93$).

Results

Supporting the involvement manipulation, participants reported a significantly higher level of involvement with restaurants ($M = 5.58$) than with potato chips ($M = 4.44$; $t = 8.43$, $p < .001$). To check the manipulation of nostalgia, we compared the evoked nostalgia between participants in the nostalgic music conditions and those in the non-nostalgic music conditions. As expected, those exposed to the nostalgic music reported a higher sense of nostalgia ($M = 4.82$) than those exposed to the non-nostalgic music ($M = 3.62$; $t = 5.62$, $p < .001$), suggesting successful manipulation of nostalgia. Unexpectedly, the nostalgic song was also rated as more likeable ($M = 5.27$) than the non-nostalgic song ($M = 4.36$; $t = 3.54$, $p < .001$). As liking of a song can be due to a variety of reasons that may or may not be related to nostalgia (e.g., genre or musician preference), we controlled for this likability difference in the main analyses below to rule out the possibility that song likability rather than nostalgia was driving the effects.

Figure 1 displays the mean purchase intention and attitude toward the brand under each of the four experimental conditions. To examine the effect of life satisfaction and to test our hypotheses, we ran two linear regressions, one with purchase intention as the dependent variable and the other with attitude toward the brand as the dependent variable. For both analyses, we included a song dummy (1=nostalgic song; 0=non-nostalgic song), involvement (1=high

involvement/restaurant; 0=low involvement/chips), level of life satisfaction, their respective two-way and three-way interactions, and song likeability as the independent variables. Life satisfaction scores were mean-centered to reduce collinearity. Results from the regressions are reported in Table 2. Both regressions showed a good fit, with R^2 equal to .36 for the purchase intention model and .38 for the brand attitude model. The VIFs for both models were all under four, suggesting that collinearity was not a problem with either model (Neter et al., 1996).

INSERT FIGURE 1 ABOUT HERE

For purchase intention, a significant negative three-way interaction among the song dummy, product category, and life satisfaction emerged ($\beta = -.91$; $t = -2.47$, $p = .01$). We conducted simple slope analyses to help interpret the interaction. For potato chips, confirming H1, there was a significant two-way interaction between the nostalgic song dummy and life satisfaction ($\beta = .73$; $t = 2.90$, $p < .001$). We used spotlight analysis as suggested by Spiller et al. (2013) to identify the effect of nostalgic music at the lowest (1) and highest levels (7) of life satisfaction. When life satisfaction was high, having nostalgic music in the commercial led to higher purchase intention relative to that from the non-nostalgic music ($\beta = 1.78$; $t = 2.48$, $p = .014$). However, when life satisfaction was low, using the nostalgic music had a negative impact on purchase intention of the advertised potato chips ($\beta = -2.58$; $t = 2.61$, $p = .01$). In the meantime, nostalgic music did not make a significant impact on purchase intention for the restaurant ($p = .67$), and the interaction between nostalgic song and life satisfaction was also not significant ($p = .50$), supporting the idea that individuals in high-involvement conditions are less

likely to engage in an online reconstruction of past experiences through the lens of life satisfaction.

INSERT TABLE 2 ABOUT HERE

For attitude toward the brand, a similar pattern of results emerged. The three-way interaction among the song dummy, product category, and life satisfaction was marginally significant ($\beta = -.54$; $t = -1.85$, $p = .07$). Simple slope analyses again showed a significant two-way interaction between nostalgic song dummy and life satisfaction for potato chips ($\beta = .44$; $t = 2.25$, $p = .03$). At a high level of life satisfaction ($=7$), the commercial featuring the nostalgic music led to marginally more favorable attitude toward the potato chips brand than the version featuring the non-nostalgic song ($\beta = 1.05$; $t = 1.87$, $p = .06$). In contrast, nostalgic music had a detrimental effect on brand attitude ($\beta = -1.62$; $t = -2.11$, $p = .04$) when life satisfaction was low ($=1$). Similar to the purchase intention results, neither the main effect of nostalgic music nor its interaction with life satisfaction was significant for attitude toward the restaurant brand ($p > .50$). Overall, H1 and H2 were supported.

STUDY 2

Study 2 aimed to examine the underlying processes behind our hypotheses. We argued that life satisfaction functions as a biased filter through which individuals reconstruct the valence of their past experiences evoked by nostalgic music. Furthermore, this reconstruction should be more likely to occur when the advertised product is a low-involvement product than when it is a high-involvement product. Study 2 tested these underlying processes by considering individuals' recall of ambiguous past events that are subject to interpretation. If life satisfaction indeed

influences how individuals reinterpret their past experiences, high-satisfaction individuals should be more likely to conjure up positive subjective experiences from the past than low-satisfaction individuals.

