

# CONSUMER NOSTALGIA LITERATURE REVIEW AND AN ALTERNATIVE MEASUREMENT PERSPECTIVE

**Justina Gineikienė\***

*Vilnius University*

---

**Abstract.** *During the last two decades consumer nostalgia literature has experienced the growing amount of research, nonetheless, the nomological network in the area is still poorly established and fundamental questions of generalizability and measurement of nostalgia effects remain unanswered. This paper represents an attempt to comprehensively assess extant research in consumer nostalgia field, distinguish developments in the literature by summarizing the main findings of previous research and establishing theoretical trends. The analysis reveals that a number of demographic, social and psychological nostalgia antecedents, moderators and outcomes remain at the propositions level or lack the accumulated empirical quantitative support and validation from other studies. Therefore, specific recommendations regarding the development of nostalgia nomological network are provided to aid the continued theoretical and methodological improvements in the area. Since 1991 research in nostalgia has assumed that the correct measurement approach is a reflective one. This paper offers an alternative perspective for viewing and operationalizing nostalgia construct as a formative construct. Guidelines are summarized that aim to assist researchers with decision rules on whether to employ formative or reflective nostalgia measurement for future research. One of the main contributions of this study is to show the need for researchers to explicitly justify their choice of reflective or formative measurement models by supporting it with theoretical arguments and empirical evidence.*

**Key words:** *nostalgia, literature review, dimensionality, reflective and formative measures.*

---

## 1. Introduction

Emerging economies' share in global output has increased from less than 20% in the early 1990s to more than 30% at present (ECB, 2013, measured at market exchange rates) and these regions are attracting considerable attention both from businesses and theorists. Taking into account promising growth prospects of emerging countries, businesses seek to expand to those new and little discovered territories. However, emerging countries may have specific features that have to be taken into consideration and firms among other important factors need to evaluate consumer differences that

---

\* Department of Marketing, Vilnius University, Sauletekio av. 9, +37052366146, e-mail: justina@icbaltic.lt

may be deciding for the success of entrance strategies. Consumer nostalgia is one of the factors that are relevant for emerging markets, because in some settings this individual feature may interplay with another well researched phenomenon, such as consumer ethnocentrism. For example, due to a large number of newly established countries, effects of nostalgia may be carried-over across state borders and become relevant for international marketing practitioners and researchers. Thus, the findings of this paper have considerable implications for companies seeking to enter or strengthen the position in the emerging international markets. Furthermore, researchers need better understanding of the individual differences in emerging markets. Despite growing amount of research on emerging international contexts, this topic still remains under-researched and there are significant generalizability gaps in the marketing literature.

This study seeks to explore one of the individual factors that is relevant for emerging markets, namely, the consumer nostalgia, defined as “a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)” (Holbrook & Schindler, 1991, p. 330). The concept of consumer nostalgia has received much attention with almost exponential increase in the amount of research during the last decade. Surprisingly, little has been published on consumer nostalgia in terms of literature review. This paper represents an attempt to comprehensively assess the research in the field of consumer nostalgia literature and to contribute to the consumer nostalgia theory in two major ways.

First, developments in the literature are distinguished by summarizing the main previous research findings, data, samples, methods and techniques, geographic distribution, thus establishing trends regarding the theoretical evolution of the consumer nostalgia field and creating a knowledge digest on the subject. Specific recommendations regarding the development of nostalgia nomological network are provided to aid the continued theoretical and methodological improvements in the area and suggest prospects for the future investigation in nostalgia research domain.

Second, the paper seeks to provide reconsideration of conceptualization and measurement perspective of nostalgia, thus delineating guidance toward capitalizing on the methodological strengths and avoiding the pitfalls of the nostalgia research. This study discusses the conceptualization and dimensionality of the most widespread nostalgia proneness scale developed by Holbrook (1993) and proposes an alternative measurement perspective.

Although this paper is of particular importance and relevance for emerging economies, due to its conceptual and methodological nature the research findings are not limited to specific regions or countries and may be as well useful for overall consumer nostalgia research domain.

The study is organized as follows. First, it provides conceptual background of nostalgia research by reviewing studies in this field published since 1991. Next, it presents existing measurement instruments of nostalgia and discusses their dimensionality,

reliability, and validity. Third, it provides alternative conceptual and theoretical discussion in order to demonstrate why formative measurement may be suitable for nostalgia research. Finally, it discusses implications of this research and delineates guidelines for decision when to employ formative versus reflective indicators.

The following literature review is a narrative review of papers published from 1991 (when the definition of consumer nostalgia was first used by Holbrook & Schindler) to 2013. The period chosen not only marks the first conceptualization attempts of nostalgia, but also provides a possibility to summarize and explore more than two decades of nostalgia research. To select the studies for the review, the articles were first identified by searching in scientific databases such as EBSCO, Emerald, JSTOR, Sage Publications. As there are not many publications on nostalgia, additional search for all relevant scientific articles mentioned in existing research was performed using the internet search engines. Search categories “nostalgia” and “nostalgic” were used. As in this paper I do not intend and cannot provide a comprehensive review of all nostalgia works, analysis is limited to research in consumer behavior and marketing area and on studies addressing conceptual or theoretical developments in the consumer nostalgia research field. Thus, studies that addressed purely psychological or sociological issues of nostalgia were excluded from further analysis. The papers were categorized according to whether they addressed the conceptual foundations (antecedents), implications and outcomes, or conceptualization and operationalization of the nostalgia construct. As measurement issues of the nostalgia construct have been widely discussed over decades, separate analysis of nostalgia measurement is performed. In total 26 papers are reviewed, which represent 17 scholarly journals and proceeding papers from academic conferences. According to the study settings, most nostalgia studies are concentrated in the USA, and only several studies were carried out in France, the United Kingdom, the Republic of South Africa, Taiwan and the Russian Federation.

## **2. Conceptual background**

### ***2.1. Definition of Nostalgia***

The word “nostalgia” is derived from the Greek language: “nostos” meaning to “return home or to one’s native land” and “algos” referring to “pain, suffering, or grief”. (Holak & Havlena 1992; Sedikides, Wildschut, & Baden, 2004). Nostalgia has been defined as “a positively toned evocation of a lived past”, “yearning for yesterday” (Davis, 1979). This phenomenon is a study subject for such disciplines as sociology (Bartmanski, 2011; Davis, 1979, Stauth & Turner, 1988), psychology (Castelnuovo-Tedesco, 1998; Ross, 1991), politics and history (Lowenthal, 1985; Riabchuk, 2009, Lee, 2011; Fletcher, 2012), anthropology (DaSilva & Faught, 1982; Graburn, 1995; Stewart, 1988), architecture (Peleggi, 2005), tourism research (Russell, 2008; Vesey & Dimanche, 2003; Ritchie & Adair, 2004), semiotics (Kessous & Roux, 2008), creative industries and design (Huppertz, 2009; Leaver & Schmidt, 2010).

Initially nostalgia was identified by physicians as a cerebral disease, and was seen as a mental illness that caused depression-like symptoms (McCann, 1941; Rosen, 1975). Davis (1979), who was the first to explore nostalgia from the sociological point of view, found that many positive sentiments are expressed in regard to nostalgia, and nostalgia began to be viewed in a more positive light. Nostalgia is associated with increased social bonds, increased positive self-regard, as a coping mechanism in which individuals respond to negative moods with positive memories (Wildschut, Sedikides, Arndt, & Routledge, 2006). Sierra & McQuitty (2007) explored nostalgia effects from a different angle and applied social identity theory (SIT) perspective. Individuals collectively define themselves in terms of unique characteristics (e.g., being raised during a certain time period) and nostalgia is evoked when consumers reminisce about their past social identity (Sierra & McQuitty, 2007). Both tangible and intangible stimuli can evoke nostalgia and have the capacity to influence consumer behavior such as the purchase of nostalgic products (Sierra & McQuitty, 2007).

Conceptualization of nostalgia was provided and extensively researched by consumer behavior studies. Holbrook & Schindler (1991) defined nostalgia as “a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)”. Havlena & Holak (1991) and Stern (1992) have clarified this conceptualization by proposing that nostalgic thoughts may be generated from either a personally remembered past (personal nostalgia) or from a time in history before one was born (historical/communal nostalgia).

Nostalgia attaches to an object related experiences that have been lost and are not available anymore and there may be many reasons, for instance, the relevant object-related experiences have become difficult to obtain or the consumer had to change consumption pattern due to changes in tastes, geographical displacements, or even losses caused by fires, earthquakes or other natural disasters (Holbrook & Schindler, 2003; Sayre, 1994). Holbrook & Schindler (2003) visually illustrate this attribute with a penchant for eating ice cream – if this is the same ice cream that was available in one’s childhood, this experience can’t be considered nostalgic. Truly nostalgic sentiment would be longing for the vanilla-flavoured rennet custard that one’s mother used to cook on the stove before the days of prepackaged pudding and which no longer appears on sale.

The emergent amount of literature on nostalgia provides some propositions and findings regarding the nature of the nostalgic experience. Among these are that nostalgia occurs in response to negative mood and the discrete affective state of loneliness (Wildschut et al., 2006), nostalgia is distinct from homesickness, which is a longing for one’s home during a time of absence (Van Tilburg, Vingerhoets, & Van Heck, 1996), individuals’ nostalgic memories tend to be selective and generally positive, that is, they are filtered through “rose-colored glasses” (Belk, 1991; Havlena & Holak, 1991; Holak & Havlena, 1992; Stern, 1992).

## 2.2. Construct conceptualization and categorization studies

A number of consumer nostalgia studies focused on the conceptualization of the construct. The roots of the construct conceptualization in consumer research can be traced back to Holbrook and Schindler article of 1989 in which the authors found that preferences toward popular music appear to reflect tastes acquired during late adolescence or early adulthood. The development of tastes for popular music follows an inverted U-shaped pattern that reaches a peak in about the 24th year. The term “nostalgia” was later defined by Holbrook & Schindler (1991) and further conceptualization of nostalgia was provided by Havlena & Holak (1991), Stern (1992), Baker & Kennedy (1994), Rousseau & Venter (1999, 2000), Goulding (2001), Pascal, Sprott, and Muehling (2002) and others.

For example, Rousseau & Venter (1999) proposed the nostalgia model that attempts to incorporate cognitive, affective and action tendency components in the following categories: the influencing variables (e.g., individual, demographic factors), impact areas (which relate to arts, culture, consumer products, fashion, etc.), manifestations (which imply quality, aesthetics, acquaintance) and outcome based actions (e.g. consumer preference, purchase, consumption patterns).

The most extensive categorization of nostalgia was proposed by Holak, Havlena, & Matveev (2006) who significantly contributed to nostalgia research by distinguishing among 4 categories of nostalgia:

1. *Personal nostalgia* (direct individual experience) refers to the nostalgia based on direct experience and personal memories. Personal nostalgia is what Davis (1979) calls “true nostalgia” and what Baker & Kennedy (1994) call “real nostalgia” and it has been the subject of most psychological and sociological analysis.
2. *Interpersonal nostalgia* (indirect individual experience) refers to nostalgic experience based on direct experience and the memories of other individuals, for example, intergenerational nostalgia may be communicated from parents or grandparents. Interpersonal nostalgia evokes less intense feelings and may produce a less complex emotional profile with regard to the original stimulus than personal nostalgia.
3. *Cultural nostalgia* (direct collective experience) involves direct experience that is common across members of the group, for instance, presence of reminiscences of Woodstock or similarities across families in celebrations of Thanksgiving and Christmas.
4. *Virtual nostalgia* (indirect collective experience) is based upon fantasy and indirect experience and may originate from books, video materials, or conversations with experts and scholars (who themselves have no direct experience with the object of the nostalgia).

Holak et al. (2006) conclude that due to differences in their origins, the four classes of nostalgia may involve substantially different responses. Personal and cultural

nostalgia are likely to be much richer, complex experiences than interpersonal or virtual nostalgia. On the other hand, cultural and virtual nostalgia, because of their collective emphasis, will probably be much more consistent across individuals than personal or interpersonal nostalgia. As a result, most business uses of nostalgia in advertising and product design emphasize subjects likely to evoke cultural or virtual nostalgia (Havlena & Holak, 1991; Stern, 1992).

