



LUND UNIVERSITY  
School of Economics and Management

# **Reminding You to Purchase**

A Quantitative Study Analyzing the Effect of Nostalgia Marketing  
on Consumers' Purchase Intention

by

Joel Andersson Eneberg

Pauli Jokela

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Supervisor: Burak Tunca  
Examiner: Javier Cenamor

# Abstract

The study aims to analyze the effect of nostalgia marketing on consumers' purchase intention by investigating if nostalgia has a relationship with purchase intention, and if self-referencing has an interacting effect on the relationship. The research is conducted in a quantitative method with a deductive approach, designed as a cross-sectional experimental study containing four separate web-based surveys with different stimulus conditions. An analysis of covariates was employed to analyze the relationships. The results are based on this primary data, collected using the web-based service Prolific, and secondary data collected from published journal articles. Self-referencing theory serves as the main theoretical framework, explaining how processed information in relation to the individual increases recall and retrieval. Contrary to our first hypothesis, there was no significant effect between nostalgia and purchase intention. However, in line with our second hypothesis, nostalgia has a significant effect on purchase intention when interacting with self-referencing. As such, H1 was not accepted while H2 was accepted. Therefore, it is concluded that nostalgia's effect on purchase intention depends on the context in which it is applied. Further findings indicate that nostalgia, regardless of context, could affect consumers' attitudes. Future research is suggested to investigate further the impact of nostalgia marketing on market-driven variables, and how nostalgia can improve the brand experience. The study's findings implicate that managers should understand the context-specific nature of nostalgia before applying it in marketing strategy. Our results show that nostalgia improves the brand experience and influences consumer decision-making when interacting with self-referencing elements.

Keywords: nostalgia marketing, purchase intention, self-referencing, consumer behavior

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Joel Andersson Eneberg



Pauli Jokela

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# 1. Introduction

## 1.1 Background

Have you ever wished that you could travel back in time and relive a special moment in your life? Maybe return to a more normal time, before COVID-19 grew into a worldwide pandemic? Or perhaps simply go back to yesterday, where - as John and Paul so eloquently put it - all your troubles seemed so far away? Well, you are not alone. This lingering longing for the past is commonly called nostalgia and can be witnessed in multiple areas of everyday life; on social media through the continuous uploading of old pictures with the hashtags “#ThrowbackThursday” and “#FlashbackFriday”, through the resurgence of vinyl records, the renewed popularity of the “smashed” hamburger and the success of nostalgia-framed television series such as *Stranger Things* and *The Crown*.

The average person experiences nostalgia several times a week, and it occurs to people of all ages (Zhou et al., 2019). Since people consume to express themselves and create a self-identity (Belk, 1988), it was only natural for marketing managers to incorporate memories and past experiences into advertising and product development, to elevate brand choice and brand attitude. Thus, nostalgia marketing was formed to evoke a type of nostalgic consumption, where individuals consume products or services that elicit positive memories to satisfy their desire to travel back in time. As such, nostalgia becomes a powerful marketing strategy by encouraging consumers to mentally visit, or return to, a better place and time. This can be achieved through either consuming a nostalgic product or service, or being exposed to nostalgia marketing (Ju et al., 2016).

Given the uncertainties of today regarding global warming, a relentless pandemic, and growing political instability, a certain level of fear of what to expect of the future can arise, causing us to look toward days that have already happened. Steady and continuous longing for yesterday leads to discontent with today, which leads to a rise of nostalgic consumption (Spaid, 2013), as it gives us comfort and evokes positive emotions that momentarily help us forget about the struggles of the present. This can explain the recent growth regarding nostalgia marketing.

Few scholars have examined the possible influence that nostalgia in advertising has on consumers; hence, research is limited. In these studies, nostalgia was shown to affect several different aspects of consumer behavior, such as brand attitude, brand-consumer relationship quality, and brand authenticity (Ju et al., 2016; Lasaleta, Sedikides & Vohs, 2014; Muehling, 2013; Muehling & Pascal, 2011). Furthermore, it has been indicated to influence consumers' purchase intention; however, the research has been unclear to what extent it has been affected by the nostalgic sensation, rather than other variables (Ju et al., 2016; Muehling, 2013; Muehling & Pascal, 2011). Since purchase intention is a strong indicator for predicting purchase behavior (Norfarah, Koo & Siti-Nabiha, 2018), it is relevant and valuable to

establish the effects of nostalgia within marketing. Consequently, establishing these effects will significantly add to our understanding of consumer behavior and define the utility of nostalgia as a marketing tool. Therefore, we strive to investigate further how nostalgia marketing is affecting consumers' purchase intentions.

## 1.2 Definition of Nostalgia

One of the earliest and most cited definitions of nostalgia in the context of consumer marketing was written by Holbrook and Schindler (1991, p.330):

“*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).*”

Much of the research regarding nostalgia and its effect on consumer behavior focus on the individual's experience and how nostalgia marketing strives to evoke positive emotions from those experiences (Brunk & Hartmann, 2019; Holotová, Kádeková & Košičiarová, 2020; Lasaleta, Sedikides & Vohs, 2014; Rana et al., 2021; Spaid, 2013). It is noteworthy that individuals can feel nostalgic toward objects that were more common in a time before they were born, meaning that nostalgia does not necessarily have to stem from personal experience (Holbrook & Schindler, 1991). However, not all definitions of nostalgia in previous literature include the possibility of individuals feeling nostalgic toward a time before their lifetime (Zhou et al., 2019). Nevertheless, multiple authors disagree that nostalgia is limited to personal experience, distinguishing nostalgia into two categories: personal nostalgia, which refers to memories an individual has experienced, and historic nostalgia (also called non-personal nostalgia), which refers to experiences not lived first hand (Ju et al., 2016; Muehling, 2013). Additionally, Baker and Kennedy (1994) propose three nostalgia levels: Real, simulated, and collective nostalgia. Real nostalgia refers to personal experiences that may trigger nostalgia, such as a song popular from our childhood. However, if a personal experience is unavailable, it is possible to elicit a simulation of non-personal nostalgia that evokes the same emotions and symbolic meanings as personal nostalgia. Lastly, it is also possible to experience nostalgia collectively as a representation of culture, a generation, or even a country. This kind of nostalgia is consistent between individuals, and group members share symbolism. With this said, it would be possible to experience a nostalgic sensation without having any personal experience, knowledge, or attachment to an object or time period.

Holbrook and Schindler's (1991) definition claims that nostalgia is the longing for a solely positive emotion of the past. Other authors mean that nostalgia is a more bittersweet phenomenon, combining both positive and negative emotions in a complex manner (Lasaleta, Sedikides & Vohs, 2014; Spaid, 2013; Zhou et al., 2019). Though definitions of nostalgia may differ, all agree that it is a form of reflection on the past that evokes emotions.

In our paper, we cite Holbrook and Schindler's (1991) definition of nostalgia and accept that the sensation of nostalgia does not only stem from personal experience. Furthermore, we choose not to further sub-categorize nostalgia, as this aspect will not be analyzed in this paper due to it not being a critical factor in answering our hypotheses.

## 2. Literature Review

### 2.1 Previous Research

Upon reviewing the existing literature regarding nostalgia marketing, many articles focus on the different types of existing nostalgia and how those nostalgic feelings can be evoked (Brunk & Hartmann, 2019; Muehling, 2013; Muehling & Pascal, 2011; Spaid, 2013). Brunk and Hartmann (2019) found that enchantment (or re-enchantment, as they call it) can be achieved by nostalgia marketing through three different routes: re-enactment (integrating previously popular brands into contemporary life), re-instantiation (utilizing symbolic meaning of the past), and re-appropriation (playful rendering of the past). The separate routes also evoked distinct types of nostalgia, where re-enactment sparked a progressive nostalgia, re-instantiation led to a reluctant nostalgia, and re-appropriation resulted in a playful nostalgia (Brunk & Hartmann, 2019). The managerial contribution of this paper is the discovery of the routes to enchantment through different modes of nostalgia. However, amongst their suggestions for future research, the authors urge further research regarding measuring the effect nostalgia marketing has on brand attachment, brand loyalty, or purchase intention (Brunk & Hartmann, 2019).

Muehling (2013) also defines two different types of nostalgia - personal and historical - and investigates the relative effects these types of nostalgia have on consumers' formation of brand attitudes through ad exposure. Personal nostalgia is described as something that the individual had personally experienced in the past, while historical nostalgia refers to a time before one was born. Through creating fictitious ads to manipulate the type and level of nostalgia for a non-existing camera brand, the author tested the brand attitude of the participant while eliminating the variable of previous brand attitude. Muehling found that both types of nostalgia had a positive effect on consumer brand attitudes. However, perhaps more interestingly, a surprising amount of personal nostalgia was discovered amongst participants who had been exposed to the historic nostalgia ad, leading the author to discuss the psychological reason for this. The author concluded that nostalgia marketing has a broad audience, as personal nostalgic responses are also possible to evoke amongst consumers who have not experienced the subject of an ad (Muehling, 2013).

Lasaleta, Sedikides, and Vohs (2014) examined the effect of nostalgic emotions by conducting six experiments. The level of nostalgia was manipulated by showing either a nostalgic or non-nostalgic ad or encouraging participants to write a nostalgic or non-nostalgic autobiographical text. The authors found that participants were willing to pay a higher price for a product after being exposed to a nostalgic ad, and that evoking nostalgic emotions lessens the individual's desire for money. The results were explained through the theory of social connectedness, concluding that the lessened desire for money may lead the individual to be more prone to purchasing products when experiencing nostalgic emotions due to wanting to connect to social groups.

Ju et al. (2016) examined the effect different fictitious nostalgia marketing ads by non-existing brands would have on consumer behavior. This was done by testing three product categories, investigating if there would be a difference in effect. The study applied the theory of self-continuity, which regards humans striving to remain coherent with past experiences and self. Contrary to their hypothesis, the authors found an effect regardless of product type. Furthermore, the study showed that nostalgia had a significant positive relationship with purchase intention when mediated by brand attitude. A significant relationship between increased perceived self-continuity and attitude towards the ad and the brand was also established. Moreover, brand attitude was directly affected by self-continuity and had a full mediating role in the relationship between nostalgia and purchase intention. The results also disclosed that perceived self-continuity and purchase intention only had a significant relationship when mediated by brand attitude (Ju et al., 2016).