Another goal for Study 2 was to rule out mood as an alternative explanation of the life satisfaction effects found in the first study. Mood is a short-term affective state reflecting the extent to which a person feels positively or negatively in a particular moment (Diener and Larsen, 1984). Although mood is distinct from the relatively long-term and stable cognitive evaluation of one's life as captured by life satisfaction (Diener 1994), previous research suggests that the two are positively correlated (e.g., DeNeve and Cooper, 1998; Silvera et al., 2008). It is possible what we observed in the previous study was really due to the difference in participants' concurrent mood, which could have affected the persuasive outcomes of low-involvement products by functioning as the alternative lens through which individuals recall and evaluate past events (Teasdale et al., 1980; Mayer et al., 1990) or through a mood transfer effect (Kamins et al., 1991; Owolabi, 2009). In Study 2, we directly assessed consumers' mood state prior to advertising exposure and controlled for the mood effect in subsequent analyses.

Procedure and Measures

As our main interest in this study was how consumers reinterpret past experiences evoked by nostalgic music in advertising, Study 2 focused on advertisements with nostalgic music only. Participants were randomly assigned to one of two experimental conditions: a high-involvement product condition where they were exposed to a nostalgic restaurant commercial, and a low-involvement product condition where a nostalgic potato chips commercial was shown. These were the same nostalgic commercials created in Study 1, and they featured the same nostalgic

song. Before viewing the advertisement, participants reported their life satisfaction on the same five-item scale as in Study 1 (Cronbach's $\alpha = 0.88$) and their current mood using the Positive Affect and Negative Affect Schedule (PANAS; Watson et al. 1988). The PANAS scale contains 20-items representing both positive and negative affects measured on a five-point Likert scale. Each participant's overall mood score was created by subtracting the mean score for the negative affect items (Cronbach's $\alpha = 0.93$) from the mean score for the positive affect items (Cronbach's $\alpha = 0.92$). A filler task was inserted between the life satisfaction and mood questions to reduce contamination between the two measures.

After completing the mood and life satisfaction questions, participants proceeded to view their assigned commercial in its entirety. Afterwards, they completed the evoked nostalgia measure as in Study 1 (Cronbach's $\alpha = 0.93$) followed by past experience recall questions. We adopted an approach used in Seidlitz and Diener (1993) to gauge memory distortion and reconstruction. This approach involved participants selecting from a list of 80 life events all the ones that had happened to them. Forty of these events were concrete events that carried little ambiguity as to their occurrence (e.g., attended a wedding and death of parent or sibling), whereas the other forty were subjective events that required individual interpretation (e.g., badly embarrassed myself in front of friends and I have significantly improved by character). Within the concrete event set and the subjective event set, half were positive events and half were negative events (see Seidlitz and Diener (1993) for a complete list of the events). The positive and negative events and concrete and subjective events were all interspersed with each other, and the display order of the events were randomized. The valence scores for the concrete event set and the subjective event set were then calculated by counting the number of positive events selected minus the number of negative events selected within each set. The basic idea was that if

a consumer indeed systematically reinterpreted past events in a certain direction, we should observe a difference in the valence score for the subjective events, even after controlling for the valence of the concrete events.

After going over the events, participants reported their involvement with the target product category (Cronbach's $\alpha = 0.93$) and answered product usage frequency and demographic questions as in Study 1. All participants for Study 2 were recruited from MTurk for a small monetary compensation. Similar to Study 1, we screened participants for careless responses and excluded five participants who failed the attention check questions³. We also filtered out nine individuals who reported rarely dining out or rarely eating potato chips to ensure the relevance of the product categories. The final sample consisted of 67 participants (Average age = 32.58, 52.24% females).

Results

A t-test of the product involvement score between the two conditions showed that participants were significantly more involved with the restaurant product category ($M = 5.18$) than they were with the potato chips category ($M = 3.86$; $t = 4.58$, $p < .001$). We also examined the evoked nostalgia scores to make sure that the music was indeed considered nostalgic by participants. The average evoked nostalgia score was on par with the mean from Study 1 and was significantly above the mid-point of the scale ($M = 4.94$; $t = 5.08$, $p < .001$), suggesting successful manipulation of nostalgia.

The valence for recalled concrete past events ranged from -5 to 7, with the mean being 1.51. The valence scores for recalled subjective past events ranged from -8 to 12, with an

³ The specific attention check questions used are available upon request from the authors.

average of 2.06. To examine whether individuals indeed interpreted past events differently as a function of life satisfaction and involvement, we conducted a regression with the subjective events valence score as the dependent variable. The independent variables were an involvement condition dummy (1=high involvement; 0=low involvement), life satisfaction, and their interaction. We also included the concrete event valence score to control for potential differences in the positivity of participants' actual past. To rule out mood as an alternative explanation, we further controlled for consumers' mood state as measured by the PANAS scale. All VIFs for the model were well below 10, suggesting that collinearity was not a problem.

The model estimation results are shown in Table 3. The R^2 for the model was .35, suggesting a reasonable fit. A marginally significant interaction between life satisfaction and involvement ($\beta = -1.45$; $t = -1.83$, $p = .07$) emerged. Simple slope analyses showed that for the low-involvement potato chip product, life satisfaction led to more positive valence of recalled subjective events ($\beta = 2.86$; $t = 4.11$, $p < .001$). For the high-involvement restaurant commercial, life satisfaction also had a significant positive effect but the effect was about half that for potato chips ($\beta = 1.41$; $t = 2.45$, $p = .02$). Mood did not have a significant effect on the valence of subjective events recalled ($p > .5$).