### ***2.3. Extension/replication studies***

Nostalgia construct was extended by generalizing it from preferences towards music to preferences towards movie stars (Holbrook & Schindler, 1994), arts, consumer products, fashion, furniture (Rousseau & Venter, 1999, 2000), automobiles (Rindfleisch, Freeman, & Burroughs, 2000, Schindler & Holbrook, 2003b), visiting a museum (Goulding, 2001), perfume (Lambert-Pandraud & Laurent, 2010), deceased celebrities (Evans, Hart, Cicala, & Sherrell, 2010), and others.

Numerous studies were conducted to research nostalgia impact in advertising and it has been found that advertisement eliciting nostalgic reactions are capable of generating a more favorable perception of an ad and advertised brand and of contributing to greater purchase likelihood (Pascal et al., 2002), nostalgic cues in advertising influence the type of thoughts consumers have during ad exposure, and that these thought processes appear to have an influence on attitudes toward the advertisement and advertised brand (Muehling & Sprott, 2004), positive relationship of ads was found between individual nostalgia proneness and the nostalgia intensity towards advertisement and brand (Reisenwitz, Iyer, & Cutler, 2004), previously heard old songs have positive ad effects due to evoking consumers' good moods or by generating more favorable nostalgia-related thoughts (Chou & Lien, 2010).

Further studies concentrated on the examination of the relationship among nostalgia and such constructs as materialism (Rindfleisch et al., 2000), progressiveness, consumer nostalgic preference, vintage/antiques propensity (Rousseau & Venter, 2000), antiquarianism, experience (Schindler & Holbrook, 2003), yearning for the past, attitudes about the past and purchase intent (Sierra & McQuitty, 2007), innovativeness, and attachment (Lambert-Pandraud & Laurent, 2010), need to belong (Loveland, Smeesters, & Mandel, 2010), etc. Replication studies were performed by Rousseau & Venter (1999, 2000), Borges & Boulbry (2003) and others.

### ***2.3. Antecedents***

Despite the facts that literature still lacks consistency regarding a possible relation between nostalgia and its antecedents, two broad categories of nostalgia antecedents may be summarized that are either mentioned theoretically or empirically tested in previous research. The categories involve demographic and socio-psychological antecedents. The following section provides a summary of sometimes conflicting results of previous work on the antecedents and outcomes of nostalgia.

**Age.** Age as a demographic variable has been among most widely studied antecedents of nostalgia. There are two streams of research into the age variable – one stream focuses on evaluating age as a variable influencing nostalgic consumption preferences (age as nostalgia antecedent), the other explores how age and nostalgia proneness are connected with each other (temporal aspect – age as a chronological variable when nostalgic preferences are formed). The research into the age antecedent dates back to the seminal work of Davis (1979), who developed several hypotheses regarding the intensity of nostalgia-proneness over the individual's life cycle. Nostalgia was viewed as an adaptive capacity during transition, and individuals should be more prone to experience it during transitional periods, for example, people who move into a “mid-life crisis”, retirement, cope with the loss of a loved one, divorce, or change their careers would be particularly prone to nostalgia. Although Davis proposed that nostalgia-proneness is an individual trait that would be influenced by these individual and demographic factors, his use of a small convenience sample of twelve interviewees did not allow for testing of these hypotheses in a systematic, scientific manner (Holak et al., 2006).

The further research into age and nostalgic preferences was carried out by Holbrook and Schindler (1989), who found that preferences toward popular music appear to reflect tastes acquired during late adolescence or early adulthood. The development of tastes for popular music follows an inverted U-shaped pattern that reaches a peak in about the 24th year. It is worth paying attention to the fact that age was discovered rather to be an antecedent of nostalgic songs preferences than nostalgia as a construct. This relationship was later refined in a study by Holbrook in 1993. Both age (as a chronological variable) and nostalgia proneness (as an individual characteristic) are logically connected to nostalgia-related preferences. These two measures represent different constructs and individual propensity towards nostalgia proneness operated independently of the aging process (Holbrook, 1993). The author concludes that even when age varies over a wide range in the sample of interest, the effect of nostalgia proneness works independently of age. Thus, in general, older respondents relatively tend to prefer earlier films, whereas those higher in nostalgia proneness show differential preferences for tender musicals. Both phenomena are nostalgic, but the former refers to temporally related aspects of age, the latter to sentiment aspects of nostalgia proneness as a psychographic variable. One cannot capture consumption phenomena related to nostalgia by looking at either age or nostalgia proneness in isolation. Similar results were replicated by Holbrook & Schindler in 1994 and in 2003.

However, somewhat contrary findings were obtained by Rousseau & Venter (1999). Using Holbrook's nostalgia index, they found that age is significantly related to consumer nostalgia. Older Xhosa speaking respondents in the lower middle income group with a primary or secondary school education scored the highest on nostalgia, while young English speaking respondents in the upper income group with a tertiary education scored the lowest on nostalgia. Similar results were replicated in a study by same authors in 2000.

Moreover, mixed results were obtained by Reisenwitz et al. (2004), who used Holbrook's nostalgia index and concluded that no positive relationship between age and societal nostalgia proneness was discovered, but the relationship between individual nostalgia proneness and age existed.

In contrast to Holbrook & Schindler findings, in an extensive perfume consumption study in France, Lambert-Pandraud & Laurent (2010) found that nostalgia, in the sense of maintaining a preference for perfumes encountered during a person's formative stage, has relatively little influence, contrary to Holbrook & Schindler's (1989, 1994) assertion that people's preferences peak for cultural and hedonic products they encounter during their formative years. Only a minority of consumers older than 30 years of age have nostalgic perfume preferences for perfumes they encountered before they were 30. Therefore, nostalgia does not offer a main explanation of older consumers' observed tendency to use older perfumes (Lambert-Pandraud & Laurent, 2010). Summarizing, no firm relationship among age and nostalgia can be established as mixed and sometimes contradictory results were obtained in previous research. It remains unclear if nostalgia phenomenon is pertinent to more senior consumers reminiscing about the good old days, or is a stable individual disposition that some people develop early in life.

**Gender.** The empirical research into gender relationship towards nostalgia proneness was less extensive and in earlier studies it was hypothesized that males tend to be more nostalgic than females (Davis, 1979). Holbrook & Schindler (1989) concluded that each gender may experience and/or express nostalgia in different ways. Stern (1992) proposed that this issue relates to the socially-constructed nature of gender and each sex may evaluate different stimuli as nostalgic and may articulate nostalgia responses with differing intensity. Men and women may respond differently to different nostalgic elements in advertisements just as they respond differently to different "romance" or fantasy literature (Stern, 1992). Similarly, Baker & Kennedy (1994) proposed that men and women differ in the items which evoke feelings of nostalgia and those differences may depend on the product category and the time in the person's life that is being considered.

Holbrook & Schindler (1993) researched attitudes towards movies and found that women appear to be marginally more nostalgia-prone than men scoring on Holbrook's nostalgia index. Rousseau & Venter (1999) found no significant relationship among gender and nostalgia proneness. However, in their later study (2000) females scored on average higher than males on nostalgia and consumer nostalgic preference (a new construct developed by authors), although the differences were non-significant. Muehling & Spratt (2004) found that analyses regarding the potential moderating effects of gender on individuals' brand and ad attitudes yielded no significant interaction results. Reisenwitz et al. (2004) found women are more nostalgia prone than men from both an individual as well as a societal nostalgia proneness perspective. Thus, gender differences are associated with stronger or weaker nostalgia, for some products expressed more strongly in men, for other – in women, and the relationship needs to be further researched more profoundly.



**Other demographic variables.** Other demographic variables such as language, income, education were analyzed in several studies by Rousseau & Venter. In a study in 1999 they analyzed the relationship between language, income and education on one side and nostalgia on the other and found that older Xhosa speaking respondents in the lower middle income group with a primary or secondary school education scored the highest on nostalgia, while young English speaking respondents in the upper income group with a tertiary education scored the lowest on nostalgia. Socio-demographic variables language and income are significantly related to nostalgia. Researchers conclude that differences between levels of nostalgia would emerge amongst respondents in the sample, thus confirming the previous findings by Mc Cracken (1998) that differences in nostalgia may occur at a cultural level (it is assumed that language is an indicator of culture) (Rousseau & Venter, 1999). These results were replicated by the study of the same authors in 2000. In this study the authors distinguished another construct – consumer nostalgic preference and found that demographic variables have similar effects on both nostalgia and consumer nostalgic preferences. Older Afrikaans speaking female respondents from lower income category with a school education scored highest on nostalgia, while young Xhosa speaking respondents in the upper middle income category with university education scored highest on progressiveness. With regard to consumer nostalgic preference, older Afrikaans speaking female respondents with college/technical education in the lower income category scored highest on this factor. (Rousseau & Venter, 2000).

#### ***2.4. Social and psychological antecedents***

Rousseau & Venter (1999) summarized the possible antecedents of nostalgia by proposing that the variables influencing nostalgia can be individual (learning perception, personality, resistance to change), environmental (culture, social factors), demographics (age, income), psychographics (lifestyle, values, AIOs). Regrettably, few of the antecedents mentioned in these propositions were tested empirically (with exception of demographic variables). Such personality trait as **materialism** was studied together with nostalgia by Rindfleisch et al. (2000). For products with a high degree of public symbolism and consensually recognizable meanings such as the new VW Beetle and the Lexus GS300, materialism is a stronger predictor of preference and choice than nostalgia, however, neither materialism nor nostalgia influence the preference or choice for products that attempt to combine both materialistic (i.e., luxury and status) and nostalgic appeals. Rousseau & Venter (1999) tested relationship among **nostalgia and propensity for vintage-antiques, anti-modern art and fashion, pro-modern technology/entertainment constructs**. Holbrook's 20-item nostalgia scale was factor analyzed and two factors were extracted, namely, nostalgia and progressiveness. Moderate significant positive correlations occur between nostalgia and vintage-antiques, as well as between nostalgia and anti-modern art and fashion. However, significant and positive relationship among progressiveness and

pro-modern technology/entertainment occurred, which is somehow contrary to the general understanding of nostalgia construct. In later study Rousseau & Venter (2000) refined the scales and used not only Holbrook's scale (divided into nostalgia and progressiveness), but also newly developed consumer nostalgic preferences scale and vintage/antiques propensity scale. Strong positive correlation was found among nostalgia and consumer nostalgic preferences, but no relationship among progressiveness and consumer nostalgic preferences. The positive correlation was also observed among nostalgia and vintage/antiques propensity, as well as among consumer nostalgic preferences and vintage antique propensity.

Furthermore, prospective avenues for nostalgia antecedents research were offered in a qualitative study of living museum visitors by Goulding (2001), who found that for those who did use the museum as a platform for nostalgia, there were differences in the source of the reaction, and its personal significance. Consequently, two separate categories were developed to differentiate between behaviors: existential and aesthetic. The findings have identified that nostalgic experience is based on four major themes relating to the nostalgic reaction: the number and nature of roles occupied by the individual, the degree of alienation experienced in the present, the quality of and desire for social contact, and the ability to selectively recall the past, which results in either first-order or vicarious nostalgia (Goulding, 2001).

### *2.5. Outcomes and moderators*

Rousseau & Venter (1999) claim that from marketing perspective the nostalgia outcomes are of utmost importance in understanding consumer preference, purchase and consumption patterns. Nevertheless, previous research has scarcely addressed nostalgia outcomes from the marketing perspective and an overwhelming amount of literature focused either on preferences for nostalgic products or perceived outcomes (such as attitudes towards the ad or brand). For instance, preference (liking) as nostalgia outcome was researched by Holbrook & Schindler (1989, 1991, 1993, 1994, 2003), and Rindfleisch et al. (2000). Another stream of research concentrated on the attitudes towards nostalgic advertising (e.g., Baker & Kennedy, 1994; Pascal et al., 2002; Muehling & Sprott 2004; Reisenwitz et al., 2004; Muehling & Pascal, 2011). Baker & Kennedy (1994) made proposition that the attitude or affect associated with the ad is independent from the nostalgia associated with the ad, and the nostalgic feeling evoked by the ad is not entirely mediated by the attitude towards the ad. Pascal et al. (2002) provided empirical evidence that advertisements eliciting nostalgic reactions are capable of generating more favorable perceptions of an ad and advertised brand, and of contributing to greater purchase likelihood. They found that evoked nostalgia was a significant predictor of attitude towards ad and advertised brand. The results regarding likelihood of purchase were mixed and the hypothesis that the more nostalgia an ad evokes, the greater is the purchase likelihood was only partly confirmed. The hypothesis was supported for the brand of Kodak, but only marginally supported for Toshiba. The

analyses revealed that ad attitude did mediate the relationship between ad-evoked nostalgia and brand attitude.