Seounmi and Jin (2017) also investigated nostalgia's effect on purchase intention, while examining the moderating role of social influence in nostalgia marketing on the social media platform Pinterest. The authors utilize pictures from existing and successful brands in their research by creating different boards on Pinterest. The study results found a significant relationship between higher levels of evoked nostalgia and increased attitudes towards Pinterest and the brand, more willingness to pass along the pin, better relationship quality, and increased purchase intention. Furthermore, the study found that social influence positively moderated the relationships between nostalgia and all dependent variables (Seounmi & Jin, 2017).

Zhou et al. (2019) also concluded that nostalgia increases purchase intention, researching the matter through nostalgic food labels. Apart from establishing nostalgia's effect on attitude towards food by analyzing survey responses, the hypothesis was tested in a restaurant with buying customers. The authors found a significant difference between the nostalgic and non-nostalgic labeled dish, where the nostalgic labeled dish was ordered twice as often. As such, the authors concluded that the emotive attributes connected to nostalgia are a major influence on its effect on consumer behavior (Zhou et al., 2019).

Similar to market-driven measures, such as purchase intention, Burnkrant and Unnava (1995) investigated whether self-referencing leads to increased persuasion. This was done by examining the impact that ads with different levels of self-referencing have on consumers' persuasion. Their first experiment concluded that a high level of self-reference positively impacted persuasion by manipulating self-reference and the relevance of an accompanying picture. However, when self-reference was moderated by a high picture relevance, self-reference's effect on persuasion lessens. This is explained by the relevant picture evoking elaboration by the consumer, a similar effect to what a high self-reference message elicits (Burnkrant & Unnava, 1995).

A second experiment was conducted to further investigate the possible moderation of self-reference through a variable known to enhance elaboration. The independent variables self-referencing and grammatical form of the message were examined. Formulating a

message as a question has been shown to cause stronger elaboration than a statement, which is manipulated and tested in correlation to self-referencing in this experiment. The authors showed that self-reference could have a positive effect on persuasion when formulated as a statement. However, when the message was posed as a question, a higher level of self-reference had a negative impact on consumers' attitudes and net cognitive responses. The authors discuss the reason behind this outcome, pondering whether the elevated elaboration caused by the question leads the consumer to reflect further, resulting in negative arguments. In conclusion, self-reference positively affected persuasion when paired with a statement and an irrelevant picture. At the same time, there was a lesser effect when combined with a relevant picture and a negative effect when paired with a question (Burnkrant & Unnava, 1995).

Rana et al. (2021) established a conceptual framework and future research agenda that offered an account of nostalgia in marketing and where the field of research requires further investigation. By reviewing previous research, they assembled and categorized studies published before 2021 under five research themes: nostalgia and branding; nostalgia and consumer behavior; nostalgia and communication; nostalgia across regions and countries; nostalgia and business disruption. Because of this construct, they can provide a comprehensive understanding and explanation of previous findings regarding nostalgia in marketing and point out where gaps in the research area exist. The authors state that previous literature has made much progress in how nostalgia relates to psychology but could improve in the knowledge of nostalgia and marketing practices. As such, they stress the importance of advancing the understanding of nostalgia's relationship to the market and economic environment, thus its ability to affect brand equity and capitalize on consumer behavior. Among these recommendations, the authors suggest expanding the knowledge of how nostalgia relates to market-driven variables such as purchase intention. A notion also confirmed and encouraged amongst multiple authors within the field of research (Brunk & Hartmann, 2019; Lasaleta, Sedikides & Vohs, 2014; Rana et al., 2021).

## 2.2 Synthesis

Nostalgia has been a top trend in marketing in multiple product categories the last several years and is most effective when relating to consumers' self by eliciting memories and experiences (Lasaleta, Sedikides & Vohs, 2014; Rana et al., 2021). When an object has a nostalgic feature, it has been shown to instill individuals with social connectedness while decreasing antisocial behavior and increasing prosocial behavior (Lasaleta, Sedikides & Vohs, 2014). This indicates that nostalgia does not only connect us to our past but other people as well, reinforcing the all-encompassing effect that nostalgia can have on us. Previous studies regarding consumer behavior also show that nostalgia can be evoked even when using non-existing brands (Muehling, 2013), meaning a product or brand history is not a necessity to use nostalgia marketing techniques.

Most studies within the field of research have focused on nostalgia's relationship with market-driven variables concerning the brand experience, such as brand attitude, brand

attachment, or brand association (Muehling, 2013; Muehling & Pascal, 2011; Rana et al., 2021). However, a limited amount of studies have investigated the effect of nostalgia in a consumer decision-making process (Ju et al., 2016; Lasaleta, Sedikides & Vohs, 2014; Rana et al., 2021; Seounmi & Jin, 2017; Zhou et al., 2019). Thus, much has been established regarding the subjective nature of nostalgia and its relation to a brand or product. In contrast, less has been established regarding the behavior of nostalgia in practice, such as nostalgia's effect on consumers' purchase intention. Consequently, the field of research exhibits a lack of knowledge of nostalgia's effect on purchase intention, and further investigating this area could aid the understanding of nostalgia in marketing.

Furthermore, previous studies lack consensus in their findings as they are spread across various product categories, cultures, and consumer types (Rana et al., 2021). Along these lines, the generalization of findings is relatively low, as it is uncertain if they could be replicated in different contexts. Holbrook and Schindler (1991) explain that nostalgia is a complex mechanism determined by a vast array of influences, including culture the individual is a part of. As such, there is a gap in the research to understand further nostalgia's behavior between various cultures, with different product categories, and various consumers.

Along with this, most studies have evoked nostalgia through experiential marketing, food labels, or by utilizing the history of existing brands (Brunk & Hartmann, 2019; Lasaleta, Sedikides & Vohs, 2014; Seounmi & Jin, 2017; Spaid, 2013; Zhou et al., 2019). However, even fewer studies have examined the effect of nostalgia marketing through the use of a non-existing brand to exclude previous brand attitudes or brand attachment (Ju et al., 2016; Muehling, 2013). Out of these articles, only one examined the relationship between nostalgia marketing and consumers' purchase intention (Ju et al., 2016). Given the small number of published studies, coupled with the fact that multiple authors suggest further research should examine the effect of nostalgia marketing regarding consumers' purchase intention, and the rising use of nostalgia marketing (Brunk & Hartmann, 2019; Rana et al., 2021; Spaid, 2013) – we observe an existing gap in the previous literature on what effect nostalgia marketing ads have on consumers' purchase intention, separately from existing brand attitudes or brand attachment.

Psychological perspectives centered around the self have been the most frequently used research areas regarding nostalgia, given the subjectivity of nostalgia as a phenomenon. Therefore, theoretical perspectives such as self-connectedness, self-concept, self-identity, self-continuity have been applied to be able to investigate the occurrence of nostalgia (Brunk & Hartmann, 2019; Ju et al., 2016; Muehling, 2013; Rana et al., 2021; Spaid, 2013; Zhou et al., 2019). A few studies have also focused on the heightened social connectedness nostalgia fosters and the factor of social influence regarding nostalgia marketing (Lasaleta, Sedikides & Vohs, 2014; Seounmi & Jin, 2017). The evident trend amongst previous research has been applying perspectives focusing on how nostalgia may relate to the social aspects of identity and consumer behavior. As a result of this, there is a gap in research regarding the individual's information processing of nostalgia without the interference of social influences.

Table 2.1 Literature Review Matrix

| Article  | Main Topics   | Main Purpose  | Research Design  | Main Findings  |
|--|---|---|--|--|
| Brunk & Hartmann (2019)<br><i>Nostalgia marketing and (re-)enchantment</i>   | Nostalgia marketing   | To understand how nostalgia creates a sense of enchantment and outline guidelines for marketers on utilizing nostalgia.                   | Qualitative research collecting primary data (19 interviews and 54 essays) and secondary data examining existing marketing literature. | Three ways to create the sensation of enchantment with nostalgia and establishing a framework with managerial implications and advice. Conclusively, the authors make suggestions for areas for further research.              |
| Burnkrant & Unnava (1995)<br><i>Effects of Self-Referencing on Persuasion</i>  | Self-referencing, brand choice                              | To investigate the effect of self-referencing on persuasion.  | Experimental design, undergraduate students (N=136), conducted in the USA  | Found that self-referencing increases persuasion but may vary depending on the strength of the message and the grammatical form of self-referencing.   |
| Ju et al. (2016)<br><i>Nostalgic marketing, perceived self-continuity and consumer decisions</i>   | Experiential marketing, consumer behavior, self-continuity  | To investigate whether nostalgia marketing affects consumer decisions, brand attitude, purchase intention, and perceived self-continuity. | Experimental design, ages 20-40 (N=199) from the USA.  | Nostalgic advertisements elicited higher perceived self-continuity, a better brand attitude, and a higher purchase intention.  |
| Lasaleta, Sedikides & Vohs (2014)<br><i>Nostalgia weakens the desire for money</i>   | Nostalgia, social connectedness                             | To examine if nostalgia is effective through weakening the consumers' desire for money.   | Six separate experimental studies. Participants were 20-35 from the USA.   | Nostalgia weakens the desire for money due to the social connectedness it fosters with consumers.  |
| Muehling (2013)<br><i>The relative influence of advertising-evoked personal and historical nostalgic thoughts on consumers' brand attitudes</i>        | Nostalgia marketing, consumer brand attitudes, self-concept | To what extent different forms of nostalgia will have differential influences on the ad exposure - brand attitude relationship.           | Experimental design, ages 19-60 (N=178), conducted in the USA.   | Personal nostalgia has a positive effect on consumers' brand attitude and willingness to pay.  |
| Rana et al. (2021)<br><i>Promoting through Consumer Nostalgia: A Conceptual Framework and Future Research Agenda</i>                                   | Nostalgia marketing   | To provide a theoretical framework and understanding for nostalgia in marketing, that can serve as a tool when constructing marketing.    | A qualitative study that draws upon previous research.   | The study summarizes the existing research made on nostalgia within marketing and provides a foundation for future research.   |
| Seounmi & Jin (2017)<br><i>Reconnecting with the past in social media: the moderating role of social influence in nostalgia marketing on Pinterest</i> | Nostalgia marketing, brand attitude, purchase intention     | Research nostalgia's and social influences' effect on consumers' relation towards brands.   | Experimental design, ages 20-30 (N=143) conducted in the USA,  | Nostalgia positively affects brand attitude, purchase intention, brand-consumer relationship quality. However, effects vary depending on the strength of experienced nostalgia. Nostalgia was evoked through Pinterest boards. |
| Zhou et al. (2019)<br><i>Hungering for the past: Nostalgic food labels increase purchase intentions and actual consumption</i>                         | Nostalgia, Purchase intention                               | To explore if nostalgic labels strengthen the appeal of food items and dishes when they are related to the consumers' childhood.          | Four experimental studies with varying ages of participants. Three took place in China and one in the USA.                             | Nostalgia affects purchase intention and purchase behavior positively when used with food labels in China.   |

### 3. Research Problem

To experience nostalgic emotions is a powerful phenomenon, which has become increasingly popular for brands to evoke through marketing. Consequently, gaining a deeper understanding of how to apply nostalgia in advertising appropriately has become a current matter. However, given the multifaceted nature of consumer behavior, the alternatives to approaching this matter are many. Upon reviewing previous research, we formulated a research problem that aims to fill the gaps between what we know and what we strive to know.