INSERT TABLE 3 ABOUT HERE

Taken together, the results from this study suggest that life satisfaction indeed affected how individuals interpret past experiences, and this effect was stronger when the nostalgic advertisement featured a low-involvement product than when the ad featured a high-involvement product. Furthermore, mood did not have an effect on the interpretation of past events,

suggesting that it did not function as a filter in the assessment of past experiences. Life satisfaction was the more likely reason why consumers responded to the nostalgic ad differently.

DISCUSSION

Given the increasing cost of advertising, finding ways to maximize the effectiveness of an advertising campaign is a topic of great interest to marketers. Previous research on the use of nostalgic cues in advertisements tends to characterize it as a positive strategy leading to more favorable persuasive outcomes (Pascal et al., 2002; Muehling et al., 2004; Muehling and Pascal, 2012). Challenging this conclusion, our research shows that nostalgic background music in an advertisement varies in effectiveness depending on individuals' current state of life satisfaction and on their involvement with the product category. Under certain circumstances, nostalgic music can backfire and lead to lower intention to purchase the advertised product.

An important premise of the current research is that consumers' reaction to nostalgic cues is rooted in potentially complex interactions between the past and the present. While previous research suggests that nostalgia represents mixed emotions, the advertising literature has mostly characterized nostalgia as a positive affective influencer that evokes feelings of belongingness and trustworthiness among the audience. These feelings are the results of activation of past experiences from one's memory. Advancing understanding in this area, we draw upon research on the recall of emotions and argue that activation of the same past experiences may not lead to the same meaning among consumers. As episodic memory of actual past events becomes less clear and accessible, consumers become increasingly reliant on their current mindset to reconstruct the valence and meaning of such events. Specifically, the current research suggests that life satisfaction is a current mindset factor that can distort the way in which consumers

interpret the evoked past, such that nostalgic music creates a positive effect for individuals with high levels of satisfaction and a negative effect for those not satisfied with their life.

Furthermore, we show that the reconstructive process only occurs under low-involvement conditions, when consumers are more likely to focus on peripheral cues such as background music. Under high-involvement conditions, the cognitive load as a result of processing central product information inhibits the online reconstruction of past experiences, rendering life satisfaction less relevant in such cases.

The findings from the current research suggests the need to consider the context of exposure in studying nostalgia effects. While this research explores the role of life satisfaction, other situational and individual factors can dictate one's current mindset. For example, the programming in which an advertisement is embedded in can affect one's situational emotional state, which may affect consumers' reinterpretation of past emotions. As another example, psychology research has shown different patterns of recall bias between older and younger adults, with older adults more likely to overestimate positive affects from the past and younger adults more likely to overestimate negative affects (Ready et al., 2007). This suggests a potentially significant role of age in nostalgia effects, beyond the simple fact that older adults have a fuller and more complex past to reminisce about. Such interactions between one's past and one's present state of mind presents rich opportunities for future nostalgia research.

From a practical standpoint, the current research warns against a blind use of nostalgic cues in advertising. Instead, it is essential to understand the consumers' current mindset before deciding on such a strategy. One of the challenges in implementing the insights discovered here is that individuals' level of life satisfaction is typically unknown and difficult to measure for marketers. However, there is a rich body of literature in economics and marketing fields that has

identified several micro- and macro-level variables as proxies or important influencers of life satisfaction. For instance, the unemployment rate has been used as an effective measure of life satisfaction through their negative correlation (Blanchflower, 2001; Di Tella et al., 2001; Lucas et al., 2004; Jorges, 2007). One can also deduce general trends in life satisfaction at the time of significant life events such as marriage, divorce, and childbirth (Stutzer and Frey, 2006; Zimmermann and Easterlin, 2006; Clarke et al., 2008). At a grander level, organizations such as the Organisation for Economic Co-operation and Development (OECD) conduct regular worldwide surveys (e.g., the OECD Better Life Index at <http://www.oecdbetterlifeindex.org>) that include life satisfaction as a key indicator. These studies reveal significant differences in life satisfaction levels among different countries. Taken together, marketers can use these macroeconomic, cultural, and demographic proxies to estimate the level of life satisfaction among their audience and adjust their advertising strategies accordingly.

Limitations and Future Research

The current research has several limitations that need to be addressed in future research. First, the music in our experiment played the role of a peripheral cue unrelated to the focal product. Although most advertisements do utilize music in such a fashion, there are times when music can convey product-related information and hence become central cues. When nostalgic music is presented in this fashion, it is possible that product-focused elaboration under high-involvement no longer competes with the online reconstruction of past experiences but actually magnify the process, making the role of life satisfaction more salient in such circumstances. Future research should explore this possibility to fully understand the reconstructive process associated with nostalgia.