In 2004 Muehling & Sprott found similar results – individuals who were exposed to the nostalgic ad held more favorable ad attitudes and more favorable brand attitudes than did individuals exposed to the non-nostalgic ad. Later Muehling & Pascal (2011) empirically confirmed the hypothesis that exposure to a personal nostalgic ad would generate more self-directed thoughts among study participants than would a historical nostalgic ad or a non-nostalgic ad. Reisenwitz et al. (2004) empirically confirmed that positive relationship exists between nostalgia proneness and nostalgia intensity towards the advertisement and towards the advertised brand. Ford & Merchant (2010) found that appeals for charity that evoke personal nostalgia will have an effect on the charitable-donation intentions of consumers. In Study 1, nostalgic charity appeals evoke higher levels of emotions and donation intentions than non-nostalgic appeals. Study 2 indicates that this effect is moderated by the consumer's propensity towards being nostalgic. In Study 3 the effect of nostalgia emotions and intentions is moderated by the importance of the memory evoked.

Regrettably, only several studies focused on actual purchases of nostalgic goods. Lambert-Pandraud & Laurent (2010), who studied nostalgia outcomes and dependent variables - preference for brand and actual ownership, concluded that nostalgia, in the sense of maintaining a preference for perfumes encountered during a person's formative stage, has relatively little influence, in contrast with Holbrook & Schindler's (1989, 1994) assertion that people's preferences peak for cultural and hedonic products they encounter during their formative years.

At the same time a study by Loveland et al. (2010) found that increased preference for nostalgic products is experienced by the consumers for whom the need to belong is an active goal experience. Moreover, this research demonstrates that the consumption of nostalgic products, rather than the exposure to or the mere selection of nostalgic products, successfully satiates the need to belong.

## ***2.6. Products and stimuli***

Over the past two decades of nostalgia research multiple products, product categories and services have been tested empirically. The research was more extensive into culturally loaded products such as music hits (Holbrook & Schindler, 1989, 1991), movie stars (Holbrook & Schindler, 1994), diseased celebrities (Evans et al., 2010). Such durable goods as automobiles were tested by Rindfleisch et al. (2000) and Schindler & Holbrook (2003 b), branded products (perfume) by Lambert-Pandraud & Laurent (2010), heritage (visiting living museum) by Goulding (2001), wide array of retro products and brands such as movies, automobiles, jeans or cereals (Brown, Kozinets, & Sherry, 2003a; 2003 b), previously popular movies, television programs, cookies, crackers, shower gel, soup, candy, and cars (Loveland, Smeesters, & Mandel,

2010), nostalgia influence on charity donations was explored by Ford & Merchant (2010).

Another stream of research concentrated on nostalgic effects in advertising and tested advertisement of durable and non-durable photo products (Pascal et al., 2002; Muehling & Sprott, 2004; Muehling & Pascal, 2011), advertising for low-involvement product categories (food and household cleaning products) (Reisenwitz et al., 2004), advertising in general (Baker & Kennedy, 1994; Stern, 1992). The efforts to develop theoretical proposition into products categories were more extensive. Sierra & McQuitty (2007) proposed to widen the list to music, toys, literature, movies, artwork, clothing, sports memorabilia, candies, furniture, vehicles, technology, outdoor equipment, fireworks, home, perfume. Similarly, Rousseau & Venter (1999) hypothesized that effects of nostalgia can be expressed in such impact areas as arts, cultural entertainment, consumer products, technology, fashion and clothing, collection of antiques. Holak & Havlena (1992) regarded the phenomenon more deeply and proposed that family, home, persons, objects, events, sights, smells, tastes serve as potent stimuli for nostalgia. Holbrook & Schindler (2003 a) concluded that nostalgic bonding occurs ubiquitously and takes a variety of forms such as sensory experience, homeland, rites of passage, friendships and loved ones, gifts of love, security, breaking away, art and entertainment, performance and competence and creativity. Regrettably, few of the propositions and relationship among nostalgia and specific product groups were tested empirically in wider quantitative studies.

### **3. Methodological background and nomological validity**

Out of 24 qualitative studies, the sample of 16 studies included adults or a mixture of adults and students, and 8 studies employed students samples, particularly, when research was concentrated on nostalgic effects in advertising. Quantitative research samples ranged from 108 to 555 with one extremely large sample of 130,411 consumers. Most of the research was carried out using non-probability convenience samples by self-administered procedures. Multiple regression, factor analysis or other more traditional statistical techniques were most common in quantitative studies of nostalgia. Only 2 out of 25 analyzed nostalgia papers employed structural equation modeling (SEM) for research results analysis. It is worth noting that SEM has become one of the techniques of choice for researchers across disciplines and increasingly is a 'must' for researchers in the social sciences (Hooper, Coughlan, & Mullen, 2008) that allows the researcher to build, test and confirm models of complex relationships (Gallagher, Ting, & Palmer, 2008). Schumacker & Lomax (2004, p.7) provide four major reasons why to conduct SEM. First, use of multiple observed variables helps better understand scientific inquiry and deal with sophisticated theories, statistical models and explore complex phenomena. Second, greater recognition can be expected to be given to the validity and reliability of observed score from measurement instruments. SEM explicitly takes into account measurement error when statistically analyzing the data. Third, SEM

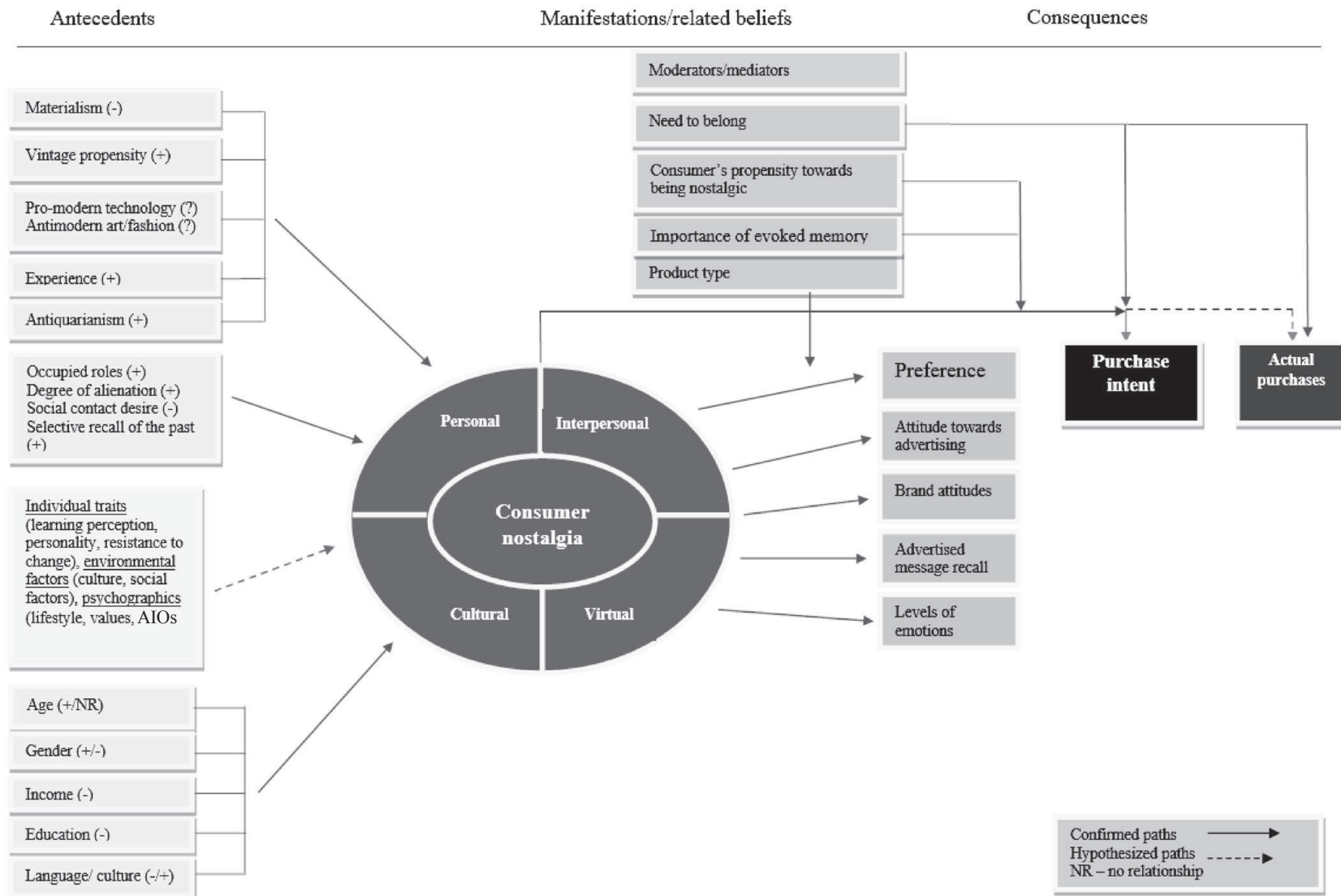


FIGURE 1. Nomological Network of Consumer Nostalgia

techniques have advanced rapidly over the last 30 years and are able to analyze more advanced theoretical models, and give additional analytical capacities to the researchers. Fourth, SEM software programs have become increasingly user-friendly.

Use of state-of-the-art statistical techniques for examination of complex marketing constructs is closely related to nomological validity of the research area. Figure 1 shows an integrative model of nostalgia antecedents, moderators, related constructs and outcomes that allows investigating both the theoretical relationships between different constructs and the empirical relationships between measures of those constructs (Netemeyer, Bearden, & Sharma, 2003, p. 82). It is evident that nomological validity can be further refined and established in consumer nostalgia field of research.

Summarizing the studies of nostalgia antecedents, attention should be drawn to the fact that no firm consensus on antecedents effects has yet been established, for example, some authors argue that age is an important predictor of nostalgia phenomenon, others provide contrary findings. The research into other demographic antecedents is at its initial development stage and only several authors provide empirical evidence on nostalgia relationship with such antecedents as gender, education or income. A number of social and psychological antecedents remain at the propositions and hypotheses level or lack the accumulated empirical quantitative support and validation from other studies, countries and researchers. Rousseau & Venter (1999) proposed that not only consumer preference, but also actual purchases and consumption patterns can be nostalgia outcomes. However, during the last two decades most of nostalgia outcomes investigation remained focused on perceived consequences. Strong paths have been established and confirmed by many authors between nostalgic advertisement and positive attitude towards brand or advertising, nostalgia proneness and preferences. However, attempts to establish the path among nostalgia proneness and purchase intent were not so successful and only one study (Lambert-Pandraud & Laurent (2010) empirically tested the relationship between nostalgia proneness and actual perfume ownership and found relatively little influence. Thus, despite the extensive amount of research that has been conducted, a fundamental question of the generalizability of nostalgia effects remains unanswered. This might be caused by substantial differences in research and methodological designs, different nostalgia measurement scales used, different products studied, data collection modes, or respondent bases. Therefore future marketing research should concentrate on nostalgia antecedents and outcomes that might help to understand the phenomenon more deeply and gain additional insights. Nostalgia effects may be context dependent and exist only under certain conditions, therefore, instead of seeking generalizations and universality, researchers should be more focused on the identification of variables that explain differential effects. Additionally, reliable and valid measures should be further refined and developed as it seems that no consensus on nostalgia measurement has been reached so far.

## 4. Measurement of nostalgia construct

### 4.1. Measurement overview

Out of 18 analyzed quantitative studies, 11 studies used Holbrook's nostalgia scale (8 or 20 item), five studies used advertising evoked nostalgia scale (developed by Pascal et al. (2002) using a 10-item scale adapted from Holbrook's scale), and two studies used the advertising evoked nostalgia scale proposed by Baker & Kennedy (1994). Other studies either employed newly developed scales or combined Holbrook's scale with new scales. Rousseau & Venter (2000) used a newly developed consumer nostalgic preference scale, Holak et al. (2006) proposed another 31 item scale of nostalgia proneness index. A new nostalgia measurement instrument was employed by Sierra & McQuity (2007), including yearning for the past and attitudes about the past. Ford and Merchant (2010) used Batcho nostalgia scale (for details see Annex 1, Table 3). In this study we concentrate on Holbrook's scale as this scale is more widely recognized in marketing and consumer behavior literature. Holbrook's (1993) Nostalgia scale has both a 20-item long form and an 8-item short form and is designed to represent the phenomenon of nostalgia proneness (Holbrook, 1993).