In this study, we strive to examine the direct relationship between nostalgia marketing and purchase intention - the variable most commonly used to predict a purchase (Norfarah, Koo & Siti-Nabiha, 2018). A limited number of studies regarding nostalgia marketing have previously been conducted with this market-driven variable (Ju et al., 2016; Seounmi & Jin, 2017; Zhou et al., 2019), while several researchers suggest this area of focus for future studies (Brunk & Hartmann, 2019; Lasaleta, Sedikides & Vohs, 2014; Rana et al., 2021). This gap is part of the reason why it is both relevant and interesting to examine further. Along with this, studying the relationship between nostalgia marketing and purchase intention would also contribute to understanding nostalgia regarding consumer decision-making processes. This would expand the knowledge of the utility of nostalgia marketing since the field of research previously has focused more on variables such as brand and ad attitude (Centeno & Wang, 2020; Holotová, Kádeková & Košičiarová, 2020; Ju et al., 2016; Laroche, Vinhal & Richard, 2010; Madden, Allen & Twible, 1988; Muehling & Pascal, 2011, 2011; Putrevu & Lord, 1994; Seounmi & Jin, 2017; Spears & Singh, 2004). We intend to examine these variables as well, but as control variables in regards to purchase intention. Other control variables include product involvement and product knowledge. We constructed our research design to include control variables for purchase intention to enable deeper analyses of our data and strengthen the findings.

Many studies have been conducted with well-established brands, using their history as a tool to evoke nostalgia (Holotová, Kádeková & Košičiarová, 2020; Lasaleta, Sedikides & Vohs, 2014; Seounmi & Jin, 2017). A method proved effective, as brand attachment can be a source of nostalgia, depending on the individual's relationship with the brand prior to the study. Utilizing existing brands might not be the most efficient way to study nostalgia since brand attachment is influenced by many factors. A negative experience, personal preference, or simply a lack of attachment may affect the study results, producing skewed findings. Therefore, to avoid such interference, our study will be conducted using fictitious products and brands, since previous studies have shown that they can evoke nostalgia without brand or product attachment. These small number of studies have shown that nostalgia can impact consumers' attitudes, even when utilized with fictitious brands and ads. However, little has been concluded about nostalgia marketing's impact on purchase intention (Ju et al., 2016; Muehling, 2013; Muehling & Pascal, 2011; Pascal, Sprott & Muehling, 2002). As such, we

found this to be an interesting matter to further investigate, given the scarcity of previous research regarding nostalgia marketing and non-existing brands.

Studies show that challenging times lead to an increase in consumers' receptivity to nostalgia marketing (Spaid, 2013). Given that we are currently living in a pandemic with an unstable global political climate, we may assume that the troubled times will continue, further incentivizing the ongoing trend of nostalgia marketing. Since nostalgia is a fundamental concept that we experience in our everyday life and is proven to influence our attitudes and behavior, further investigating this topic could lead to a deeper understanding of consumer behavior. Our research can contribute to the existing field of research and expand our current understanding and provide insight for future research and marketing practice. Thus, we strive to answer the following research question: What effect does nostalgia marketing have on consumers' purchase intention?

## 4. Theoretical Framework

### 4.1 Self-referencing Theory

Our research is anchored in the theory of self-referencing, which was introduced by Rogers, Kuiper, and Kirker (1977). This theory expands the explanations of the self and illustrates how individuals use self-referencing as a tool to dissect and process information. It is a powerful encoding device that enables us to store information in our memory. The device functions by connecting the stimulus of the environment at a given place and time with certain information, thus establishing a recall of said information in cohesion with the stimulus experienced regarding the self (Rogers, Kuiper & Kirker, 1977).

We decode the world every day by processing information in relation to ourselves, and in such a way, become experts on encoding through self-referencing. This information concerning the self is stored in a favorable position to be accessed within our memory, as we are continuously revisiting and developing ourselves. Our memory is a complex and advanced storage mechanism where it is beneficial to be positioned deep within the knowledge network for easier retrieval and recall. Along these lines, self-referencing is a useful method to strongly etch information in our minds and create an efficient retrieval of stimulus and memory. As such, self-referencing is a tool to put us in previously experienced emotional states, thus influencing our behavior. However, its strength may vary depending on the state of the individual's experience of self. The effect of self-referencing is strongest amongst traits to which the individual relates to. Meaning, if people see themselves as athletic, cues indicating this trait will become particularly important for those individuals as it is seen as an extension of themselves (Rogers, Kuiper & Kirker, 1977).

### 4.2 Self-referencing Theory & Nostalgia Marketing

The self expands beyond our direct person to include external entities such as family, favorite music, places, and possessions (Belk, 1988). In accordance with self-referencing theory, information processed in connection to ourselves increases recall (Rogers, Kuiper & Kirker, 1977). Thus it is possible to self-reference information that one has not personally experienced. This enables individuals to feel nostalgic and relate to events, times, places, and possessions they have not experienced firsthand. This is possible as long as it is experienced somehow as a part of the self, as if experienced by their parents, friends, or partner (Wildschut et al., 2006). Meaning it is rather the thought about a happening or an object that is nostalgic and not necessarily the lived experience. Although one might think nostalgic thoughts about one's experiences, it is also possible to feel nostalgic about something never previously encountered simply by it appearing nostalgic to the observer. Therefore, through encoding information in connection to the self, it is possible to evoke the sensation of nostalgia amongst people even though they have never experienced it. In other words, nostalgia is the result of reminiscent emotions evoked by an occasion or an object, that can be perceived as nostalgic regardless of any prior experience.

Nostalgia is influenced by people's creation of identity, as well as our need to feel acknowledged and accepted by different social groups and contexts. Meaning that our feelings are highly influenced by the perception of what we are expected to feel and evoke emotions according to the belief of the group (Wildschut et al., 2006). These thoughts are part of what is called collective nostalgic thoughts, where we can experience nostalgia through the eyes of those present, which generally favors more positive emotions as we lean towards assumptions in line with "the good old days" (Muehling & Pascal, 2011). This phenomenon explains why people romanticize time periods and events that took place long before they were born, such as millennials who have positive nostalgic feelings about the Woodstock festival in 1969.

As previously mentioned, nostalgia can evoke both negative or positive emotions. However, Wildschut et al. (2006) claim that people tend to be forgiving of negative nostalgic emotions as we try to redeem our life story, thus positively compensating for negative recall. Therefore, nostalgia more often than not conjures positive associations and sentiment towards the objects which generated it. Along these lines, nostalgia may evoke strong emotions that can be self-referencing, even regarding a situation not personally experienced, that still enhances recollection, retrieval, and information processing.

### 4.3 Self-referencing Theory & Purchase Intention

In previous research, self-referencing theory is more commonly applied to understand the process of interpreting information as part of the self rather than its correlation with purchase intention. However, Burnkrant and Unnava (1995) examined the effect self-referencing has on persuasion, a market-driven variable that is arguably comparable to purchase intention. Their study showed that self-referencing advertisements communicating directly with the receivers enhanced their level of retrieval of the message, as well as their level of persuasion (Burnkrant & Unnava, 1995). The conclusion of their study can be seen as an indication of a possible correlation between self-referencing and purchase intention, meaning a level of persuasion is often necessary to possess an intention to purchase.

Regarding the effectiveness of marketing strategies, an enhanced level of message recall is both desirable and current, leading self-referencing to be an appropriate theory to analyze advertisements' effects on market-driven variables.

### 4.4 Hypotheses

As scholars have shown, nostalgia as a phenomenon induces positive effects on the consumer. To evoke reminiscent emotions with the consumer has shown to create favorable responses in relation to brand managerial ambitions. However, although a small number of past studies have observed a difference in the effects between nostalgic and non-nostalgic advertisements, the amount of influence that nostalgia has over consumer behavior differs (Ju et al., 2016; Lasaleta, Sedikides & Vohs, 2014; Muehling, 2013; Muehling & Pascal, 2011).

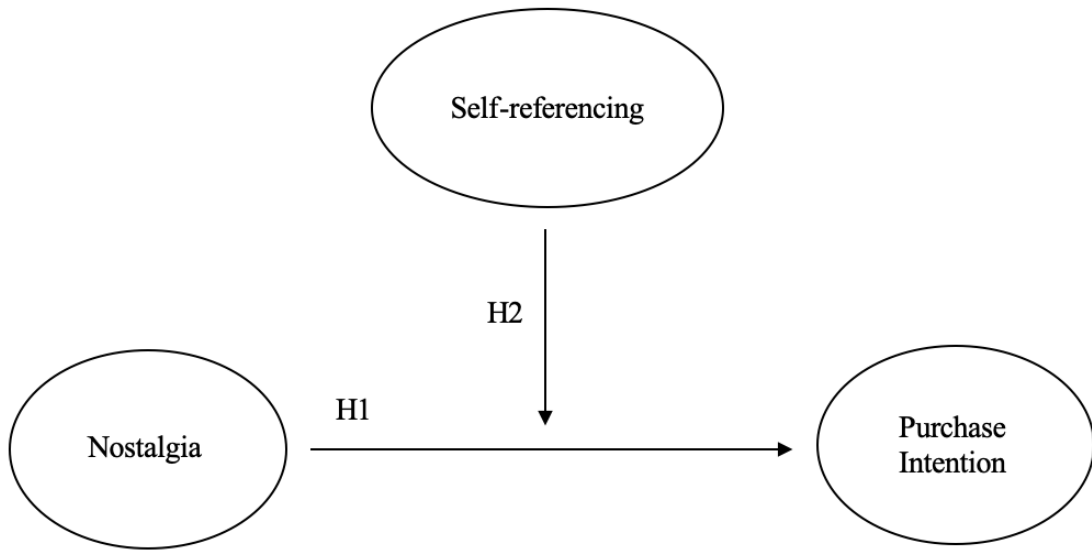
In some experiments, the effects have been minor and only showcased a slight increase compared to non-nostalgic environments (Lasaleta, Sedikides & Vohs, 2014; Muehling, 2013; Muehling & Pascal, 2011). On the other hand, other studies identify what seems to be a more considerable effect of nostalgia on brand-related dependent variables and indicate a relationship between nostalgia and especially purchase intention (Ju et al., 2016).