Second, our research cannot completely rule out the possibility of a direct affect transfer (Kamins et al., 1991). The potential outcome of such a transfer process is somewhat uncertain due to differential response to music under different mood states. Previous research suggests that a positive mood is likely to make the major scale or fast tempo more salient, whereas negative affective state leads to a focus on the slow tempo or minor scale (Hunter et al., 2011). Based on this line of thinking, it is possible that individuals with a negative mood could have found the slow and potentially melancholy nostalgic music to be more congruent with their mood state and hence react more positively to nostalgic music instead. This would predict an opposite effect to what we found in our research. Future research needs to better separate the effect of mood from that of life satisfaction. This can be done, for example, by explicitly priming mood before advertising exposure or by adding some time gap between life satisfaction measurement and advertising exposure. Finally, the generalizability of our findings needs to be tested with other product categories and other samples besides MTurk participants. Furthermore, in this research, we used distinct product categories to manipulate involvement. In ELM, the key to involvement effects lies in variations in personal relevance (Petty and Cacioppo 1986). Future research should consider other influencers of personal relevance and how they may affect the effect of nostalgic music in advertising.

REFERENCES

- Aaker, J., Drolet, A., & Griffin, D. (2008). Recalling mixed emotions. *Journal of Consumer Research*, 35(2), 268-278.
- Baker, S. M., and Kennedy, P. F. (1994). Death by nostalgia: A diagnosis of context-specific cases. *NA-Advances in Consumer Research*, (21).
- Bambauer-Sachse, S., and Gierl, H. (2009). Effects of nostalgic advertising through emotions and the intensity of the evoked mental images. *NA-Advances in Consumer Research*, (36).
- Barrett, F. S., Grimm, K. J., Robins, R. W., Wildschut, T., Sedikides, C., and Janata, P. (2010). Music-evoked nostalgia: Affect, memory, and personality. *Emotion*, 10(3), 390–403.
- Batcho, K. I. (2007). Nostalgia and the emotional tone and content of song lyrics. *American Journal of Psychology*, 120(3), 361–381.
- Baumgartner, H. (1992). Remembrance of things past: Music, autobiographical memory, and emotion. *NA-Advances in Consumer Research*, (19).
- Belk, R. W. (1988). Possessions and the Extended Self. *The Journal of Consumer Research*, 15(2), 139–168.
- Belk, R. W. (1990). The role of possessions in constructing and maintaining a sense of past. *NA-Advances in Consumer Research*, (17).
- Berntsen, D., and Rubin, D. C. (2002). Emotionally charged autobiographical memories across the life span: the recall of happy, sad, traumatic, and involuntary memories. *Psychology and Aging*, 17(4), 636–652.
- Blanchflower, D. G. (2001). Unemployment, well-being, and wage curves in Eastern and Central Europe. *Journal of the Japanese and International Economies*, 15(4), 364-402.
- Blaney, Paul H. (1986). Affect and memory: A review. *Psychological Bulletin*, 99(2), 229-246.
- Braun, K. A., Ellis, R., & Loftus, E. F. (2002). Make my memory: How advertising can change our memories of the past. *Psychology & Marketing*, 19(1), 1-23.
- Brown, S., Kozinets, R. V., and Sherry, J. F. (2003). Teaching Old Brands New Tricks: Retro Branding and the Revival of Brand Meaning. *Journal of Marketing*, 67(3), 19–33.
- Bloch, P. H., and Richins, M. L. (1983). A theoretical model for the study of product importance perceptions. *The Journal of Marketing*, 69-81.
- Boym, S. (2008). The future of nostalgia. *Basic Books*.

- Buchanan, T. W. (2007). Retrieval of Emotional Memories, *133(5)*, 761–779.
- Buhrmester, M., Kwang, T., and Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on psychological science*, *6(1)*, 3-5.
- Chou, H. Y., and Singhal, D. (2017). Nostalgia advertising and young Indian consumers: The power of old songs. *Asia Pacific Management Review*, *22(3)*, 136-145.
- Clarke, K., and Belk, R. W. (1979). The effects of product involvement and task definition on anticipated consumer effort. *ACR North American Advances*.
- Clark, A. E., Diener, E., Georgellis, Y., and Lucas, R. E. (2008). Lags and leads in life satisfaction: A test of the baseline hypothesis. *The Economic Journal*, *118(529)*.
- Collins, N. L., and Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of personality and social psychology*, *78(6)*, 1053.
- Cosgrove, J., and Sheridan, P. (2002). Listen up, sucka, the '80s are back. *Business Week*, *5*, 16.
- Daniels, E. B. (1985). Nostalgia and hidden meaning. *American Image*, *42(4)*, 371.
- Davis, F. (1979). Yearning for yesterday: A sociology of nostalgia. *Free Press*.
- Day, G. S. (1970). Buyer attitudes and brand choice behavior. *Free Press*.
- DeNeve, K. M., and Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological bulletin*, *124(2)*, 197.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social indicators research*, *31(2)*, 103-157
- Diener, E. D., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49(1)*, 71–75.
- Diener, E., and Larsen, R. J. (1984). Temporal stability and cross-situational consistency of affective, behavioral, and cognitive responses. *Journal of personality and social psychology*, *47(4)*, 871.
- Di Tella, R., MacCulloch, R. J., and Oswald, A. J. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *American economic review*, *91(1)*, 335-341.
- Eichenbaum, H., and Cohen, N. J. (2004). From conditioning to conscious recollection: Memory systems of the brain. *Oxford University Press on Demand*.
- Elliott, S. (2009). Like comfort food, warm and fuzzy makes a comeback: [*Business/Financial Desk*]. *New York Times*, *B3*.