TABLE 1. Holbrook's Nostalgia Index

Holbrook's 20-item Nostalgia index (1990, 1993)	Holbrook's 8-item Nostalgia index (1990, 1993)
1. They don't make 'em like they used to	1. They don't make 'em like they used to
2. Newer is almost always better	
3. In the future, people will have even better lives	4. Things used to be better in the good old days
4. Things used to be better in the good old days	
5. I believe in the constant march of progress	7. Products are getting shoddier and shoddier
6. Yesterday, all my troubles seemed so far away	
7. Products are getting shoddier and shoddier	9. Technological change will insure a brighter future
8. Compared to our parents, we've got it good	
9. Technological change will insure a brighter future	14. History involves a steady improvement in human welfare
10. When I was younger, I was happier than I am today	
11. Today's new movie stars could learn from the old pros	17. We are experiencing a decline in the quality of life
12. I must admit it's getting better, better all the time	
13. The truly great sports heroes are long dead and gone	18. Steady growth in GNP has brought increased human happiness
14. History involves a steady improvement in human welfare	
15. Today's standard of living is the highest ever attained	20. Modern business constantly builds a better tomorrow
16. Sometimes, I almost wish that I could return to the womb	
17. We are experiencing a decline in the quality of life	
18. Steady growth in GNP has brought increased human happiness	
19. Compared to the classics, today's music is mostly trash	
20. Modern business constantly builds a better tomorrow	

Holbrook twenty statements were originally generated to represent the domain of the construct. Ten of these items were reversed items. Exploratory and confirmatory factor analyses, using two samples and movies as stimuli, were performed by Holbrook (1993). Initial confirmatory factor analysis showed poor fit and a stepwise procedure was employed to eliminate low loading items and after this procedure, an eight-item nostalgia scale was developed. With the first sample it showed adequate unidimensionality, coefficient alpha, summated scale construct reliability estimates of internal consistency of 0.78, factor loadings ranged from 0.49 to 0.76 ( $p < 0.01$ ). The second sample replicated unidimensionality of the 8-item scale (coefficient alpha, construct reliability estimates of 0.73, factor loadings ranging from 0.34 to 0.60 ( $p < 0.01$ )) (Holbrook, 1993).

#### *4.2. Dimensionality of nostalgia scale*

Holbrook's scale is widely recognized and used in many marketing and consumer behavior studies to measure nostalgia, indeed numerous authors reported about multidimensionality of the scale. For example, Rindfleisch et al. (2000) provided evidence that nostalgia scale appeared to be multi-dimensional in nature. The authors find that both exploratory and confirmatory factor analysis procedures reveal that the 8-item scale appears to consist of two separate dimensions. The first dimension consists of such items as "Things used to be better in the good old days", while the second dimension includes such items as "Modern business constantly builds a better tomorrow." Rindfleisch et al. (2000) term the first dimension "Product-Nostalgia" as the items in this dimension appear to reflect nostalgic feelings regarding products or objects. Likewise, they term the second dimension "Life-Nostalgia" as the items in this dimension appear to reflect nostalgic feelings about life in general.

Sprott & Silverman (2000) provide additional confirmation of this proposed dimensional structure by finding identical patterns of factor loadings in applications of the scale in two of their studies. In addition, researchers find that the correlation between these two dimensions is relatively modest (i.e.,  $r \leq 0.30$ ), and that the reliability of the two dimensions is superior to the reliability of the overall scale. Rousseau & Venter (1999, 2000) apply the scale in Eastern Cape and conclude that factor analysis revealed two factors of the Holbrook nostalgia scale, namely, attitudes towards nostalgia and attitudes towards progressiveness. Reisenwitz et al. (2004) use an eight-item Holbrook's nostalgia scale and find that items load on 2 dimensions with eigenvalues greater than 1 – macro and micro. The reliability of each factor was 0.81 and 0.78 respectively. Each component was represented by four statements. The macro (or reverse-scored) statements included the following: "Technological change will insure a brighter future", "History involves a steady improvement in human welfare", "Steady growth in GNP has brought increased human happiness", "Modern business constantly builds a better tomorrow". The micro statements included the following: "They don't make 'em like they used to", "Things used to be better in the good old days", "Products



are getting shoddier and shoddier”, “We are experiencing a decline in the quality of life”. In Reisenwitz et al. (2004) study the macro factor is called societal nostalgia proneness and the micro factor is referred to as individual nostalgia proneness.

Borges & Boulbry (2003) apply the 8-item scale to France and find 2 dimensions which are called present and future temporal orientation and past temporal orientation. The first dimension comprises *Present and future temporal orientation* and includes statements “Technological change will insure a brighter future”, “Steady growth of GNP (Gross National Product) has brought increased human happiness”, “History involves a steady improvement in human welfare” and “Modern business constantly builds a better tomorrow”. In their work the first factor is referred to as nostalgia-tradition scale. The second dimension is called *past temporal orientation* and comprises items: “Things used to be better in the good old days”, “They don’t make ‘em like they used to”, “Products are getting poorer and poorer in quality”, and “We are experiencing a decline in the quality of life”. The authors conclude that “the application of the unidimensional nostalgia proneness seems to be inappropriate in France”. Evans et al. (2010) used principal components factor analysis to assess the convergent and discriminant validity properties and revealed that the 8-item scale comprises 2 dimensions: the factors are identified as a *nostalgia-tradition Scale* and a *Nostalgia-Progress Scale*. Items “Technological change will insure a brighter future”, “Steady growth of GNP (Gross National Product) has brought increased human happiness”, “History involves a steady improvement in human welfare” and “Modern business constantly builds a better tomorrow” comprise the first factor that is named *nostalgia tradition scale*. Items “Things used to be better in the good old days”, “They don’t make ‘em like they used to”, “Products are getting poorer and poorer in quality”, and “We are experiencing a decline in the quality of life” comprise the second factor and are named *nostalgia-progress scale*. Valid measures of nostalgia-proneness are necessary both for the identification of nostalgic consumers for market segmentation and for the testing of hypotheses regarding the nature and determinants of the trait (Holak et al., 2006). Rindfleisch & Sprott (2000) conclude that while the Holbrook nostalgia scale appears to exhibit both convergent and discriminant validity, this measure appears to be multidimensional in nature, as consumers’ nostalgic sentiments for products may be conceptually and empirically distinct from their nostalgic sentiments toward life in general: “As nostalgia research advances in the coming years, we believe that the specification and measurement of how consumers react to nostalgia will take on increased importance” (Rindfleisch & Sprott, 2000). Rindfleisch et al. (2000) suggest that future research on nostalgia should pay close attention to the dimensionality and reliability of the nostalgia scale itself.

#### ***4.3. Reconsideration of nostalgia construct measurement***

Nostalgia research literature review provides evidence that since 1991 work in this field has been based on traditional measurement theory (classical test theory) – nostalgia measurement model is represented as effects (reflective) indicators. This reflective approach assumes (1) that equally reliable indicators are interchangeable and they can

be substituted for one another without affecting construct definition, (2) indicators of the same factor have positive intercorrelations, (3) factors are conceptualized as unidimensional latent variables (Kline, 2011, p. 280). Indeed, for some constructs, it makes more sense conceptually to view causality flowing from the measures to the construct, rather than vice versa (Jarvis, MacKenzie, & Podsakoff, 2003; Bagozzi, 1981, 1984; Fornell & Bookstein, 1982). Diamantopoulos, Riefler, & Roth (2008) refer to Bollen's (1989, p. 65) statement "[M]ost researchers in the social sciences assume that indicators are effect indicators. Cause indicators are neglected despite their appropriateness in many instances" and make a call to encourage the thoughtful application of formative models (Diamantopoulos et al., 2008). Jarvis et al. (2003) give a warning that potentially serious consequences of measurement model misspecification exist, and researchers need to think carefully about the direction of causality between constructs and their measures. Such measurement model misspecification can create measurement error, which in turn affects the structural model (Jarvis et al., 2003; MacKenzie, Podsakoff, & Jarvis, 2005), can have a dramatic impact on one's understanding of theory (Edwards & Bagozzi, 2000) and can lead to both Type I and Type II errors (Petter, Straub, & Rai, 2007). Diamantopoulos et al. (2008) summarize studies empirically examining the consequences of measurement model misspecification on parameter estimates and report serious under- or overestimation of parameters as a consequence of misspecified causality, wrongly adopted purification procedures, or a combination of both. Diamantopoulos et al. (2008) point out that misspecifications are not detected by poor fit index values and such biases may lead to incorrect conclusions on tested relationships, thus putting many empirical results into question. For instance, Jarvis et al. (2003) report that 29 percent of studies published in the top four journals during a 24-year period improperly specified formative and reflective constructs and this is by far the most common type of measurement model specification error.

The difference between reflective and formative indicators depends on causal priority between indicators and the latent variable in question (Diamantopoulos & Siguaw, 2000, p.21), while the construct causes variance in its reflective indicators, the direction of causality is reversed such that the formative indicators cause variance in the construct (Cenfetelli & Bassellier, 2009); in reflective measures a change in the construct affects the underlying measures, whereas in formative constructs, changes in the formative measures cause changes in the underlying construct (Jarvis et al., 2003). Multicollinearity among indicators can be a significant problem for formative measurement model, but it is a virtue when the indicators are reflective (Jarvis et al., 2003). Formative measurement items are designed to tap into the different subconstructs and multicollinearity is safeguarded by ensuring that the items do not tap into the same aspects (Petter et al., 2007). Internal consistency is of minimal importance in formative indicators, and reliability methods based on internal consistency do not apply (Netemeyer et al., 2003, p. 93). Variables that might even be negatively related can both be as meaningful indicators of a formative construct (Diamantopoulos &

Winklhofer, 2001; Nunnally & Bernstein, 1994, p. 489). Dropping a causal indicator that possesses low item-to-total correlations may omit a unique part of the formative construct and change the meaning of the variable (Jarvis et al., 2003; Petter et al., 2007) and could make the measure deficient by restricting the domain of the construct (Churchill, 1979). Items used as formative indicators must cover the entire scope of the latent variable as described under content specification (Diamantopoulos & Winklhofer, 2001).

To the contrary, in the case of reflective construct all the measures are assumed to be equally valid indicators, measures must be internally consistent and are interchangeable (Jarvis et al., 2003) and unidimensionality is a key assumption within covariance-based SEM for reflective constructs (Petter et al., 2007). Construct validity is unchanged when a single indicator is removed from reflective construct, although reliability estimates (e.g., Cronbach's alpha) of the set of indicators can be lower if fewer indicators are included in the measurement model (Bollen & Lennox, 1991). In the formative model error is represented at the construct level, whereas in the reflective model - at the individual item level (Jarvis et al., 2003) and formative models minimize "the trace of the residual variances in the 'inner' (structural) equation" (Fornell & Bookstein, 1982, p. 442). Coltman, Devinney, Midgley, & Venaik (2008) summarize that uncritical and universal application of a reflective structure leads to oversimplification of broad, diverse and complex real-world constructs and exposes scholars to the risk of reducing the rigor of business theory and research and its relevance for managerial decision making.

Bearing in mind the above, the next section, in line with Jarvis et al. (2003) suggestions, provides conceptual discussion regarding measurement approach of consumer nostalgia: the possible direction of causality between nostalgia construct and its indicators, interchangeability and covariation among indicators and nomological network.

**1) Direction of causality between the construct and its indicators.** For formative measurement models, the direction of causality flows from the measures to the construct, and it flows from the construct to the measures for reflective measurement models.