Nostalgia has been shown to have a positive relationship with market-driven variables, such as brand attitude, which in turn indicates consumers' purchase intention (Ju et al., 2016; Spears & Singh, 2004). Because of this, one could assume that there might be a direct relationship between nostalgia and purchase intention as well. Therefore, it is of interest to examine if there also exists any correlation between nostalgia and purchase intention. However, another factor to take into consideration is that previous studies experience difficulty generalizing the results. The conditions in which they were performed have hindered this, as some product categories and samples have been too context-specific, thus lacking external validity (Rana et al., 2021; Zhou et al., 2019). Studies have also found that it is hard to confirm the significance of the relationship as the dependent variables are influenced by other factors, such as brand attachment and attitude towards the advertisement or the brand. Because previous studies conclude that reminiscent emotions positively influence brand-related consumer behaviors, this leads us to hypothesize that introducing an advertisement influenced by nostalgia will positively affect the purchase intention of the respondent.

***H1: An advertisement influenced by nostalgia will positively affect purchase intention.***

This effect is seemingly a subject of individual internalization, thus a product of extending the self onto the product or advertisement. Previous studies utilize several different theories regarding aspects of the self to explain this highly complex process (Ju et al., 2016; Rana et al., 2021). However, only a few found a significant explanatory effect for their theory, one out of which was performed by Burnkrant and Unnava (1995), who found that higher levels of self-referencing increased persuasion. A possible result of an increased persuasion within consumer behavior is an increased purchase intention. Furthermore, nostalgia is highly dependent on how the person views the nostalgia as a part of the self; thus self-referencing theory may be a useful perspective to discover and illustrate the effects of nostalgia. Moreover, the individual's interaction with the self is a deciding factor in consumer behavior, which is why the amount of self-referencing may prove to have an interacting effect on nostalgia's influence on brand-related variables (Burnkrant & Unnava, 1995; Ju et al., 2016; Muehling, 2013). As such, self-referencing is hypothesized to have an interacting effect on the relationship between nostalgia and purchase intention.

***H2: Self-referencing will have an interacting effect on the relationship between nostalgia and purchase intention, such that when self-referencing is high, nostalgia has a stronger effect on purchase intention.***



*Figure 4.1 Conceptual Model*

## 5. Method

### 5.1 Research Approach

In modern research, two different research approaches are most frequently used: inductive or deductive. The inductive research approach allows the empirical data to shape the theoretical framework, which will then be used to structure the paper and analyze the observations. In this manner, the observations guide the author to the appropriate theory or theories. In contrast, the deductive research approach is structured to test an existing theory or hypothesis by gathering empirical data. However, these two approaches have spawned a third research approach: the abductive research approach. This approach is constructed as a combination of both inductive and deductive, where the search for empirical data and applicable theories is a continuously intertwined process, allowing observations to guide the choice of theories, while theories simultaneously lead to new perspectives of the search for empirical data (Bryman & Bell, 2017).

As we formed our hypotheses from existing theories and tested them through our gathering of unique data, a deductive research approach was deemed most fitting. The purpose of the study was to test the hypotheses and contribute to the existing theory, while generating statistically tested conclusions that can be generalized beyond the specific conducted experiment (Bryman & Bell, 2017).

### 5.2 Research Method

Regarding the research method of a study and the gathering of empirical data, there are two dominant approaches; quantitative or qualitative research method. The quantitative research method is most commonly applied when conducting studies with measurable results that test hypotheses, as it is grounded in an objective perspective on reality. This allows the results of studies with a quantitative research method to be generalized more frequently. However, the qualitative research method emphasizes the social constructs of society and is more frequently used to gain a deeper understanding of a specific and relatively new topic. The qualitative method is subjective, supporting the notion that reality is not an objective matter but unique to each individual's perception (Bryman & Bell, 2017).

As we were conducting a study producing measurable results, with a purpose to statistically test and prove several hypotheses grounded in existing theory, we systematically chose to gather empirical data in a quantitative manner (Bryman & Bell, 2017).

### 5.3 Reliability and Validity

A definition of reliability can be summed up as the absence of errors – to have as few errors as possible. With few errors, the reproducibility of a test is heightened, leading to a higher probability of the test showing the same result if conducted again. As our quantitative

research was based on questionnaires with seven-point Likert scales, the appropriate manner of measuring the internal reliability of the items constituting a variable is through a Cronbach's alpha test. This is tested and presented with a number between 0 and 1. The limit of acceptability for a Cronbach's alpha test is 0.7, while a measure above 0.8 is considered highly acceptable. A high level of internal reliability indicates that items are of the same construct and measure the same phenomena (Burns & Burns, 2008).

Another important aspect of quantitative research is the validity of the tests and results. This can be assessed through both internal and external validity. The internal validity regards how the research was conducted and to what degree it is possible to explain the interrelationship between the examined variables – ensuring that unwanted variables and factors do not affect the results (Burns & Burns, 2008). We ensured a high level of internal validity by testing control variables and examining their possible effect on our dependent and independent variables. Furthermore, we will discuss and consider other possible explanations for demonstrated causal relationships to continuously question and evaluate the internal validity of our research.

The study's external validity depends on the sample that produced the result, indicating how extendable the study's conclusion is to the general population (Burns & Burns, 2008). The generalizability of our research is limited due to a short time frame and small research budget, thus leading us to research a marketing phenomenon by examining respondents' attitudes regarding solely one product category through online questionnaires. However, by having a rather significant sample size of respondents belonging to the millennial generation, we believe in having produced a generalizable result regarding the effect of nostalgia marketing.

## 5.4 Research Design

This study aimed to observe the effects and influence of nostalgia marketing on consumers' purchase intention, while investigating if the level of self-referencing in the ad had an interacting effect. The research was executed as a cross-sectional experimental study consisting of four separate tests, since the level of nostalgia needed to be manipulated along with the level of self-referencing. Thus, allowing us to examine the causal relationship between the dependent and independent variables (Burns & Burns, 2008). As our hypotheses stated, we believed self-referencing to have an interacting effect between nostalgia and the dependent variable purchase intention. Therefore, self-referencing acted as an interacting variable in the analysis of our data.

We manipulated nostalgia and self-referencing in a 2 x 2 factorial design to test the two independent variables. A short text manipulated the level of nostalgia together with an overlay text section with a statement that manipulated the amount of self-referencing. Previous research has shown the possibility to achieve a sensation of nostalgia by a picture background on a poster ad together with a short text referencing the past (Muehling, 2013; Muehling & Pascal, 2011). Studies have also managed to manipulate the amount of

self-referencing by altering the message between directly addressing the reader or writing more generally without a specific receiver (Burnkrant & Unnava, 1995). We manipulated the level of nostalgia and self-referencing similar to these studies.

In a factorial design, it is possible to derive information about the effects of each variable manipulated and their interrelationship. In this manner, we observed and analyzed the interaction effect that self-referencing had between nostalgia and the dependent variable. In addition to this, the resource limits of this study led us to deem a factorial design appropriate to utilize, as it manages to evaluate several manipulated variables within the frame of one experiment (Burns & Burns, 2008). Therefore, the experiment aimed to manipulate a high versus low amount of nostalgia through a text, and a high versus low amount of self-referencing by different types of statements in the ads. This way, we compared four components' effects on purchase intention. These components were made of: high nostalgic text with a high self-referencing statement; high nostalgic text with a low self-referencing statement; low nostalgic text with a high self-referencing statement; low nostalgic text with a low self-referencing statement.

Multiple control variables were included in the questionnaires to further isolate and control the causes and results of our observations by ensuring that previous perceptions and opinions of the participants do not affect the results of the tests. This was conducted by measuring the respondents' perceived product knowledge, product involvement, as well as attitudes towards the brand and advertisement. The control variables would catch eventual interfering effects, where the relationship between nostalgia and purchase intention could be misrepresented because of other variables than purchase intention. Attitude towards ad and brand has been previously said to affect the relationship between purchase intention, which makes it highly relevant for our results to identify possible interference (Ju et al., 2016). Previous product knowledge and product involvement aided in understanding if respondents' relation to the product might have biased the results. To include all of these control variables, and measuring them accordingly, were important aspects of the study, as a higher level of experimental control indicates stronger findings (Burns & Burns, 2008).

The experiment was analyzed through *analysis of covariance*, also called *ANCOVA*, where it is possible to test the significance between several different control variables and partial out effects of interacting variables (Burns & Burns, 2008). Most importantly, this method makes it possible to derive the interrelationship between variables, which was required to manipulate both nostalgia and self-referencing. In our case, we wanted to see the effects of nostalgia on purchase intention and examine the interacting effect that the level of self-referencing had on that relationship. This allowed us to either accept or reject our hypotheses. Meanwhile, by including covariates in our analysis, we examined additional continuous variables and their influence and relation to the dependent variable. The adjustments for covariates reduce error variance, which in turn increases the precision of the results and lowers the risk for a false negative (Burns & Burns, 2008).

When running the test, the output we required was firstly descriptive statistics, where we observed any differences in means among measured variables and demographic qualities. A manipulation check was conducted through *independent t-tests* to ensure that the stimuli behaved according to our requirements. Reliability analyses in the form of *Cronbach's alpha* were then calculated regarding the grouping of items for each variable. A set of *Pearson's correlation* were calculated to examine if there were significant relationships between any market-driven variables. Following this, we confirmed key assumptions regarding the collected data by testing its homogeneity of variance in *Levene's test of equality of error variance*, as well as the normality of the data in a *quantile-quantile plot* and *Shapiro-Wilk normality test*. The main results of the study were found in the ANCOVA test between-subject effects. This gives us the indication of whether the fixed factors nostalgia and self-referencing had a statistically significant effect if they interact, as well as the size of their effect and the observed power. If factors are shown to be significant, a *post hoc test* can be necessary to reveal where the significant differences occur and review an *estimated marginal means*, which the post hoc test is based upon (Burns & Burns, 2008). Supplementary analyses were conducted on the collected data to reach further insights. Conclusively, we based the analysis of the study on the information derived from the ANCOVA, and results will be revealed using the method presented in this section.