- Ford, J. B., and Merchant, A. (2010). Nostalgia drives donations: The power of charitable appeals based on emotions and intentions. *Journal of Advertising Research*, 50(4), 450–460.
- Fredrickson, B. L., and Kahneman, D. (1993). Duration neglect in retrospective evaluations of affective episodes. *Journal of personality and social psychology*, 65(1), 45.
- Hazan, C., and Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of personality and social psychology*, 52(3), 511.
- Hepper, E. G., Ritchie, T. D., Sedikides, C., and Wildschut, T. (2012). Odyssey's end: lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion*, 12(1), 102.
- Hofer, J. (1934). Medical dissertation on nostalgia (CK Anspach, Trans.). *Bulletin of the History of Medicine*, 2, 376–391.
- Holak, S. L., and Havlena, W. J. (1998). Feelings, fantasies, and memories: An examination of the emotional components of nostalgia. *Journal of Business Research*, 42(3), 217–226.
- Holak, S. L., Havlena, W. J., and Matveev, A. V. (2006). Exploring nostalgia in Russia: testing the index of nostalgia-proneness. *European Advances in Consumer Research*, 7, 195–200.
- Holak, S. L., Matveev, A. V., and Havlena, W. J. (2007). Nostalgia in post-socialist Russia: Exploring applications to advertising strategy. *Journal of Business Research*, 60(6), 649–655.
- Holbrook, M. B. (1993). Nostalgia and consumption preferences: Some emerging patterns of consumer tastes. *Journal of Consumer Research*, 20(2), 245–256.
- Horton, J. J., Rand, D. G., and Zeckhauser, R. J. (2011). The online laboratory: Conducting experiments in a real labor market. *Experimental economics*, 14(3), 399–425.
- Howard, J. A., and Sheth, J. N. (1969). *The Theory of Buyer Behavior* New York.
- Hunter, P. G., Schellenberg, E. G., & Schimmack, U. (2010). Feelings and perceptions of happiness and sadness induced by music: Similarities, differences, and mixed emotions. *Psychology of Aesthetics, Creativity, and the Arts*, 4(1), 47.
- Hunter, P. G., Schellenberg, E. G., and Schimmack, U. (2008). Mixed affective responses to music with conflicting cues. *Cognition & Emotion*, 22(2), 327–352.
- Hunter, P. G., Schellenberg, E. G., & Griffith, A. T. (2011). Misery loves company: Mood-congruent emotional responding to music. *Emotion*, 11(5), 1068.
- Iyer, A., and Jetten, J. (2011). What's left behind: Identity continuity moderates the effect of nostalgia on well-being and life choices. *Journal of personality and social psychology*, 101(1), 94.

- Jorges, H. (2007). 'Unemployment, life satisfaction, and retrospective error', for *Society A*, vol (170), pp. 4.
- Juhl, J., Sand, E. C., and Routledge, C. (2012). The effects of nostalgia and avoidant attachment on relationship satisfaction and romantic motives. *Journal of Social and Personal Relationships*, 29(5), 661-670.
- Juslin, P. N., and Vastfjall, D. (2008). Emotional responses to music: The need to consider underlying mechanisms. *Behavioral and Brain Science*, 31(559–575), 559–621.
- Kamins, M. A., Marks, L. J., and Skinner, D. (1991). Television commercial evaluation in the context of program induced mood: Congruency versus consistency effects. *Journal of Advertising*, 20(2), 1-14.
- Kirmani, A., and Zhu, R. (2007). Vigilant against manipulation: The effect of regulatory focus on the use of persuasion knowledge. *Journal of Marketing Research*, 44(4), 688-701.
- Laczniak, R. N., Muehling, D. D., and Grossbart, S. (1989). Manipulating message involvement in advertising research. *Journal of Advertising*, 18(2), 28-38.
- Leboe, J. P., and Ansons, T. L. (2006). On misattributing good remembering to a happy past: An investigation into the cognitive roots of nostalgia. *Emotion*, 6(4), 596–610.
- Lefi, L., and Gharbi, A. (2011). Nostalgia and Brand Attachment: Theoretical Framework and Application in the Case of an Abstract: 3(1), 187–200.
- Lucas, R. E., Clark, A. E., Georgellis, Y., and Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological science*, 15(1), 8-13.
- Mattila, B. A. S., and Wirtz, J. (2001). Anna-Congruency of Scent and Music as a Driver of in Store Evaluation and Behavior. *Journal of Retailing*, 77(2), 273–289.
- Mayer, J. D., Gayle, M., Meehan, M. E., & Haarman, A. K. (1990). Toward better specification of the mood-congruency effect in recall. *Journal of Experimental Social Psychology*, 26(6), 465-480.
- Meade, Adam W. and S. Bartholomew Craig (2012), “Identifying Careless Responses in Survey Data,” *Psychological Methods*, 17 (3), 437-455.
- Meltzer, H. (1930). Individual differences in forgetting pleasant and unpleasant experiences. *Journal of Educational Psychology*, 21(6), 399.
- Merchant, A., and Ford, J. (2008). Nostalgia and giving to charity: a conceptual framework for discussion and research. *International Journal of Nonprofit and Voluntary Sector Marketing*, 13(1), 13–30.