In nostalgia case the conceptual domain of nostalgia is described as "a preference (general liking, positive attitude, or favorable affect) **toward objects** (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)" (Holbrook & Schindler, 1991, p. 330) (emphasis added). Nostalgia attaches primarily to **object related experiences** that have somehow been lost — either because the relevant object-related experiences have become difficult to obtain or because the consumer in question has moved on to a consumption pattern in which they are no longer included due to changes in tastes, geographical displacements, or even losses caused by fires, earthquakes or other natural disasters (Holbrook & Schindler, 2003; Sayre, 1994, emphasis added). Holak et al. (2006) proposed a four-way classification of nostalgic experience: personal nostalgia (direct individual

experience), interpersonal nostalgia (indirect individual experience), cultural nostalgia (direct collective experience) and virtual nostalgia (indirect collective experience). The authors state that due to **differences in their origins**, the four classes of nostalgia may involve substantially different responses and that **nostalgia experiences are elicited in response to “object,” “person”, and “event” prompts** (Holak et al., 2006) (emphasis added). The study by Holbrook & Schindler (2003a, p. 121) tries to illustrate possible types of nostalgic bonding and concludes that nostalgic bonding occurs ubiquitously and takes a variety of forms:

*„The informants’ reports demonstrate the wide range of object-related experiences that can be connected to memories of the past. The object itself can be large (such as an antique table) or small (such as an engraved gold medal). It can be costly (an 18th century cello) or inexpensive (a candy bar), decorative (an ‘atomic’ lamp) or functional (a briefcase), handmade (a picture frame) or massproduced (a television). The object can be edible (cloves), branded (Tropicana orange juice), musical (a clarinet), out of style (old glasses) or unique (family photographs). Apparently, there is no limit to the types of object that can carry nostalgic feelings“. .....*

*“The informants’ vignettes and stereographs provide a glimpse of those life events that are particularly likely **to lead to such strong feelings**. Among these, relations with other people are certainly a very common source of powerful emotions. Specifically, the love felt towards a parent, grandparent, child, spouse or significant other **leads to nostalgic bonding**. Furthermore, the comfort and security of a place — whether a family environment or a geographic homeland — is a classic **source of nostalgic feelings**. Conversely, the thrill of then new things — for example, a first flirtation, an introduction to poetry or a novel consumer purchase — appears to be a potentially strong target for nostalgic bonding. Finally, the joys of accomplishment — whether relating to tennis victories, to prowess at sewing or to musical performances in the subway — are capable **of generating nostalgic experiences**” (emphasis added).*

20-item Holbrook’s nostalgia scale was originally developed as potential facet of individual character – a psychographic variable, aspect of life style, or general customer characteristic – that may vary among consumers, independent of time- or age related factors (Holbrook, 1993). Scale development was based on large literature review and developed in explaining preferences towards a large set of 125 products. The operationalization of the scale follows conventional scale development procedures and is based on the assumption that nostalgia proneness is reflected in preference **towards** objects, people or places. However, what if the conceptualization were another way round – nostalgia proneness is **caused by existence of** objects that **evoke this feeling**? Nostalgia proneness occurs and is made of preferences towards objects, people or places. This can be supported by the way Holbrook & Schindler (2003) describe nostalgia as “object-related experiences”, “leads to nostalgic bonding”, “source of nostalgic feelings” etc. Occurrence of these constituents would positively or negatively impact the degree of nostalgia proneness. Following the logic, nostalgia can’t occur if there are no objects. Objects cause nostalgia, and not vice versa. Following this proposition, the direction of

causality is from items to construct. Changes in indicators should cause changes in the construct, but changes in the construct do not cause changes in indicators.

**2) *Interchangeability of the indicators.*** The indicators need not be interchangeable for formative measurement models, but should be for reflective measurement models.

The reflective approach requires that individual items share a common theme. Doubts can be raised whether individual items in Holbrook's nostalgia scale domain fulfill this requirement. For example, would an item designed to measure attitude towards business "Modern business constantly builds a better tomorrow" necessarily be related with one designed to measure attitude towards music or movie stars "Today's new movie stars could learn from the old cinema pros" or "Compared to classics, today's music is mostly trash"?

Misspecified measure can lead to a neglect of a key aspect of the focal construct. More specifically, if one wants to explore nostalgic music preference and erroneously drops an item „Compared to the classics, today's music is mostly trash“ from a measure of nostalgia proneness due to not meeting conventional standards for reflective items (i.e., low factor loadings), we lose a key aspect of nostalgia assessment. A number of nostalgia objects may underlie the nostalgia proneness, nostalgia may be personal, interpersonal, historical and virtual (Holak et al., 2006). The diversity of nostalgia phenomena suggests that the formative viewpoint may be more appropriate.

**3) *Covariation among the indicators.*** Covariation among the indicators is not necessary or implied by formative indicator models, but covariation among the indicators is a necessary condition for reflective indicator models.

Conceptually, a change in one of the nostalgia indicators doesn't necessarily imply a change in other indicators. Having high nostalgia proneness in regard to progress perception does not lead and imply higher nostalgia proneness in regard to other objects, for example, favorite music from ones youth. A person may score high on nostalgia regarding sports heroes, but score low on nostalgia regarding products. Formative construct can be represented by mutually exclusive types of behavior (Jarvis et al., 2003). For example, we have several nostalgia indicators "History involves a steady improvement in human welfare", "Today's new movie stars could learn from the old cinema pros", "The truly great sports heroes are long dead and gone", "Technological change will insure a brighter future", "Modern business constantly builds a better tomorrow", "When I was younger, I was happier than I am today". These indicators may be mutually exclusive. For example, a person may think that great sport heroes are gone or modern business builds better tomorrow, but he doesn't necessarily thinks both.

**4) *Nomological net of construct indicators.*** For the reflective indicator model, since all of the indicators reflect the same underlying construct and are assumed to be interchangeable, they should all have the same antecedents and consequences. However, for the formative indicator model, because the measures do not necessarily capture the same aspects of the construct's domain and are therefore not necessarily interchangeable, there is no reason to expect them to have the same antecedents and consequences.

Again if we look at nostalgia items, we can observe that one group of antecedents and outcomes can be expected to result for nostalgic products perception. A person who thinks that products were better in good old days will more likely tend to score higher on purchase intent or actual purchase. If we take culturally loaded items (like „Compared to the classics, today’s music is mostly trash“), one can expect that these items would influence outcomes for specific cultural products like music records purchase, but this doesn’t mean that people who score high on cultural nostalgia will tend to buy all nostalgic products and avoid technological and innovative items. Theoretically, if we look more deeply into antecedents, the proposition can be made that for different product categories different antecedents can be important.

Moreover, nostalgia construct is context specific: not only country specific, but also generation specific, and specific at the individual level. For example, Woodstock festival can have one meaning to US consumers and completely different meaning to China consumers. Or soviet era symbols can have positive virtual nostalgic effects in a country that was not affected by occupation, and negative in a country that was affected by occupation. Objects that cause nostalgia can vary between countries, individuals, and are not universal. This implies that direct comparison of nostalgia indexes may not be possible across countries and different generation samples.

## 5. Discussion and Conclusions

**On measurement.** Over the past two decades nostalgia research has assumed that the correct measurement model is a reflective one. This paper offers an alternative approach for viewing and operationalizing nostalgia construct as a formative construct. Propositions and theoretical reasoning is provided that in some instances the reflective assumption may not be theoretically or empirically justified. Diamantopoulos (2011) stresses that constructs themselves are not *inherently* formative or reflective and *formative or reflective constructs* are only intended as a shorthand description actually referring to *constructs-once-measured* (originally stressed words). The choice of the measurement perspective and use of the formative or reflective measurement should be based on the “auxiliary theory” (Diamantopoulos, 2011; Diamantopoulos & Sigauw, 2006; Bagozzi, 1982). Latent constructs are not inherently formative or reflective and the choice of measurement rests on theoretical considerations (Cenfetelli & Bassellier, 2009; Bollen, 2007; Howell, Breivik, & Wilcox, 2007). The substantive theory (which addresses the underlying conceptual properties of constructs), as well as the auxiliary measurement theory (which explains the nature of the relationships between constructs and their measures), should also be considered when deciding on formative versus reflective measurement (Hardin, Chang, & Fuller, 2008; Howell et al., 2007). For example, psychological constructs are best measured using reflective indicators, while constructs determined by an explanatory combination of variables are best measured using formative indicators (Bagozzi, 2007; Fornell & Bookstein, 1982; Howell et al., 2007). The choice to model and analyze a construct as unidimensional (i.e., reflective),

formative, or multidimensional depends largely on the construct under study and “the generality or specificity of one’s theoretical interest” (Petter et al., 2007; MacKenzie et al., 2005, p. 713).

Thus, if the aim of the research is to measure a specific aspect of nostalgia, represent subjective nostalgic attitudes or self perceived nostalgia, a reflective nostalgia measurement may suit better. Reflective nostalgia scale was appropriately employed by Baker and Kennedy (1994) as they took original Holbrook’s scale and remade it for advertising measurement purpose. Their scale includes items “This ad reminds me of an experience from the past”, “This ad makes me think of an experience which I feel sad about because it is over, yet it is a happy memory”, “This ad does not make me have any feelings about the past”, “I wish I could relive the experience(s) this ad makes me think of”, “I do not think about the past when I look at this ad”, “I associate this ad with a happy experience, yet it makes me feel sad”. Note that in Baker & Kennedy case the aim is not to measure general nostalgia on all objects. Baker & Kennedy scale measures nostalgia towards only one object – advertising.

However, if the research aim is to explore complex nostalgia phenomenon, to build a holistic index to understand in general what makes a consumer nostalgic, to gain insights what objects cause nostalgia, to cover the whole domain of nostalgia, a formative view might be more appropriate. In the table below the guidelines and propositions are summarized that aim to assist researchers on decision rules whether to employ formative or reflective nostalgia measurement for future research.

**TABLE 2. Decision Guidelines in Employing Reflective Versus formative Nostalgia Measurement**

	<b>Nostalgic attitude scale</b>	<b>Nostalgia index</b>
Perspective	Reflective perspective	Formative perspective
Objective	To have an instrument for measuring a particular aspect of nostalgia, to represent subjective nostalgic attitudes, to gain insight <i>in what reactions and self-perceptions nostalgia is expressed.</i>	To explore and understand complex and broad nostalgia phenomenon, to gain insights <i>what objects cause nostalgia</i> , to cover the whole domain of nostalgia, to represent objective reality.
Nature of construct	Perceived attitudes	Objective reality
Domain coverage	Specific aspect of domain	General and comprehensive domain representation
Variance	Account for variance among observable indicators	Explain abstract or unobserved variance at the latent construct level
Research areas examples	Nostalgic attitudes towards specific advertising or specific products or product groups, towards concrete historical events.	Indexes that capture many nostalgic stimuli, products or objects

	Nostalgic attitude scale	Nostalgia index
Suggested examples from existing research	<p><b>1. Baker &amp; Kennedy (1994) nostalgic attitudes scale</b> (measuring the intensity of feeling).</p> <ol style="list-style-type: none"> <li>1. This ad reminds me of an experience from the past.</li> <li>2. This ad makes me think of an experience which I feel sad about because it is over, yet it is a happy memory.</li> <li>3. This ad does not make me have any feelings about the past.</li> <li>4. I wish I could relive the experience(s) this ad makes me think of.</li> <li>5. I do not think about the past when I look at this ad.</li> <li>6. I associate this ad with a happy experience, yet it makes me feel sad.</li> </ol>	<p><b>1. Holbrooks 20 item Nostalgia proneness index</b></p> <ol style="list-style-type: none"> <li>1. They don't make 'em like they used to</li> <li>2. Newer is almost always better.</li> <li>3. In the future, people will have even better lives.</li> <li>4. Things used to be better in the good old days.</li> <li>5. I believe in the constant march of progress.</li> <li>6. Yesterday, all my troubles seemed so far away.</li> <li>7. Products are getting shoddier and shoddier.</li> <li>8. Compared to our parents, we've got it good.</li> <li>9. Technological change will insure a brighter future.</li> <li>10. When I was younger, I was happier than I am today.</li> <li>11. Today's new movie stars could learn from the old pros.</li> <li>12. I must admit it's getting better, better all the time.</li> <li>13. The truly great sports heroes are long dead and gone.</li> <li>14. History involves a steady improvement in human welfare.</li> <li>15. Today's standard of living is the highest ever attained.</li> <li>16. Sometimes, I almost wish that I could return to the womb.</li> <li>17. We are experiencing a decline in the quality of life.</li> <li>18. Steady growth in GNP has brought increased human happiness.</li> <li>19. Compared to the classics, today's music is mostly trash.</li> <li>20. Modern business constantly builds a better tomorrow.</li> </ol>



One of the main contributions of this study is to show the need for researchers to explicitly justify their choice of reflective or formative measurement models by supporting it with theoretical arguments and empirical evidence. Researchers have to bear in mind that a construct measured with reflective indicators is not necessarily the same construct when measured with formative indicators, even if the construct name stays the same (Diamantopoulos, 2010).