To make valid research contributions, our research design was similar to many previous studies and utilized many of the same methods for measurements, forming the questionnaire and experiment design. As such, we can ensure that our results are comparable and relevant in relation to previous studies' findings.

## 5.5 Stimuli

Four experimental advertisements were developed with different stimuli manipulation to test the hypothesized relationships. These consisted of either a high or low nostalgic text, and either an accompanying high or low self-referencing statement. The high nostalgic text aimed to evoke positive emotions from the consumer by romanticizing the past by stating:

“*Relive Your Memories. There's no time like the past. Teenage romances, hanging out with friends and watching movies on DVD. Revive the nostalgia, with these timeless jeans!*”

The high self-referencing text addressed the consumer directly with an engaging statement, with the intent to make the consumer reason about the subject matter from a personal perspective:

“*Remember your old stiff jeans that were unpleasant to wear. Now imagine yourself wearing our comfortable, soft and stretchy high quality denim shaped after how you move. They will fit you perfectly. Jeans made for you.*”

The low nostalgic text focused on the present by stating:

“*The Year of 2021. There’s no time like the present. Smartphones, video calls and streaming movies online. Live in the now, with these modern jeans!*”

The low self-referencing text consisted of a non-personal statement focusing on communicating a general message:

“*Jeans made from high quality denim. Developed with the proper materials and manufactured in our own factories. Thoroughly tested in our laboratories to ensure quality and washability. Jeans made for everyone.*”

All texts were developed inspired by previous studies to increase comparability but were altered to fit the context of this study (Burnkrant & Unnava, 1995; Ju et al., 2016; Muehling, 2013; Muehling & Pascal, 2011).



Figure 5.1 Altered picture



Figure 5.2 Original picture

The accompanying picture to all advertisements presented a man and a woman from behind holding hands while walking down a staircase outdoors, wearing denim jeans and white t-shirts (see Figure 5.1). The picture was collected from unsplash.com, allowing free use of stock photos. It was chosen because of its aesthetics fitting both a modern and a nostalgic ad, paired with the anonymity of not seeing the faces of the people in the picture and wearing white t-shirts. The original photograph (see Figure 5.2) was altered slightly to become even more anonymous. This was accomplished by removing elements in the picture that may have

created possible interfering attitudes of respondents, such as t-shirt prints of skulls. Furthermore, by using the same picture for each advertisement, we could alter as few elements as possible in the different ads, enabling a stronger argument for the produced results being caused by our manipulation of the stimuli in the ad.

Denim jeans were decided to be the focal product for the advertisements, as it allows for a wide range of relevant ads, given that many consumers use the product daily, as well as the product having a broad target audience. Furthermore, it is a possible low engagement product, thus allowing purchase intention to be more easily affected than an expensive product category, such as cars or computers. Thus, allowing the ad a realistic probability to affect the consumer's purchase intention. Furthermore, denim jeans are a product that the target respondents were expected to have previously purchased or will purchase in the future, regardless of age or gender within the chosen frame of the experiment. The sample of participants was also a target market for the product, further justifying the product choice of the experiment. The advertisements can be seen in Appendix C.

## 5.6 Sample

The chosen sample population is millennials, also referred to as Generation Y, containing people born between 1980 and 2000. Legitimizing our sample population was the factor that past studies have used a similar sample population in their research, making the findings of this study comparable to previous results (Holotová, Kádeková & Košičiarová, 2020; Ju et al., 2016; Lasaleta, Sedikides & Vohs, 2014; Seounmi & Jin, 2017). Furthermore, millennials have been suggested to be the sample of further research regarding nostalgia marketing (Rana et al., 2021).

Since we examine the effect of subtle changes in text-based advertisements, we deemed it necessary to limit our sample to native English-speaking countries.

The questionnaires for the main study had 195 respondents, while the pre-test had 80 respondents. Each questionnaire for the main study had at least 45 respondents, thus exceeding the widely accepted rule of having at least ten participants per independent variable (Burns & Burns, 2008). Having a sample size of 195 respondents allowed the experiment to have a greater possible effect size, allowing for more substantial observed power in the conducted analyses and a larger possibility for generalizable results.

## 5.7 Procedure

All respondents were gathered using the paid research survey tool Prolific, limiting the generalizability of the results slightly, as the respondents had to be members of Prolific to partake in the survey. However, Prolific is amongst the superior platforms to recruit subjects and is suitable for researchers performing studies regarding economic and social science experiments (Palan & Schitter, 2018).

The respondents were selected through non-probability sampling due to Prolific being a membership service. This led there to be a zero inclusion chance for some of the members of the population. Respondents were randomly assigned to a test to avoid the possible influence of conscious assignment of participants (Burns & Burns, 2008).

The study was launched at midday CET and made unavailable once the desired quota of respondents in Prolific was reached. Participants were paid a sum of money upon completing the survey, corresponding to a wage of five GBP an hour.

## 5.8 Measures

The primary outcome of the experiment was to evaluate the answers in the questionnaires regarding the different stimuli of the advertisements. The study investigated the dependent variable purchase intention in relation to the independent variable nostalgia and the interacting variable self-referencing. As such, there existed three main areas to be included in the questionnaires that required methods of measurement: Purchase intention, amount of self-referencing, and sensation of nostalgia. The latter two were included in the questionnaires as manipulation checks to ensure that the stimuli manipulation functioned as it would in the pre-testing of stimuli.

Along with this, we tested another four control variables that might have had an interfering effect on the relationship between the dependent, independent, and interacting variables. These control variables were: Brand attitude, ad attitude, product involvement, and product knowledge. None of the variables in our study were novices in the field of research, as there already exist well-established and reliable methods to measure, that is previously used in marketing research (Holbrook, 1993; Kim & Biocca, 1997; Laroche, Vinhal & Richard, 2010; Madden, Allen & Twible, 1988; Merchant et al., 2013; Putrevu & Lord, 1994; Smith & Park, 1992; Spears & Singh, 2004). As such, we applied these acknowledged measurements to test the variables appropriately and in line with prior studies, although slightly adjusted to fit the context and purpose of our research. These are presented in Table 5.1, along with sources and corresponding use of scale.

Table 5.1 Measures

| Measure   | Items  | Scale  | Source   |
|---|--|--|--|
| <b>Ad attitude</b><br>(A <sub>Ad</sub> )                  | 1) Bad/Good<br>2) Boring/Interesting<br>3) Unlikable/Likable   | seven-point semantic differential scale                          | (Madden, Allen & Twible, 1988)   |
| <b>Brand attitude</b><br>(A <sub>Brand</sub> )            | 1) Bad/good<br>2) Unappealing/Appealing<br>3) Unlikable/Likable  | seven-point semantic differential scale                          | (Spears & Singh, 2004)   |
| <b>Nostalgia</b><br>(NO)                                  | 1) Reminds me of the past<br>2) Helps me recall pleasant memories<br>3) Makes me feel nostalgic<br>4) Makes me think about when I was younger  | seven-point Likert scale rating strongly disagree/strongly agree | (Pascal, Sprott & Muehling, 2002)  |
| <b>Self-referencing</b><br>(SR)                           | 1) The ad made me think about my own experiences with jeans<br>2) The ad seemed to be written to reflect my experience with jeans<br>3) The ad seems to be related to me personally<br>4) I can easily picture myself using the product in the ad  | seven-point Likert scale rating strongly disagree/strongly agree | (Abbas, 2014; Burnkrant & Unnava, 1995; Centeno & Wang, 2020; Debevec & Iyer, 1988; Escalas, 2007; Krishnamurthy & Sujan, 1999; Meyers-Levy & Peracchio, 1996) |
| <b>Product knowledge</b><br>(P <sub>Knowledge</sub> )     | 1) I feel very knowledgeable about this product.<br>2) If I had to purchase this product today, I would need to gather very little information in order to make a wise decision.<br>3) I feel very confident about my ability to tell the difference in quality among different brands of this product | seven-point Likert scale rating strongly disagree/strongly agree | (Smith & Park, 1992)   |
| <b>Product involvement</b><br>(P <sub>Involvement</sub> ) | 1) I perceive jeans as:<br>Unimportant/Important<br>2) Jeans: Does not matter to me/Matters a lot to me  | seven-point semantic differential scale                          | (Laroche, Vinhal & Richard, 2010)  |
| <b>Purchase intention</b><br>(PI)                         | 1) How much do you want to purchase these jeans?<br>2) I would like to purchase the advertised product the next time<br>3) I would definitely like to try Hello Denim.   | seven-point Likert scale rating not at all/very much             | (Putrevu & Lord, 1994)   |

## 5.9 Pre-test

We first conducted pre-testing to ensure that the manipulated stimuli are functioning as vessels for nostalgia and enforce self-referencing as the experiment requires. These tests solely regarded the performance of the advertisement elements that were later manipulated in the experiment. The pre-test had 87 respondents. However, seven survey submissions were rejected as they were incomplete, invalid, or duplicate answers from the same respondent. Therefore, the pre-test resulted in having 80 accepted respondents, with a gender distribution of 58 females, 20 males, one prefer not to say, and one other.

*Table 5.2 Descriptive Statistics - Pre-test*

| Gender            | N  |
|-------------------|----|
| Female            | 58 |
| Male              | 20 |
| Other             | 1  |
| Prefer not to say | 1  |

| Age   | N  |
|-------|----|
| 20-25 | 32 |
| 26-30 | 24 |
| 31-35 | 9  |
| 36-41 | 15 |

A text with high nostalgia manipulation was tested to investigate whether it evoked a sufficient amount of nostalgia for our test subjects. A measurement primarily used in previous research, developed by Pascal, Sprott, and Muehling (2002), was used to measure the level of nostalgia (see Table 5.1). We ensured the internal consistency of the nostalgic variable measurement items through conducting Cronbach's alpha reliability analysis, which indicated strong internal consistency ( $\alpha=0.908$ ).