- Muehling, D. D. (2013). The relative influence of advertising-evoked personal and historical nostalgic thoughts on consumers' brand attitudes. *Journal of Marketing Communications*, 19(2), 98–113.
- Muehling, D. D., and Pascal, V. J. (2011). An Empirical Investigation of the Differential Effects of Personal, Historical, and Non-Nostalgic Advertising on Consumer Responses. *Journal of Advertising*, 40(2), 107–122.
- Muehling, D. D., and Pascal, V. J. (2012). An Involvement Explanation for Nostalgia Advertising Effects. *Journal of Promotion Management*, 18(1), 100–118.
- Muehling, D. D., Sprott, D. E., and Sprott, D. E. (2004). The power of reflection: An empirical examination of nostalgia advertising effects. *Journal of Advertising*, 33(3), 25-35.
- Muehling, D. D., Sprott, D. E., and Sultan, A. J. (2014). Exploring the Boundaries of Nostalgic Advertising Effects: A Consideration of Childhood Brand Exposure and Attachment on Consumers' Responses to Nostalgia-Themed Advertisements. *Journal of Advertising*, 43(1), 73–84.
- Neter, J., Kutner, M. H., Nachtsheim, C. J., and Wasserman, W. (1996). *Applied linear statistical models* (Vol. 4, p. 318). Chicago: Irwin.
- Olsen, B. (1993). Brand loyalty and lineage: Exploring new dimensions for research. *NA-Advances in Consumer Research Volume 20*.
- Orth, U. R., and Gal, S. (2012). Nostalgic brands as mood boosters. *Journal of Brand Management*, 19(8), 666–679.
- Owolabi, A. B. (2009). Effect of consumers mood on advertising effectiveness. *Europe's journal of psychology*, 5(4), 118-127.
- Park, C. W., and Young, S. M. (1986). Consumer response to television commercials: The impact of involvement and background music on brand attitude formation. *Journal of marketing research*, 11-24.
- Pascal, V. J., Sprott, D. E., and Muehling, D. D. (2002). The influence of evoked nostalgia on consumers' responses to advertising: An exploratory study. *Journal of Current Issues & Research in Advertising*, 24(1), 39-47.
- Paolacci, G., Chandler, J., and Ipeirotis, P. G. (2010). Running experiments on amazon mechanical turk.
- Pavot, W., and Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, 5(2), 164.
- Petty, R. E., and Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Communication and persuasion* (pp. 1-24). Springer New York.

- Petty, R. E., Cacioppo, J. T., and Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of consumer research*, 10(2), 135-146.
- Praxmarer, S., and Gierl, H. (2009). The effects of positive and negative ad- evoked associations on brand attitude. *Asia Pacific Journal of Marketing and Logistics*, 21(4), 507–520.
- Ready, R. E., Weinberger, M. I., and Jones, K. M. (2007). How happy have you felt lately? Two diary studies of emotion recall in older and younger adults. *Cognition and Emotion*, 21(4), 728-757.
- Reisenwitz, T. H. (2003). Nostalgia advertising: An exploratory study of its effectiveness and the effect of nostalgia proneness.
- Robinson, M. D., and Clore, G. L. (2002). Episodic and semantic knowledge in emotional self-report: evidence for two judgment processes. *Journal of personality and social psychology*, 83(1), 198.
- Roy, R., and Sharma, P. (2015). Scarcity appeal in advertising: exploring the moderating roles of need for uniqueness and message framing. *Journal of Advertising*, 44(4), 349-359.
- Schindler, R. M., and Holbrook, M. B. (1993). Critical periods in the development of men's and women's tastes in personal appearance. *Psychology & Marketing*, 10(6), 549–564.
- Schindler, R. M., and Holbrook, M. B. (2003). Nostalgia for early experience as a determinant of consumer preferences. *Psychology & Marketing*, 20(4), 275–302.
- Sedikides, C., Wildschut, T., and Baden, D. (2004). Conceptual issues and existential functions. *Handbook of Experimental Existential Psychology*, 205.
- Sedikides, C., Wildschut, T., Gaertner, L., Routledge, C., and Arndt, J. (2008). Nostalgia as enabler of self-continuity. *Self-continuity: Individual and collective perspectives*, 227-239.
- Seidlitz, L., and Diener, E. (1993). Memory for positive versus negative life events: Theories for the differences between happy and unhappy persons. *Journal of personality and social psychology*, 64(4), 654.
- Seidlitz, L., Wyer Jr, R. S., and Diener, E. (1997). Cognitive correlates of subjective well-being: The processing of valenced life events by happy and unhappy persons. *Journal of Research in Personality*, 31(2), 240-256.
- Shin, D. C., and Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, 5(1–4), 475–492.
- Sierra, J. J., and McQuitty, S. (2007). Attitudes and emotions as determinants of nostalgia purchases: An application of social identity theory. *Journal of Marketing Theory and Practice*, 15(2), 99-112.