**On nomological network.** Nostalgia literature review demonstrates that its nomological network may be refined or strengthened by a number of research initiatives. **First**, new and continuing research is needed into the antecedents of nostalgia in order to transfer the scientific knowledge from hypotheses level to empirically confirmed, valid and reliable research. The list of antecedents should be further extended by future research. Another less developed area is the moderators' impact on nostalgia relationship with its outcomes. The accumulated knowledge from other consumer behavior areas suggests that nostalgia effects on preferences or buying intentions might be mitigated by a number of moderators (e.g., perceived quality, individual involvement type and level, brand name). Also, the research into product type impact on nostalgic preferences can be further extended by examining how nostalgia impacts changes for durable versus non-durable goods, for arts, cultural products, for low-involvement versus high involvement products, for technological and complex products versus fast moving or convenience products, etc. Finally, another interesting research stream might concentrate on empirical studies to determine whether nostalgia effect applies equally well to intangible services. A good example is provided by Goulding (2001) and might be extended to visiting nostalgic music events, restaurants, etc.

**Second**, as the number of variables and relationship in the nomological network of nostalgia research increases, greater need for more complex testing emerges. Structural modeling provides basis for empirical grounding and testing of this complex relationship and constructing of more holistic models. Moreover, antecedents, manifestations and outcomes testing in multivariate models can provide some indication of the relative strength of these constructs. Traditional statistical techniques could be blamed for lack of nomological validity in nostalgia research, thus, future studies should try to employ more state-of-the-art techniques and try to explore nostalgia phenomenon testing more complexly the relationships among antecedents, related constructs and consequences.

**Third**, reconsideration of nostalgia measurement is of utmost importance as none of the above propositions can be completed successfully if the conceptual and theoretical consensus in this field of research is not well established. Researchers have to be aware of the auxiliary nature of nostalgia construct, clearly define the study objectives and choose properly reflective versus formative measurement of nostalgia. Development and validation of refined nostalgia measurement instruments is a priority for the future research. Specifically, the following steps in measures development should be of the greatest concern:

- To develop refined formatively measured nostalgia index that captures the conceptual and complex domain of the construct.
- To refine existing reflective measures of nostalgic attitudes to different product categories, settings, and nostalgia types. For example, historical and virtual nostalgia reflective measurement theoretically should be distinct from personal nostalgia reflective measurement.
- Finally, taking into account the complexity of nostalgia phenomenon and following recommendations by Petter et al. (2007), multidimensional measurement of nostalgia construct should be explored to determine whether such constructs dimension can be measured using either reflective or formative indicators.

## **6. Limitations**

As Hardin et al. (2008) note, respecification of the indicators as formative or reflective should not be driven only by examining the comparative lists of properties of formative and reflective measures. This should be used only as a tool for identifying misspecified measures. While these two types of indicators may share common aspects of the construct, their specification is driven by measurement theory and, thus, should not be examined from any perspective other than their original intent (Howell et al., 2007b). The decision to specify indicators as formative or reflective should be made prior to their use, because the theoretical underpinnings of formative versus reflective measurement are incompatible (Diamantopoulos & Siguaw, 2006; Howell et al., 2007a). However, according to Coltman et al. (2008), a counter-argument is that measuring existing reflective scales as formative constructs represents a conservative test of the proposition that formative measurement is worth considering. Thus, the propositions of current study can be regarded only as exploratory and providing guidance for future research. In order to capture the whole domain of formative nostalgia construct, the new item generation procedures should be employed involving expert screening, focus groups, content analysis, and other measurement generation procedures recommended by measurement literature.

TABLE 3. Summary of Previous Consumer Nostalgia Studies

Authors, date, country, journal	Main findings	Products/ stimuli	Antecedents	Outcomes	Methodology (sample, type, sampling method, statistical method)	Nostalgia measurement
Holbrook & Schindler (1989), USA, Journal of Consumer Research	Preferences toward popular music appear to reflect tastes acquired during late adolescence or early adulthood. The development of tastes for popular music follows an inverted U-shaped pattern that reaches a peak in about the 24th year.	28 top hits from the years 1932 to 1986 for musical stimuli	Age	Preferences	Convenience adults sample, n=108 Multiple regression analysis	Music as stimulus rated on 10-point scale (1-“I dislike it a lot“, 10 - „I like it a lot“).
Holbrook (1991), USA, Advances in Consumer Research	Definition of nostalgia as a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth).	Music hits	Age	Preferences	Literature review	Not assessed (NA)
Holak & Havlena (1992), USA, Advances in Consumer Research	Subjects such as holidays, religious observances, family, popular music, and school-related experiences tend to occur repeatedly in the nostalgic experiences descriptions. Both personal and historical nostalgia are represented in the descriptions. Tangible objects and intangible presentations (in a form of music or film) are depicted as key nostalgia stimuli.	Family, home, persons, objects, events, sights, smells, tastes serve as potent stimuli for nostalgia	NA	NA	Snowball convenience sample, n=62 Exploratory research Qualitative assessment of nostalgic experiences description	NA
Stern (1992), USA, Journal of Advertising	Stimulus-side analysis of nostalgia in advertising text. Historical and personal nostalgia can be determined by advertising plot, setting, characters, and values inherited from literary antecedents.	[Advertisements, periodicals, and direct mail catalogues]	NA	NA	Literary criticism	NA

Holbrook (1993), USA, Journal of Consumer Research	Age and nostalgia proneness working together does play a role in shaping consumption preferences by influencing patterns of consumer tastes. Those higher in nostalgia proneness tend to prefer musicals and tenderhearted films. An eight-item nostalgia proneness scale is developed, no significant correlation appeared between age and nostalgia.	Movies	Age, gender	Movie preference	Study 1 – students, n=226 Study 1 – convenience sample, n=156 Factor analysis and ordinary least squares regression	Holbrook nostalgia scale (1993)
Baker & Kennedy (1994), USA, Advances in Consumer Research	There are three types of nostalgia—real, simulated, and collective. The attitude or affect associated with the ad is independent from the nostalgia associated with the ad.	Print advertisement	NA	Attitude towards advertising	Students, n=86 Factor analysis	Six-item nostalgia scale (Baker, Kennedy, 1994) with a 5-point Likert scale measuring the intensity of feeling from strongly agree to strongly disagree.
Holbrook & Schindler (1994), USA, Journal of Marketing Research	The existence of an age-related preference peak previously found for the case of music generalizes to the context of visual preferences for photographs of movie stars. Nostalgia is shown to moderate this tendency, and differences between male and female respondents suggest that the experience of strong positive feelings plays a causal role. Liking for movie stars peaked at the age of 14.	Movie stars photos as stimuli	Age, gender	Preference towards movie stars	Convenience adults sample, n=237 Factor analysis, Ordinary least squares (OLS) regression analysis	Holbrook nostalgia scale (1993)
Rousseau & Venter (1999), Republic of South Africa, Journal of Industrial Psychology	Nostalgia model that incorporates cognitive, affective and action tendency components in the following categories: influencing variables (e.g., individual, demographic factors), impact areas (relate to arts, culture, consumer products, fashion, etc.), manifestations (imply quality, aesthetics, acquaintance) and outcome based actions (e.g., consumer preference, purchase, consumption patterns). Significant differences between various language (culture), age, education and income groups on nostalgia is revealed.	Arts, cultural entertainment, consumer products, technology, fashion and clothing, collection of antiques	Individual (learning perception, personality, resistance to change) Environmental (culture, social factors) Demographics (age, income) Psychographics (lifestyle, values, AIOs)	Consumer preference Purchases Consumption patterns	Non-probability convenience sample, n=504 Factor analysis, Anova, descriptive statistics (mean, standard deviation, frequency distribution)	<b>Holbrook nostalgia scale (1993)</b> (divided into 2 factors: nostalgia, progressiveness).

Rindfleisch, Freeman, & Burroughs (2000), USA, <i>Advances in Consumer Research</i>	For products with a high degree of public symbolism and recognizable meanings such as the new VW Beetle and the Lexus GS300, materialism is a stronger predictor of preference and choice than either measure of nostalgia. Neither materialism nor nostalgia influence the preference or choice for products that attempt to combine both materialistic and nostalgic appeals.	Automobiles	Materialism	Product preference	1 study – 141 students 2 study – 94 students Correlations, logistic regression, linear regression	<b>Holbrook nostalgia scale (1993) with two-factor solution</b>
Rousseau & Venter (2000), Republic of South Africa, <i>Journal of Industrial Psychology</i>	Significant relationships do exist between the measured constructs and distinct socio-biological variables, difference in levels of nostalgia can be expected when dealing with multicultural samples.	Arts, consumer products, fashion, furniture, music	Language, age, income, education	Consumer nostalgic preference and Vintage/antiques propensity	Convenience sample, n=555 Factor analysis, descriptive statistics (mean, standard deviation, frequency distribution)	<b>Holbrook nostalgia scale (1993)</b> (divided into Nostalgia, Progressiveness) <b>Consumer nostalgic preference scale</b>
Goulding (2001), United Kingdom, <i>Psychology &amp; Marketing</i>	Identified two different types of nostalgic experience which are based on four major themes relating to the nostalgic reaction: the number and nature of roles occupied by the individual, the degree of alienation experienced in the present, the quality of and desire for social contact, and the ability to selectively recall the past, which results in either first-order or vicarious nostalgia.	Visiting living museum	Occupied roles, degree of alienation in the present, desire for social contact, and selective recall of the past	NA	Qualitative research using grounded theory methodology In-depth interviews of visitors on site; Observation of behavior; and focus-group discussions. Open coding axial coding clustering	NA
Pascal, Sprott, & Muehling (2002), USA, <i>Journal of Current Issues and Research in Advertising</i>	Advertisement eliciting nostalgic reactions are capable of generating more favorable perception of an ad and advertised brand and of contributing to greater purchase likelihood. Attitude towards ad <b>mediates</b> the relationship between advertising-evoked nostalgia and brand attitude. Attitude toward the ad and brand attitude marginally <b>mediates</b> the relationship between advertising-evoked nostalgia and purchase likelihood.	Advertisement of durable and non-durable photo products	NA	Advertising outcomes: attitudes towards advertising, brand attitudes, likelihood of purchase	Students, n=147 Principal components analysis Regression analysis	<b>10-item evoked nostalgia scale</b> , for development as the basis was used Holbrook and Schindler (1991) nostalgia conceptualization.

Borges & Boulbry (2003), France, Cross-Cultural Research Conference	The application of a scale developed in a specific cultural context (USA) to another one (France) presents many difficulties. It seems that French people feel nostalgia in a different way (two dimensions), and the application of the unidimensional nostalgia proneness seems to be inappropriate in France.	NA	NA	NA	Adults, n=246 EFA, CFA using SEM	<b>Holbrook nostalgia scale (1993) (two-factor solution)</b>
Holbrook & Schindler (2003 a), USA, Journal of Consumer Behaviour	Nostalgic bonding occurs ubiquitously and takes a variety of forms, shares in common the basic mechanism whereby some object evokes, symbolizes, instantiates or otherwise captures some sort of lost but still-valued experiences — namely, those associated with a set of pleasurable or at least personally significant memories from the past.	Sensory experience Homeland Rites of passage Friendships and loved ones Gifts of love Security Breaking away Art and entertainment Performance and competence Creativity	NA	NA	Interpretive/ qualitative research method of subjective personal introspection (SPI) Adults, N=51	NA
Schindler & Holbrook (2003 b), USA, Psychology & Marketing	Nostalgic effects are extended to durable and utilitarian products as automobiles. Despite the common impression that the tendency toward nostalgia increases with age (e.g., Davis, 1979), none of these three nostalgia-proneness indices provide any evidence of this. The preferences of the Holbrook index's high nostalgia peaked at a product-specific age of 18 and the preferences of the Taylor/Konrad index's high nostalgia peaked at a product-specific age of 20, the preferences of the McKechnie index's high nostalgia peaked at a product-specific age of - 37. Because of this substantial disagreement between the nostalgia-proneness indices, it appears appropriate to consider the possibility that these measures are tapping different aspects of liking for the past.	Automobiles	Gender, age, product type	Liking of the product	The time-dated stimuli comprise 80 photographs of automobiles, each introduced in one of the years between 1915 and 1994. Adults, n=225 Ordinary least-squares regression analyses Principal-components analysis	<b>I. Holbrook's 20-item nostalgia scale</b> <b>II. McKechnie's (1974; 1977) 20-item Antiquarianism Scale.</b> <b>III. The Taylor and Konrad (1980) 12 items Experience Scale</b>