*Table 5.3 Reliability Analysis - Level of Nostalgia - Pre-test*

| Scale Reliability Statistics |                     |
|------------------------------|---------------------|
|                              | Cronbach's $\alpha$ |
| scale                        | 0.908               |

| Item Reliability Statistics             |  |
|---|--|
|   | if item dropped<br>Cronbach's $\alpha$ |
| Reminds me of the past                  | 0.863                                  |
| Helps me recall pleasant memories       | 0.885                                  |
| Makes me feel nostalgic                 | 0.861                                  |
| Makes me think about when I was younger | 0.912                                  |

The pre-test results show that the high nostalgic text scored higher than the low nostalgic text, a statistically significant difference when compared through running an independent samples t-test with a confidence interval of 95%. We can also establish an observed effect size between the difference of means when calculated through a Cohen's d measure ( $NO_{High}$ :  $M=3.89$ ,  $SD=1.56$ ;  $NO_{Low}$ :  $M=2.91$ ,  $SD=1.35$ ;  $NO_{T-Test}$ :  $t(78)=3.01$ ,  $p=0.002$ ,  $d=0.675$ ).

Table 5.4 Independent Samples T-Test - Level of Nostalgia - Pre-test

|                    |             | Statistic | df   | p     | Mean difference | SE difference | Effect Size | 95% Confidence Interval |       |
|--------------------|-------------|-----------|------|-------|-----------------|---------------|-------------|-------------------------|-------|
|                    |             |           |      |       |                 |               |             | Lower                   | Upper |
| Level of Nostalgia | Student's t | 3.01      | 78.0 | 0.002 | 0.978           | 0.325         | Cohen's d   | 0.204                   | 1.14  |

Note. Ha High > Low

However, when conducting the pre-test, the level of nostalgia contained ten items according to the existing research made by Pascal, Sprott, and Muehling (2002). After receiving feedback from respondents and peers regarding the similarities between the ten items, a review of the items was deemed necessary. Upon reviewing similar responses regarding the items from the survey submissions, we decided to narrow down the measurement of nostalgia to four items (see Table 5.1), as this did not alter the outcome of the measurements or pre-test in any significant way. The measured level of nostalgia using ten items compared to four items is presented in Appendix A.

Furthermore, we tested different statement alternatives to establish two options where one elicited high self-referencing and the other low self-referencing. The method to measure self-referencing (see Table 5.1) consisted of rating four items derived from previous research (Abbas, 2014; Burnkrant & Unnava, 1995; Centeno & Wang, 2020; Debevec & Iyer, 1988; Escalas, 2007; Krishnamurthy & Sujana, 1999; Meyers-Levy & Peracchio, 1996). However, since the items do not directly translate into our research question, they were appropriately modified and applied without altering the method's substance. The variable of self-referencing recorded a high level of internal consistency ( $\alpha=0.873$ ).

Table 5.5 Reliability Analysis - Level of Self-reference - Pre-test

| Scale Reliability Statistics |                     |
|------------------------------|---------------------|
|                              | Cronbach's $\alpha$ |
| scale                        | 0.873               |

| Item Reliability Statistics                                     |  |
|---|--|
|   | if item dropped<br>Cronbach's $\alpha$ |
| The ad made me think about my own experiences with jeans        | 0.820                                  |
| The ad seemed to be written to reflect my experience with jeans | 0.813                                  |
| The ad seems to be related to me personally                     | 0.820                                  |
| I can easily picture myself using the product in the ad         | 0.887                                  |

The pre-test concluded that the high self-referencing statement scored higher than the low self-referencing statement, a statistically significant difference with a large effect size when compared with an independent samples t-test with a 95% confidence interval ( $SR_{High}$ :  $M=4.69$ ,  $SD=1.15$ ;  $SR_{Low}$ :  $M=3.46$ ,  $SD=1.37$ ;  $SR_{T-Test}$ :  $t(78)=4.30$ ,  $p<0.001$ ,  $d=0.965$ ).

Table 5.6 Independent Samples T-Test - Level of Self-reference - Pre-test

|                         |             | Statistic | df   | p     | Mean difference | SE difference | Effect Size | 95% Confidence Interval |            |
|-------------------------|-------------|-----------|------|-------|-----------------|---------------|-------------|-------------------------|------------|
|                         |             |           |      |       |                 |               |             | Lower                   | Upper      |
| Level of Self-reference | Student's t | 4.30      | 78.0 | <.001 | 1.23            | 0.286         | Cohen's d   | 0.965                   | 0.467 1.45 |

Note. H<sub>a</sub> High > Low

Lastly, we tested the name of the experiment's fictitious brand to find a neutral name, diminishing the risk of an overwhelmingly negative or positive brand name altering the results of the study. This was done by presenting 14 brand name alternatives and then choosing the most appropriate neutral scoring brand name after being rated on a seven-point Likert scale from *bad* to *good*. Of the 14 brand names, Hello Denim and JeansLab were scored the most neutral and scored identically with 3.9125. As the two names were deemed equally neutral, we chose Hello Denim as it had a slightly lower standard deviation (1.68) when compared to JeansLab (1.74).

Table 5.7 Descriptive Statistics - Brand Names

|                    | Genes | Jiinz | JNS  | DNM  | Hello Denim | Threads | Denim Threads | Dencem | Genim | Jearsy | JeansLab | ByJeans | Clothable | Garment Square |
|--------------------|-------|-------|------|------|-------------|---------|---------------|--------|-------|--------|----------|---------|-----------|----------------|
| Mean               | 2.73  | 1.82  | 3.36 | 4.36 | 3.91        | 3.76    | 3.35          | 2.29   | 1.93  | 2.06   | 3.91     | 3.52    | 2.54      | 2.74           |
| Standard deviation | 1.73  | 1.19  | 1.73 | 1.66 | 1.68        | 1.78    | 1.58          | 1.47   | 1.19  | 1.32   | 1.74     | 1.57    | 1.33      | 1.64           |

After establishing the brand name for our research, a logotype was designed to be included in the questionnaires.



Figure 5.3 Logotype for Hello Denim

# 6. Results

## 6.1 Descriptive Statistics

The questionnaires garnered 215 respondents. However, 20 survey submissions were rejected as they were either incomplete, duplicate, or invalid answers from the respondent. Thus, 195 responses were accepted. The 195 respondents were randomly distributed to one out of four experimental treatment conditions. In these different experimental conditions, the respondents were exposed to an advertisement (as seen in Appendix C) containing either high nostalgia and high self-referencing (n=47), high nostalgia and low self-referencing (n=54), low nostalgia and high self-referencing (n=45), or low nostalgia and low self-referencing (n=49).

The majority of the respondents were female (68.7% female, 30.8% male, 0.5% other). The age of the respondents ranged from 20 to 41, with all age intervals evenly represented and split across the four test groups. A majority of participants were from England (n=141), accounting for 72% of the total sample. After reviewing the demographic statistics of our respondents and the descriptive statistics for the market-driven variables of our research (see Table 6.1), a manipulation check was conducted regarding the independent variables. The complete questionnaire can be seen in Appendix B.

*Table 6.1 Descriptive Statistics - Experiment*

|                    | <b>Product Involvement</b> | <b>Product Knowledge</b> | <b>Purchase Intention</b> | <b>Level of Nostalgia</b> | <b>Ad Attitude</b> | <b>Brand Attitude</b> |
|--------------------|----------------------------|--------------------------|---------------------------|---------------------------|--------------------|-----------------------|
| Mean               | 4.78                       | 4.21                     | 3.90                      | 3.15                      | 4.09               | 4.47                  |
| Median             | 5.00                       | 4.33                     | 4.00                      | 3.00                      | 4.00               | 4.67                  |
| Standard deviation | 1.36                       | 1.15                     | 1.50                      | 1.52                      | 1.55               | 1.42                  |
| Minimum            | 1.00                       | 1.00                     | 1.00                      | 1.00                      | 1.00               | 1.00                  |
| Maximum            | 7.00                       | 7.00                     | 6.33                      | 6.75                      | 7.00               | 7.00                  |

| <b>Gender</b> | <b>N</b> |
|---------------|----------|
| Female        | 134      |
| Male          | 60       |
| Other         | 1        |

| <b>Frequencies of Gender in Groups</b> |               |             |              |
|--|---------------|-------------|--------------|
| <b>Group</b>                           | <b>Female</b> | <b>Male</b> | <b>Other</b> |
| 1                                      | 34            | 13          | 0            |
| 2                                      | 34            | 20          | 0            |
| 3                                      | 33            | 11          | 1            |
| 4                                      | 33            | 16          | 0            |

| Nationality | N   |
|-------------|-----|
| Australia   | 11  |
| Canada      | 3   |
| England     | 141 |
| Ireland     | 11  |
| New Zealand | 5   |
| Scotland    | 18  |
| Wales       | 2   |
| USA         | 4   |

| Frequencies of Nationality in Groups |           |        |         |         |             |          |       |     |
|--------------------------------------|-----------|--------|---------|---------|-------------|----------|-------|-----|
| Group                                | Australia | Canada | England | Ireland | New Zealand | Scotland | Wales | USA |
| 1                                    | 3         | 0      | 36      | 2       | 1           | 3        | 1     | 1   |
| 2                                    | 4         | 2      | 36      | 3       | 0           | 8        | 0     | 1   |
| 3                                    | 3         | 0      | 30      | 2       | 4           | 4        | 1     | 1   |
| 4                                    | 1         | 1      | 39      | 4       | 0           | 3        | 0     | 1   |

| Age   | N  |
|-------|----|
| 20-25 | 56 |
| 26-30 | 47 |
| 31-35 | 48 |
| 36-41 | 44 |

| Frequencies of Age in Groups |       |       |       |       |
|------------------------------|-------|-------|-------|-------|
| Group                        | 20-25 | 26-30 | 31-35 | 36-41 |
| 1                            | 14    | 8     | 13    | 12    |
| 2                            | 20    | 12    | 14    | 8     |
| 3                            | 12    | 12    | 11    | 10    |
| 4                            | 10    | 15    | 10    | 14    |

## 6.2 Manipulation Check

In accordance with the pre-test, the manipulation checks in the experiment show that respondents exposed to the high nostalgia stimulus elicit a higher level of nostalgia compared to the low nostalgia advertisement ( $NO_{High}$ :  $M=3.46$ ,  $SD=1.54$ ;  $NO_{Low}$ :  $M=2.82$ ,  $SD=1.43$ ;  $NO_{T-Test}$ :  $t(193)=2.97$ ,  $p=0.002$ ,  $d=0.425$ ).