- Silvera, D. H., Lavack, A. M., and Kropp, F. (2008). Impulse buying: the role of affect, social influence, and subjective wellbeing. *Journal of Consumer Marketing*, 25(1), 23-33.
- Simpson, J. A., Rholes, W. S., and Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of personality and social psychology*, 62(3), 434.
- Spiller, S. A., Fitzsimons, G. J., Lynch Jr, J. G., and McClelland, G. H. (2013). Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression. *Journal of Marketing Research*, 50(2), 277-288.
- Stern, B. B. (1992). Historical and personal nostalgia in advertising text: The fin de siècle effect. *Journal of Advertising*, 21(4), 11-22.
- Stutzer, A., and Frey, B. S. (2006). Does marriage make people happy, or do happy people get married? *The Journal of Socio-Economics*, 35(2), 326-347.
- Taft, R. (1954). Selective recall and memory distortion of favorable and unfavorable material. *The Journal of Abnormal and Social Psychology*, 49(1), 23.
- Teasdale, J. D., Taylor, R., & Fogarty, S. J. (1980). Effects of induced elation-depression on the accessibility of memories of happy and unhappy experiences. *Behaviour research and therapy*, 18(4), 339-346.
- Tiedens, L. Z., and Linton, S. (2001). Judgment under emotional certainty and uncertainty: the effects of specific emotions on information processing. *Journal of personality and social psychology*, 81(6), 973.
- Tulving, E. (1984). Precis of elements of episodic memory. *Behavioral and Brain Sciences*, 7(2), 223-238.
- Verplanken, B. (2012). When bittersweet turns sour: Adverse effects of nostalgia on habitual worriers. *European Journal of Social Psychology*, 42(3), 285-289.
- Watson, D., Clark, L. A., and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063.
- White, R. B. (2002). Why it's cool to troll through time. *Time*, 16.
- Wildschut, T., Sedikides, C., Arndt, J., and Routledge, C. (2006). Nostalgia: Content, Triggers, Functions. *Journal of Personality and Social Psychology*, 91(5), 975-993.
- Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., and Cordaro, F. (2010). Nostalgia as a repository of social connectedness: The role of attachment-related avoidance. *Journal of Personality and Social Psychology*, 98(4), 573-586.

Zhao, G., and Muehling, D. D. (2014). Remembering the Good Old Days: The Moderating Role of Consumer Affective State on the Effectiveness of Nostalgic Advertising. *Journal of Advertising*, 43(3), 244–255.

Zhao, G., Muehling, D., Singh, S., and Chai, J. (2011). Consumer Chronic Affect and Persuasiveness of Nostalgia Advertising Appeals. *ACR North American Advances*.

Zhou, X., Wildschut, T., Sedikides, C., Shi, K., and Feng, C. (2012). Nostalgia: The Gift That Keeps on Giving: Figure A1. *Journal of Consumer Research*, 39(1), 39–50.

Zimbardo, P. G., and Boyd, J. N. (2015). Putting time in perspective: A valid, reliable individual-differences metric. In *Time perspective theory; review, research and application* (pp. 17-55). Springer, Cham.

Zimmermann, A. C., and Easterlin, R. A. (2006). Happily, ever after? Cohabitation, marriage, divorce, and happiness in Germany. *Population and Development Review*, 32(3), 511-528.

Zaichkowsky, J. L. (1994). The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of advertising*, 23(4), 59-70.