Muehling & Sprott (2004), USA, Journal of Advertising	Nostalgic cues in advertising do indeed influence the type of thoughts consumers have during ad exposure, and these thought processes appear to have an influence on attitudes toward the advertisement and advertised brand. Follow-up analyses regarding the potential moderating effects of age or gender on individuals' brand and ad attitudes yielded no significant interaction results	Print advertisement of photo product	Age, gender	<i>attitudes toward the ad</i> <i>attitudes toward the advertised brand</i>	Students, n=159 Exploratory qualitative research	<b>10-item evoked nostalgia scale used from Pascal, Sprott, Muehling (2002)</b>
Reisenwitz, Iyer, & Cutler (2004), USA, Marketing Management Journal	The authors distinguish societal and individual nostalgia proneness. A positive relationship exists between individual nostalgia proneness and nostalgia intensity towards the advertisement and towards the brand. No positive relationship between age and societal nostalgia proneness was discovered, but relationship between individual nostalgia proneness and age exists. Women are more nostalgia prone than men.	Advertising for 2 low-involvement product categories (food and household cleaning products)	Age, gender	Feeling of nostalgia toward the ad Feeling of nostalgia toward the brand	Convenience students sample, n=296 Mature adults (older than 50 years) n=56 Principal axis factoring	<b>I. Holbrook nostalgia scale (1993) (two factor solution)</b> <b>II. Nostalgia intensity towards an ad</b> (scale by Baker, Kennedy (1994)) <b>III. Nostalgia intensity toward the brand/company</b> (scale by Baker, Kennedy (1994))
Holak, Havlena, & Matveev (2006), Russia, European Advances in Consumer Research	Developed measure of nostalgia-proneness as an individual trait. Four-way classification of nostalgia, which due to differences in their origins may involve substantially different responses.	Personal nostalgia	NA	NA	Convenience sample n=80 Principal axis factor analysis	<b>I. Holbrook's 20 items nostalgia scale</b> <b>II. Index of Nostalgia Proneness (Havlena and Holak, 2000).</b>
Sierra & McQuitty (2007), USA, Journal of Marketing Theory and Practice	The results support social identity theory prediction that both emotional and cognitive factors affect purchase intentions for nostalgic products.	Music Toy Literature Movie Artwork Clothing Sports Memorabilia	<i>attitudes about the past</i> <i>yearning for the past</i>	Intentions to purchase nostalgic products	Convenience adults sample, n=198 SEM	<b>I. Yearning for the past (new four-item measure developed)</b> <b>II. Attitudes about the past (Grier and Deshpande (2001) four-item scale)</b>

		Candy Furniture Vehicle Technology Outdoor Equipment Firework Home Perfume				
Chou & Lien (2010), Taiwan, Asia Pacific Journal of Marketing and Logistics	Previously heard old songs have positive ad effects due to evoking consumers' good moods or by generating more favorable nostalgia-related thoughts. High-relevance lyrics facilitate the production of favorable ad execution-related thoughts, which improve ad attitude directly and indirectly through good moods.	Two products (cookie bar and chocolate)	NA	Ad related thoughts and ad attitude	Students, n=276 2 x 2 between-subject factorial experiment	<b>5-item evoked nostalgia scale on a seven-point scale (Pascal et al., 2002)</b>
Ford & Merchant (2010), USA, Journal of Advertising Research	Appeals for charity that evoke personal nostalgia will have an effect on the charitable-donation intentions of consumers. In study 1, nostalgic charity appeals evoke higher levels of emotions and donation intentions than non-nostalgic appeals. Study 2 indicates that this effect is <b>moderated</b> by the consumer's propensity towards being nostalgic. In study 3 the effect of nostalgia emotions and intentions is <b>moderated</b> by the importance of the memory evoked.	Charity donations	NA	Levels of emotions Donation intentions	Study 1 online consumer panel, n=103, Anova Study 2, mailed questionnaires, n=457, MANOVA, ANOVA Study 3 online consumer panel, n=186, MANOVA, ANOVA	<b>Personal Nostalgia Inventory (Batcho, 1995)</b> —a 20-item inventory wherein respondents rate “How much do you miss each of the following things from your past?”. These items ranged from concrete categories (for instance, toys, TV shows, and friends) to abstract categories (the way society used to be, the way people were then, etc.).
Evans, Hart, Cicala, & Sherrell (2010), USA, Journal of Management and Marketing Research	For the dimension of Celebrity Identification, gender, nostalgia-tradition, nostalgia-progress, and risk were all significant suggesting there may be a consistent gender effect on dead celebrity worship. For Celebrity Enjoyment, only gender and nostalgia-tradition were significant.	Deceased celebrities	Risk, gender, age as third variables	Celebrity attitude scale	Students, n=161 Factor analysis, regression	<b>I. Holbrook nostalgia scale (1993) (divided into two factors – Nostalgia-tradition and Nostalgia-progress)</b>



Lambert-Pandraud & Laurent (2010), France, Journal of Marketing	Nostalgia, in the sense of maintaining a preference for perfumes encountered during a person's formative stage, has relatively little influence, in contrast with Holbrook and Schindler's (1989, 1994) assertion that people's preferences peak for cultural and hedonic products they encounter during their formative years.	Branded products (perfume)	Age as antecedent. Innovative ness, attachment as third explaining variables for older brands consumption	Preference for brand Actual ownership	1 study - mail survey of 130,411 females reported using perfume 2 study -260 female perfume consumers at perfume shops. Correlation Logit analysis	<b>Holbrook nostalgia scale (1993) (two-factor solution)</b>
Loveland, Smeesters, & Man del (2010), Netherlands Journal of Consumer Research	Increased preference for nostalgic products is experienced by consumers for whom the need to belong is an active goal experience. Consumption of nostalgic products, rather than the exposure to or the mere selection of nostalgic products, successfully satiates the need to belong.	Movies, TV programs, cookies, crackers, shower gel, soup, candy, and cars	Need to belong	Exposure Selection Consumption	5 experimental studies Study 1 a – 136 students, 1 b – 63 adults, 2 - 43 students, 3 – 94 students, 4 – 72 students Logistic regression ANOVA	<b>NA</b>
Muehling & Pascal (2011), USA, Journal of Advertising	Personal nostalgia (a yearning for one's past) generally outperforms both historical and non-nostalgic advertising when measures of self-directed thoughts, positive affect, and attitude toward the ad are considered. However, when cognitive measures (i.e., brand/message-related cognitive responses and message recall) are considered, a personally nostalgic ad is shown to be comparable to a historical nostalgic ad, but inferior to a non-nostalgic ad.	3 experimental ads as stimuli Fictitious brand name of digital camera Positive affect as third variable	NA	Positive feeling (affect) Attitude towards advertising Attitude towards brand Message recall	Students n=249 ANOVA, regression	<b>I. Brand attitudes II. Attitudes toward the ad III. Feelings when exposed to the ads, using a 19-item scale adapted from Burke and Edell (1989). IV. Nostalgic responses to the experimental treatments</b>
Muehling (2013), USA, Journal of Marketing Communications	Irrespective of whether individuals are exposed to a personally nostalgic or historically nostalgic ad, responses of a personally nostalgic nature tend to predominate and are more influential in shaping brand attitudes. Attitudes toward the ad were shown to mediate this relationship for both nostalgia ad types.	Print ads for a fictitious brand of digital camera (Foton)	NA	Attitude toward the ad and attitude toward the brand	Students n=178 Regression analyses and paired sample t-tests	<b>Self-reported personal and historical evoked nostalgia scale (Pascal, Sprott, Muehling (2002) scale was used as a basis)</b>

## References

- Bagozzi, R. (1981). Evaluating structural equation models with unobservable variables and measurement error: a comment. *Journal of Marketing Research*, 18(8), 375-81.
- Bagozzi, R. P. (1982). A Field Investigation of Causal Relations Among Cognitions, Affect, Intentions and Behavior. *Journal of Marketing Research*, (19), 562-584.
- Bagozzi, R. P. & Yi, Y. (1988). On the Evaluation of Structural Equation Models. *Journal of the Academy of Marketing Science*, 16, 74-94.
- Baker, S. M., & Kennedy, P. F. (1994). Death by Nostalgia: A Diagnosis of Context-Specific Cases. *Advances in Consumer Research*, 21, 169-174.
- Bartmanski, D. (2011). Successful icons of failed time: Rethinking post-communist nostalgia. *Acta Sociologica* (Sage Publications, Ltd.), 54 (3), 213-231.
- Batcho, K. I. (1995). Nostalgia: A Psychological Perspective. *Perceptual and Motor Skills*, 80(1), 131-143.
- Batcho, K. I. (1998). Personal Nostalgia, World View, Memory, and Emotionality. *Perceptual and Motor Skills*, 87 (2), 411-432.
- Belk, R. W. (1990). The Role of Possessions In Constructing and Maintaining A Sense of Past. *Advances in Consumer Research*, 17, 669-676.
- Bentler, P.M. & Chou, C.P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, 16 (1), 78-117.
- Bollen, K.A. (1989). *Structural Equations with Latent Variables*. New York: Wiley.
- Bollen, K. A. & Lennox, R. (1991). Conventional Wisdom on Measurement: A Structural Equation Perspective. *Psychological Bulletin*, 110, 305-314.
- Bollen, K. A. (2007). Interpretational Confounding Is Due to Misspecification, Not to Type of Indicator: Comment on Howell, Breivik, and Wilcox. *Psychological Methods*, 12 (2), 219-228.
- Borges, A. & Boulbry G. (2003). Measuring French Nostalgia: the Validation of The Holbrook 's Nostalgia Proneness Scale in France. *Ninth Cross-Cultural Research Conference*. December 10-14, Half Moon Bay Resort, Rose Hall, Jamaica.
- Braun-LaTour, K. (2007). Beyond Nostalgia: Using Childhood Memories as a Means to Emotionally Connect with Consumers. *International Journal of Advertising*, 26 (3), 402-405.
- 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., & Sherry Jr., J. F. (2003a). Sell Me the Old, Old Story: Retromarketing Management and the Art of Brand Revival. *Journal of Customer Behaviour*, 2 (2), 133-147.
- Brown, S., Kozinets, R. V., & Sherry Jr., J. F. (2003b). Teaching Old Brands New Tricks: Retro Branding and the Revival of Brand Meaning. *Journal of Marketing*, 67 (3), 19- 33.
- Brown, R.L., (1994). Efficacy of the indirect approach for estimating structural equation models with missing data: a comparison of five methods. *Structural Equation Modeling*, 1, 287-316.
- Castelnouvo-Tedesco, P. (1998) Reminiscence and nostalgia: The pleasure and pain of remembering. In G.H. Pollock and S.I. Greenspan (Eds.), *The course of life: Completing the journey* (Vol. 7, pp 110-130). Madison, CT: International Universities Press.
- Cenfetelli, R. T. & Bassellier, G. (2009). Interpretation of formative measurement in information systems research. *MIS Quarterly*, 33(4), 689-707.
- Churchill, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 16, 64-73.
- Coltman, T., Devinney, T. M., Midgley, D. F., & Venaik, S. (2008). Formative Versus Reflective Measurement Models: Two Applications of Formative Measurement. *Journal of Business Research*, 61 (12), 1250-1262.