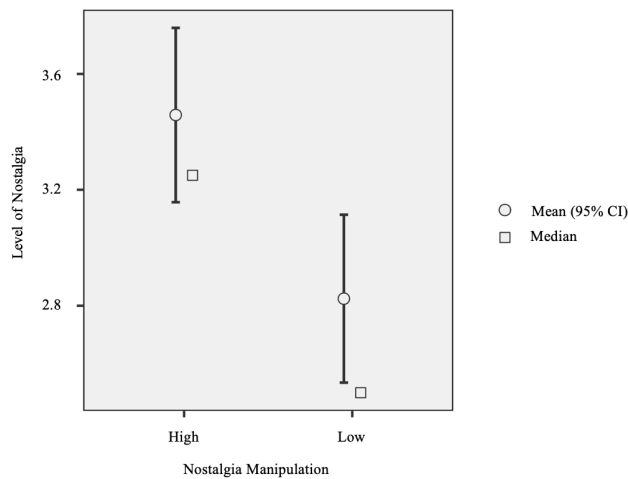
Table 6.2 Independent Samples T-Test - Level of Nostalgia

|                    |             |           |     |       |                 |               |             | 95% Confidence Interval |             |
|--------------------|-------------|-----------|-----|-------|-----------------|---------------|-------------|-------------------------|-------------|
|                    |             | Statistic | df  | p     | Mean difference | SE difference | Effect Size | Lower                   | Upper       |
| Level of Nostalgia | Student's t | 2.97      | 193 | 0.002 | 0.633           | 0.214         | Cohen's d   | 0.425                   | 0.137 0.711 |

Note.  $H_a$  High > Low

| Group Descriptives |       |     |      |        |      |       |
|--------------------|-------|-----|------|--------|------|-------|
|                    | Group | N   | Mean | Median | SD   | SE    |
| Level of Nostalgia | High  | 101 | 3.46 | 3.25   | 1.54 | 0.154 |
|                    | Low   | 94  | 2.82 | 2.50   | 1.43 | 0.148 |

Plot for Level of Nostalgia



Similarly, respondents who viewed the high self-referencing statement exhibit a higher degree of self-referencing as to those given a low self-referencing statement ( $SR_{High}$ :  $M=3.43$ ,  $SD=1.44$ ;  $SR_{Low}$ :  $M=3.05$ ,  $SD=1.36$ ;  $SR_{T-Test}$ :  $t(193)=1.90$ ,  $p=0.029$ ,  $d=0.273$ ). As such, the manipulation of stimuli was satisfactory in regards to the purpose of the study. The manipulation checks were established by conducting independent samples t-tests with a 95% confidence interval.

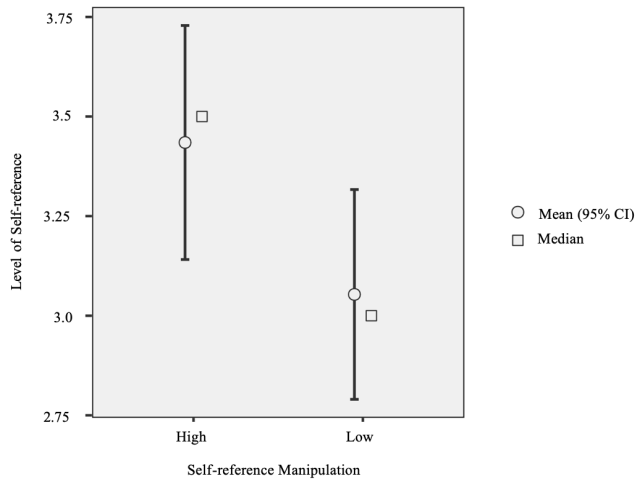
Table 6.3 Independent Samples T-Test - Level of Self-referencing

|                         |             |           |     |       |                 |               |             | 95% Confidence Interval |               |
|-------------------------|-------------|-----------|-----|-------|-----------------|---------------|-------------|-------------------------|---------------|
|                         |             | Statistic | df  | p     | Mean difference | SE difference | Effect Size | Lower                   | Upper         |
| Level of Self-reference | Student's t | 1.90      | 193 | 0.029 | 0.381           | 0.201         | Cohen's d   | 0.273                   | -0.0120 0.556 |

Note.  $H_a$  High > Low

| Group Descriptives      |       |     |      |        |      |       |
|-------------------------|-------|-----|------|--------|------|-------|
|                         | Group | N   | Mean | Median | SD   | SE    |
| Level of Self-reference | High  | 92  | 3.43 | 3.50   | 1.44 | 0.150 |
|                         | Low   | 103 | 3.05 | 3.00   | 1.36 | 0.134 |

Plot for Level of Self-reference



### 6.3 Reliability Analyses

Each variable consists of several seven-point Likert-scale items. Reliability analyses were conducted to confirm the internal consistency of each variable. The results were strong for all variables, reporting values of 0.872 or above, except for product knowledge, which scored 0.608. The reliability analysis showed that the second item (“If I had to purchase jeans today, I would need to gather very little information in order to make a wise decision”) was the weakest correlating item. Excluding the item would raise the internal consistency of the product knowledge variable to 0.729. However, after conducting further analyses, we could conclude that dropping the item would not alter the results of the research. Therefore, we chose not to remove the item and keep the variable as it is. Once all of the variables were internally consistent, their correlations were examined in a correlation matrix.

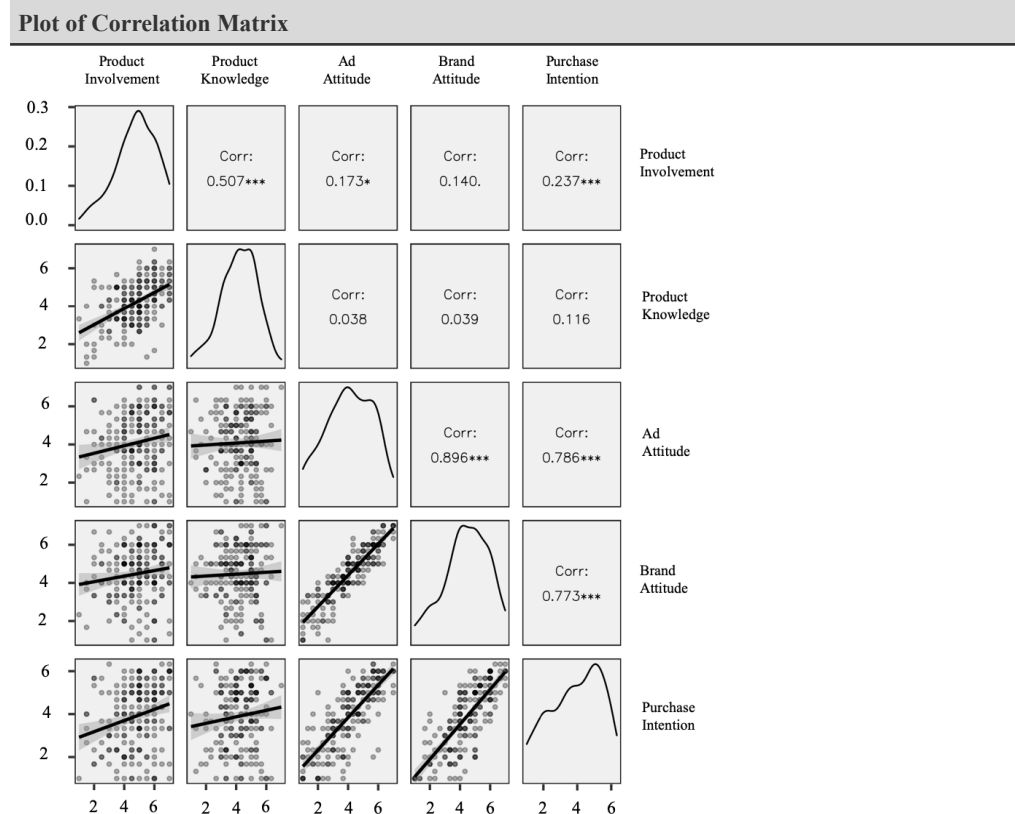
### 6.4 Correlation Matrix

To determine if there were any significant relationships between the market-driven variables, a set of Pearson’s correlation was calculated, showing that purchase intention has a significant correlation with several of the variables. The weakest relationship is with product involvement predicting only around 5% of purchase intention ( $P_{\text{Involvement}}$ :  $r=0.237$ ). On the other hand, both ad attitude and brand attitude showcase a more considerable correlation, proving to be a moderate indicator as both variables predict around 60% of the purchase intention ( $A_{\text{Ad}}$ :  $r=0.786$ ;  $A_{\text{Brand}}$ :  $r=0.773$ ). In relation to this, the two attitude variables have a significant correlation with each other, producing a strong coefficient of determination predicting 80% of their relationship ( $p<0.001$ ,  $r=0.896$ ).

There is a significant correlation between product involvement and product knowledge, although this relationship is seemingly weak with a coefficient of determination of 25% ( $p < 0.001$ ,  $r = 0.507$ ). Along with this, product involvement also exhibits a significant correlation with ad attitude but embodies a weak relationship with a coefficient of determination of about 5% ( $p = 0.016$ ,  $r = 0.173$ ). As the results of the correlation matrix were satisfactory, the hypotheses could be tested through running an analysis of covariance (ANCOVA).