FIGURE 1. Mean Purchase Intention and Attitude Toward the Brand in Study 1

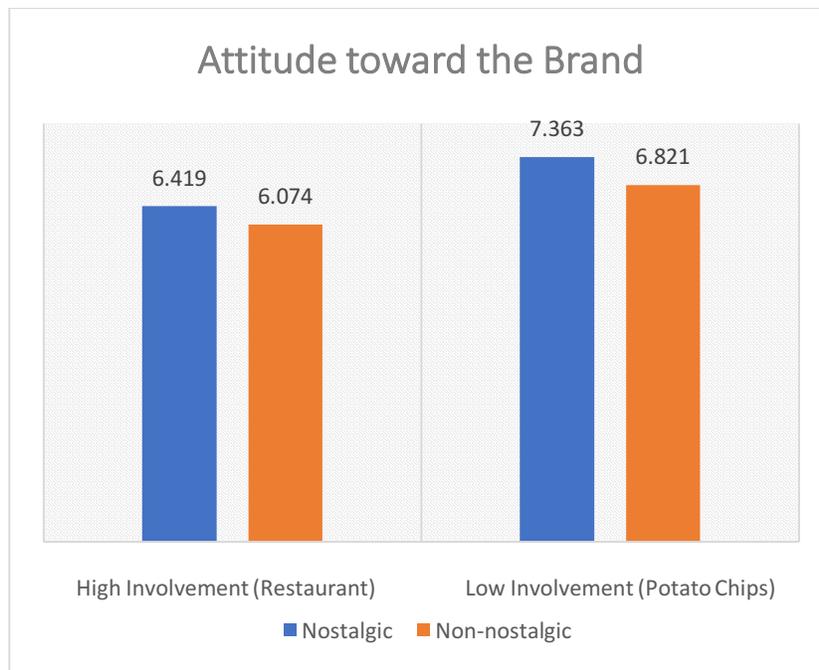
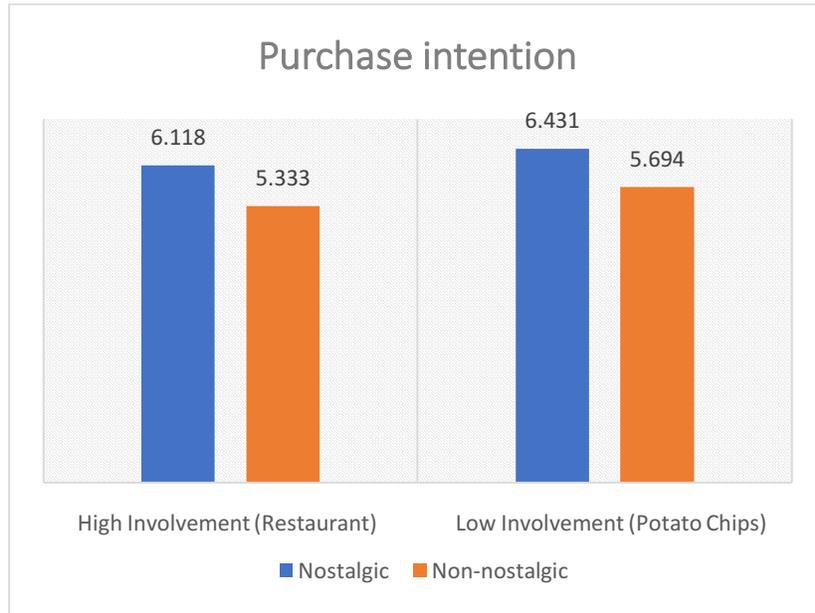


Table 1-Evoked Nostalgia Scale

Pascal et al., (2002), seven-point Likert Scale (Strongly disagree/Strongly agree)-
1. Reminds me of the past.
2. Helps me recall pleasant memories.
3. Makes me feel nostalgic.
4. Makes me reminiscence about a previous time.
5. Makes me think about when I was younger.
6. Evokes fond memories.
7. Is a pleasant reminder of the past.
8. Brings back memories of good times from the past
9. Reminds me of the good old days
10. Reminds me of good times in the past

TABLE 2-Study 1 Regression Results

Variables	Purchase Intention Coefficient (Standard Error)	Attitude toward the Brand Coefficient (Standard Error)
<i>Intercept</i>	2.68*** (.42)	4.40*** (.33)
<i>Nostalgic Song Dummy</i>	-.03 (.40)	-.06 (.31)
<i>Involvement</i>	-.23 (.38)	-.65** (.29)
<i>Life Satisfaction</i>	-.23 (.17)	-.18 (.13)
<i>Song Likability</i>	.69*** (.07)	.55*** (.06)
<i>Song*Involvement</i>	.19 (.54)	-.09 (.42)
<i>Song*Life Satisfaction</i>	.73*** (.25)	.44** (.19)
<i>Involvement*Life Satisfaction</i>	.48* (.25)	.36* (.19)
<i>Song*Involvement*Life Satisfaction</i>	-.91** (.37)	-.54* (.06)
<i>R²</i>	.36	.38

*** $p < .01$; ** $p < .05$; * $p < .1$

TABLE 3-Study 2 Regression Results

Variables	Valence of Subjective Past Events Coefficient (Standard Error)
<i>Intercept</i>	2.80** (2.61)
<i>Involvement Dummy</i> (1=high involvement)	-.70 (-.73)
<i>Life Satisfaction</i>	2.86*** (4.11)
<i>Involvement*Life Satisfaction</i>	-1.45* (-1.83)
<i>Valence of Concrete Past Events</i>	.23 (.18)
<i>Mood</i>	-.34 (-.64)
<i>R²</i>	.35

*** $p < .01$; ** $p < .05$; * $p < .1$