- DaSilva, F. & Faught, J. (1982). Nostalgia: A Sphere and Process of Contemporary Ideology. *Qualitative Sociology*, 5 (1), 47.
- Davis, F. (1979). *Yearning for Yesterday: A Sociology of Nostalgia*. New York: Free Press.
- Diamantopoulos, A. (2010). Reflective and Formative Metrics of Relationship Value: Response to Baxter's Commentary Essay. *Journal of Business Research*, 63 (1), 91-93.
- Diamantopoulos, A. (2011). Incorporating formative measurement into covariance-based structural equation models. *MIS Quarterly*, 35 (2), 335-358.
- Diamantopoulos, A. & Winklhofer, H. (2001). Index Construction with Formative Indicators: An Alternative to Scale Development. *Journal of Marketing Research*, 37, 269-277.
- Diamantopoulos, A. & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, 17(4), 263-282.
- Diamantopoulos, A., Riefler, P., & Roth, K. P. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203-1218.
- Edwards, J. R., & Bagozzi, R. P. (2000). On the Nature and Direction of Relationships Between Constructs and Measures. *Psychological Methods*, 9(2), 155-74.
- Emerging economies (n.d.). *The European Central Bank*. Retrieved November 11, 2013, from <http://www.ecb.europa.eu/ecb/tasks/international/emerging/html/index.en.html>
- Evans, Robert D., Jr., Phillip M. Hart, John Cicala, & Dan L. Sherrell (2010). Elvis: Dead and Loving It - The Influence of Attraction, Nostalgia, and Risk in Dead Celebrity Attitude Formation. *Journal of Management and Marketing Research*, 3, 1-13.
- Gallagher, D., Palmer, A., & Ting, L. (2008). A Journey into the Unknown; Taking the Fear Out of Structural Equation Modeling with AMOS for the First-Time User. *The Marketing Review*, 8 (3), 255-275.
- Gefen, D., Straub, D. W., & Boudreau, M-C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the Association for Information Systems*, 4, 1-79.
- Gerbing, D.W., & Anderson, J.C., (1984). On the meaning of within factor correlated measurement errors. *Journal of Consumer Research*, 11, 572-580.
- Gerbing, D., & Anderson, J. (1998). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25(2), 186-92.
- Goulding, C. (2001). Romancing the Past: Heritage Visiting and the Nostalgic Consumer. *Psychology and Marketing*, 18 (6), 565-592.
- Graburn, N. (1995). Tourism, modernity and nostalgia. In A. Ahmed & C. Shore, (Eds), *The future of anthropology: Its relevance in the contemporary world* (pp.158-178). London: The Athlone Press.
- Fletcher, R. (2012). The Art of Forgetting: imperialist amnesia and public secrecy. *Third World Quarterly*, 33 (3), 423-439.
- Ford, J.B., & Merchant A. (2010). Nostalgia Drives Donations: The Power of Charitable Appeals Based on Emotions and Intentions. *Journal of Advertising Research*, 50(4), 450-459.
- Fornell, C., & Bookstein, F. L. (1982). A Comparative Analysis of Two Structural Equation Models: LISREL and PLS Applied to Market Data. In C. Fornell (Ed.), *A Second Generation of Multivariate Analysis* (pp.289-324). New York: Praeger.
- Hirsch, Alan R. (1992). Nostalgia: A Neuropsychiatric Understanding. *Advances in Consumer Research*, 19, 390-395.
- Hardin, A. M., Chang, J. C.-J., & Fuller, M. A. (2008). Formative vs. Reflective Measurement: Comment on Marakas, Johnson, and Clay (2007). *Journal of the Association for Information Systems*, 9 (9), 519-534.

- Havlena, W.J., & Holak, S.L. (1991). The good old days: Observations of nostalgia and its role in consumer behavior. *Advances in Consumer Research*, 18, 323-329.
- Havlena, W., & Holak, S.L. (1996). Exploring Nostalgia Imagery Through the Use of Consumer Collages. *Advances in Consumer Research*, 23, 35/2.
- Holak, S.L., & Havlena, W. (1992). Nostalgia: An Exploratory Study of Themes and Emotions in the Nostalgic Experience. *Advances in Consumer Research*, 19, 380-387.
- Holak, S.L., & Havlena, W. (1998). Feelings, Fantasies, and Memories: An Examination of the Emotional Components of Nostalgia. *Journal of Business Research*, 42 (7), 217–226.
- Holak, S.L., & Havlena, W., & 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., & Havlena, W., & 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 Paterns of Consumer Tastes. *Journal of Consumer Research*, 20 (9), 245-56.
- Holbrook, M. B., & Schindler, R. (1989). Some Exploratory Findings on the Development of Musical Tastes. *Journal of Consumer Research*, 16 (6), 119–24.
- Holbrook, M. B., & Schindler, R. (1991). Echoes of the Dear Departed Past: Some Work in Progress on Nostalgia. *Advances in Consumer Research*, 18, 330–333.
- Holbrook, M. B., & Schindler, R. (1994). Age, Sex, and Attitude Toward the Past as Predictors of Consumers' Aesthetic Tastes for Cultural Products. *Journal of Marketing Research*, 31 (8), 412–422.
- Holbrook, M. B., & Schindler, R. (1996). Market Segmentation Based on Age and Attitude Toward the Past: Concepts, Methods and Findings Concerning Nostalgic Influences on Customer Tastes. *Journal of Business Research*, 37 (9), 27–39.
- Holbrook, M. B., & Schindler, R. (2003 a). Nostalgic bonding: Exploring the role of nostalgia in the consumption experience. *Journal of Consumer Behaviour*, 3 (2), 107–127.
- Holbrook, M. B., & Schindler, R. (2003 b). Nostalgia for Early Experience as a Determinant of Consumer Preferences. *Psychology and Marketing*, 20 (4), 275–302.
- Hooper, D., Coughlan, J. & Mullen, M.R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *Electronic Journal of Business Research Methods*, 6 (1), 53-60.
- Howell, R. D., Breivik, E., & Wilcox, J. B. (2007). Reconsidering Formative Measurement. *Psychological Methods*, 12 (2), 205-218.
- Chou, H.Y, & Lien, N. H.(2010). Advertising effects of songs' nostalgia and lyrics' relevance. *Asia Pacific Journal of Marketing and Logistics*, 22 (3), 314 – 329
- Hu, L., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: sensitivity to under-parameterized model misspecification. *Psychological Methods*, 3 (4), 424–453.
- Huppertz, D. (2009). Designer Nostalgia in Hong Kong. *Design Issues, Spring*, 25 (2), 14-28.
- Jackson, D.L. (2003). Revisiting the sample size and number of parameter estimates: some support for the N:q hypothesis. *Structural Equation Modeling*, 10 (1), 128–141.
- Jarvis, C. B.; MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30, 199-218.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York, NY: The Guilford Press.
- Kessous, A., & Roux, E. (2008). A semiotic analysis of nostalgia as a connection to the past. *Qualitative Market Research*, 11 (2), 192-212.
- Lambert-Pandraud D R., & Laurent G. (2010). Why Do Older Consumers Buy Older Brands: The Role of Attachment and Declining Innovativeness. *Journal of Marketing*, July, 74 (5), 104-121.

- Leaver, D., & Schmidt, R. (2010). Together Through Life - an exploration of popular music heritage and the quest for re-enchantment. *Creative Industries Journal*, 3 (2), 107-124.
- Lee, M. (2011). Nostalgia as a Feature of „Glocalization“: Use of the Past in Post-Soviet Russia. *Post-Soviet Affairs*, 27(2), 158-177.
- Loveland, K. E., Smeesters, D., & Mandel, N. (2010). Still Preoccupied with 1995: The Need to Belong and Preference for Nostalgic Products. *Journal of Consumer Research*, 37 (3), 393 - 408.
- Lowenthal D. (1985). *The Past is a Foreign Country*. Cambridge University Press.
- Mackenzie, S. B. (2001). Opportunities for Improving Consumer Research through Latent Variable Structural Equation Modeling. *Journal of Consumer Research*, 28, 159-166.
- MacKenzie S, Podsakoff P, & Jarvis C. (2005). The Problem of Measurement Model Misspecification in Behavioural and Organizational Research and some Recommended Solutions. *Journal of Applied Psychology*, 90 (4), 710-730.
- McCracken, G. (1988). *The Long Interview*. Newbury Park, CA: Sage Publications.
- Medsker, G. J., Williams, L. J., & Holahan, P. J. (1994). A Review of Current Practices for Evaluating Causal Models in Organizational Behavior and Human Resources Management Research. *Journal of Management*, 20, 439-464.
- Merchant, A., & Ford, J. B. (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., & 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., & 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.
- Muthen, B., Kaplan, & D., Hollis, M. (1987). On structural equation modeling with data that are not missing completely at random. *Psychometrika*, 52, 431–462.
- Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures : issues and applications*. Thousand Oaks, CA: Sage.
- Novick MR, & Lewis C. (1967). Coefficient alpha and the reliability of composite measurements. *Psychometrika*. 32, 1–13.
- Nunnally J.C. (1978). *Psychometric theory* 2nd ed. New York: McGraw-Hill, In: Ping R.A. Jr. 2004. On Assuring Valid Measures for Theoretical Models Using Survey Data. *Journal of Business Research*, 57, 125-141.
- Pascal, V. J., Sprott, D. E., & Muehling, D. D. (2002). The Influence of Evoked Nostalgia on Consumers' Responses to Advertising: An Exploratory Study. *Journal of Current Issues and Research in Advertising*, 24 (1), 39–49.
- Peleggi, M. (1996). National heritage and global tourism in Thailand. *Annals of Tourism Research*, 23, 432-448.
- Petter, S., Straub, D. & Rai, A. (2007). Specifying formative constructs in information systems research. *MIS Quarterly*, 31(4), 623-656.
- Ping R.A. Jr. (2004). On Assuring Valid Measures for Theoretical Models Using Survey Data. *Journal of Business Research*, 57, 125-141.
- Riabchuk, M. (2009). Ukraine's Nuclear Nostalgia. *World Policy Journal*, 26 (4), 95-105.
- Reisenwitz, T. H., Iyer, R., & Cutler, B. (2004), Nostalgia Advertising and the Influence of Nostalgia Proneness. *Marketing Management Journal*, 14 (2), 55–66.
- Riefler, P., & Diamantopoulos, A. (2007). Consumer animosity: a literature review and a reconsideration of its measurement. *International Marketing Review*, 24(1), 87-119.

- Rindfleisch, A., Freeman, D. and Burroughs, J. E. (2000). Nostalgia, materialism, and product preference: An initial inquiry. *Advances in Consumer Research*, 27, 36–41.
- Rindfleisch, A., & Sprott D. E. (2000). Moving Forward on Looking Backward: Advancing Theory and Practice in Nostalgia. *Advances in Consumer Research*, 27, 34-35.
- Ritchie, B.W., & Adair, D. (2004). Sport tourism: An introduction and overview. *Sport tourism: Interrelationships, impacts and issues*, p.1 -29.
- Ross, B.M. (1991). *Remembering the personal past: Descriptions of autobiographical memory*. New York: Oxford University Press.
- Rousseau , G.G., & Venter, D.J.L (1999). The Influence of Nostalgia on Consumer Preference. *Journal of Industrial Psychology*, 25 (2), 2-10.
- Rousseau , G.G., & Venter, D.J.L (2000). The Relationship Between Nostalgia and Consumer Preference: Replication and Extension. *Journal of Industrial Psychology*, 26 (2), 32-36.
- Russell, D. (2008). Nostalgic tourism. *Journal of Travel & Tourism Marketing*, 25 (2), 103-116.
- Sayre, S. (1994). Possessions and identity in crisis: Meaning and change for victims of the Oakland firestorm. *Advances in Consumer Research*, 21, 109–114.
- Schindler, R. M., & Holbrook, M. B. (1993). Critical periods in the development of men's and women's tastes in personal appearance. *Psychology & Marketing*, 10, 549–564.
- Schumacker, R.E. & Lomax, R.G. (2010). *A Beginner's Guide to Structural Equation Modeling* (3rd Edition). NY: Routledge Press.
- Shah, R., &Goldstein, S. M. (2006). Use of Structural Equation Models in Operations Management Research: Looking Back and Forward. *Journal of Operations Management*, 24, 148-169.
- Shook, C. L., Ketchen, D. J., Hult., G. T. M, & Kacmar, M. (2004). An Assessment of the Use of Structural Equation Modeling in Strategic Management Research. *Strategic Management Journal*, 25, 397-404.
- Sierra, J. J., & 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.
- Stauth, G., & Turner, B. (1988). Nostalgia, Postmodernism and the Critique of Mass Culture, *Theory, Culture & Society*, 5, 509-526.
- Stern, B. (1992). Historical and Personal Nostalgia in Advertising Text: The Fin de Siecle Effect. *Journal of Advertising*, 31, 11–22.
- Steenkamp, J. B. E. M. & Baumgartner, H. (2000). On the Use of Structural Equation Models for Marketing Modeling. *International Journal of Research in Marketing*, 18, 195-202.
- Steenkamp, J. B. E. M. & van Trijp, H. C. M. (1991). The Use of LISREL in Validating Marketing Constructs. *International Journal of Research in Marketing*, 8, 283- 299.
- West, S.G., Finch, J.F., & Curran, P.J. (1995). Structural equation models with nonnormal variables: problems and remedies. *Structural Equation Modeling: Issues, Concepts, and Applications*. Newbury Park, CA : Sage.
- Stewart, K. (1988). Nostalgia-A Polemic. *Cultural Anthropology*, 3, 227-41,
- Tilburg, M.A.L. van, Vingerhoets, A.J.J.M., & Heck, G.L. van (1996). Homesickness: A review of the literature. *Psychological Medicine*. 26, 899-912.
- Vesey, C. & Dimanche, F. (2003). From Storyville to Bourbon Street: Vice, nostalgia, and tourism. *Journal of Tourism and Cultural Change*, 1 (1), 54-70.
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, Triggers, Functions. *Journal of Personality and Social Psychology*, 91 (5), 975–993.