Table 6.4 Correlation Matrix

| Correlation Matrix  |             |                     |                   |             |                |                    |
|---------------------|-------------|---------------------|-------------------|-------------|----------------|--------------------|
|                     |             | Product Involvement | Product Knowledge | Ad Attitude | Brand Attitude | Purchase Intention |
| Product Involvement | Pearson's r | —                   |                   |             |                |                    |
|                     | p-value     | —                   |                   |             |                |                    |
| Product Knowledge   | Pearson's r | 0.507               | —                 |             |                |                    |
|                     | p-value     | < .001              | —                 |             |                |                    |
| Ad Attitude         | Pearson's r | 0.173               | 0.038             | —           |                |                    |
|                     | p-value     | 0.016               | 0.601             | —           |                |                    |
| Brand Attitude      | Pearson's r | 0.140               | 0.039             | 0.896       | —              |                    |
|                     | p-value     | 0.051               | 0.585             | < .001      | —              |                    |
| Purchase Intention  | Pearson's r | 0.237               | 0.116             | 0.786       | 0.773          | —                  |
|                     | p-value     | < .001              | 0.106             | < .001      | < .001         | —                  |



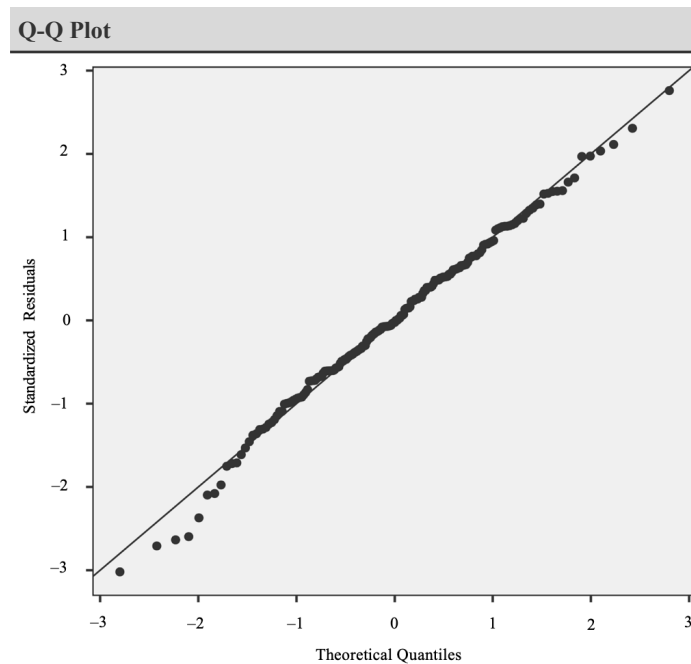
## 6.5 ANCOVA

To test our two hypotheses, an ANCOVA with a 95% confidence interval was conducted, examining the relationship between nostalgia and purchase intention, investigating the interaction between nostalgia and self-reference in regards to purchase intention, as well as analyzing control variables and their possible impact on purchase intention. Firstly, we examined the key assumptions of the data to ensure that the ANCOVA test was reliable. The result of Levene's homogeneity test is satisfactory, and a normal distribution of data is established through a Shapiro-Wilk's normality test, as well as a quantile-quantile plot (Levene's:  $F=0.679$ ,  $p=0.566$ ; Shapiro-Wilk:  $p=0.498$ ).

Table 6.5 Assumption Checks

| Homogeneity of Variances Test (Levene's) |     |     |       |
|--|-----|-----|-------|
| F  | df1 | df2 | p     |
| 0.679                                    | 3   | 191 | 0.566 |

| Normality Test (Shapiro-Wilk) |     |
|-------------------------------|-----|
| Statistic                     | p   |
| 0.679                         | 191 |



Given that the ANCOVA was deemed reliable, we tested our hypotheses by analyzing the results of the ANCOVA.  $H1$  predicted that nostalgia would have a significant direct effect on purchase intention. However,  $H1$  is not supported, as we can not find a significant direct effect between nostalgia and purchase intention upon reviewing the results of the ANCOVA ( $F=0.415$ ,  $p=0.520$ ,  $\eta^2=0.002$ ).

$H2$  predicted that the level of self-reference would have an interacting effect on the relationship between nostalgia and purchase intention: when self-referencing is high, nostalgia will have a stronger effect on purchase intention. By solely examining the results of the ANCOVA, we can not determine if  $H2$  is supported or not. However, we can establish that when nostalgia and self-reference interact, they significantly affect purchase intention. To conclude if the significant effect occurs in line with  $H2$ , a post hoc comparison was conducted ( $F=4.816, p=0.029, \eta^2=0.021$ ).

Although not hypothesized, we can report no statistically significant effect between self-referencing and purchase intention ( $F=2.552, p=0.112, \eta^2=0.011$ ).

Regarding the control variables of the experiment, only brand attitude and ad attitude have a significant effect on purchase intention, meaning they can explain a part of purchase intention regardless of the independent variables ( $A_{\text{Brand}}: F=11.287, p<0.001, \eta^2=0.048$ ;  $A_{\text{Ad}}: F=25.264, p<0.001, \eta^2=0.108$ ). As such, product involvement and product knowledge do not have a significant effect on purchase intention ( $P_{\text{Intention}}: F=1.578, p=0.211, \eta^2=0.007$ ;  $P_{\text{Knowledge}}: F=1.241, p=0.267, \eta^2=0.005$ ).

Table 6.6 ANCOVA - Purchase Intention

|  | Sum of Squares | df  | Mean Square | F      | p     | $\eta^2$ |
|--|----------------|-----|-------------|--------|-------|----------|
| Self-reference Manipulation                          | 1.967          | 1   | 1.967       | 2.552  | 0.112 | 0.011    |
| Nostalgia Manipulation                               | 0.320          | 1   | 0.320       | 0.415  | 0.520 | 0.002    |
| Product Involvement                                  | 1.216          | 1   | 1.216       | 1.578  | 0.211 | 0.007    |
| Product Knowledge                                    | 0.957          | 1   | 0.957       | 1.241  | 0.267 | 0.005    |
| Ad Attitude  | 19.473         | 1   | 19.473      | 25.264 | <.001 | 0.108    |
| Brand Attitude                                       | 8.700          | 1   | 8.700       | 11.287 | <.001 | 0.048    |
| Self-reference Manipulation * Nostalgia Manipulation | 3.712          | 1   | 3.712       | 4.816  | 0.029 | 0.021    |
| Residuals  | 144.142        | 187 | 0.771       |        |       |          |

To learn where the significant interaction effect occurs between nostalgia and self-reference, a post hoc test is necessary.

## 6.6 Post Hoc Comparisons

By conducting post hoc comparisons with a 95% confidence interval, we can establish between which groups the significant difference in means exists. By examining the post hoc comparisons, we can conclude that  $H2$  is supported, as a high level of nostalgia has a significant effect on purchase intention when interacting with a high level of self-reference. This is evident upon reviewing the results of Tukey's "Honestly Significant Difference" test, showing a significant difference in means when comparing the groups with high nostalgia and different levels of self-referencing ( $t(187)=2.706, p_{\text{tukey}}=0.037, d=0.5504$ ). To clarify, when the level of nostalgia is high, there is a significant difference in means of purchase intention when altering the level of self-reference.

This difference in means was the only significant difference according to the post hoc test, revealing that other variations in means are irrelevant for our hypotheses. Since the post hoc comparisons are based on the estimated marginal means, we deemed it necessary to examine those as well.

*Table 6.7 Post Hoc Comparisons - Self-reference Manipulation \* Nostalgia Manipulation*

| Comparison                  |                        |                             |                        | Mean Difference | SE      | df    | t   | p <sub>tukey</sub> | Cohen's d | 95% Confidence Interval |        |         |
|-----------------------------|------------------------|-----------------------------|------------------------|-----------------|---------|-------|-----|--------------------|-----------|-------------------------|--------|---------|
| Self-reference Manipulation | Nostalgia Manipulation | Self-reference Manipulation | Nostalgia Manipulation |                 |         |       |     |                    |           | Lower                   | Upper  |         |
| High                        | High                   | -                           | High                   | Low             | 0.1972  | 0.186 | 187 | 1.060              | 0.714     | 0.2247                  | -0.194 | 0.6434  |
|                             |                        | -                           | Low                    | High            | 0.4833  | 0.179 | 187 | 2.706              | 0.037     | 0.5504                  | 0.145  | 0.9557  |
|                             |                        | -                           | Low                    | Low             | 0.1202  | 0.182 | 187 | 0.662              | 0.911     | 0.1369                  | -0.271 | 0.5452  |
|                             | Low                    | -                           | Low                    | High            | 0.2860  | 0.180 | 187 | 1.587              | 0.389     | -0.3258                 | -0.732 | 0.0806  |
|                             |                        | -                           | Low                    | Low             | -0.0770 | 0.182 | 187 | -0.424             | 0.974     | -0.0877                 | -0.496 | 0.3207  |
| Low                         | High                   | -                           | Low                    | Low             | -0.3630 | 0.176 | 187 | -2.058             | 0.171     | -0.4135                 | -0.812 | -0.0149 |

*Note.* Comparisons are based on estimated marginal means

## 6.7 Estimated Marginal Means

It is possible to clarify the results from the ANCOVA and post hoc comparison by illustrating the estimated marginal means, where we can visually interpret the outcome from the experiment. Regarding *H1* it is evident by looking at the table that the difference between the levels of nostalgia has no significant effect on purchase intention, as their means are somewhat similar ( $NO_{High} M=3.87$ ,  $NO_{Low} M=3.96$ ).

*Table 6.8 Estimated Marginal Means - Nostalgia Manipulation*

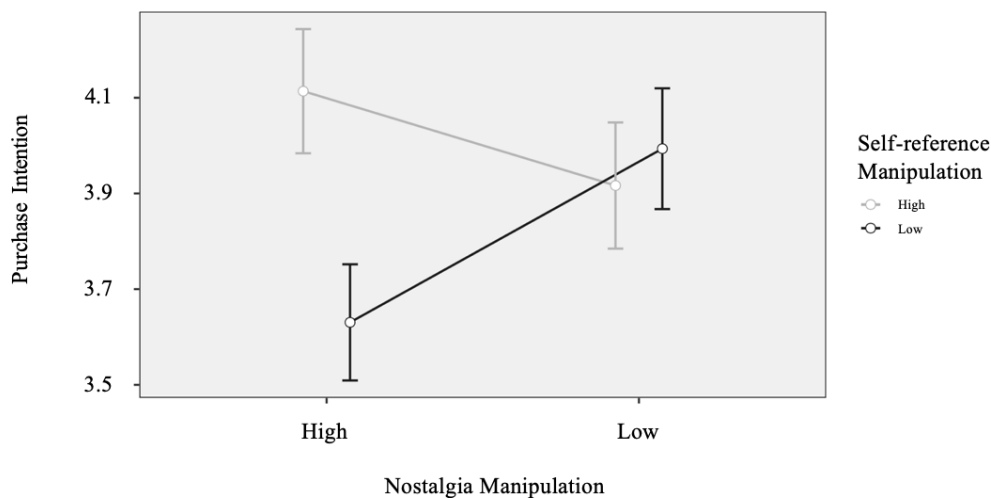
| Nostalgia Manipulation | Mean | SE     | 95% Confidence Interval |       |
|------------------------|------|--------|-------------------------|-------|
|                        |      |        | Lower                   | Upper |
| High                   | 3.87 | 0.0885 | 3.70                    | 4.05  |
| Low                    | 3.96 | 0.0917 | 3.77                    | 4.14  |

However, when investigating *H2* and the interacting effect of self-reference, we can derive a consequential relationship with nostalgia. The purchase intention is significantly higher when the advertisement is nostalgic and contains self-referencing elements, in comparison to when it is absent, as visualized in the plot for estimated marginal means.

Table 6.9 Estimated Marginal Means - Nostalgia Manipulation \* Self-reference Manipulation

| Estimated Marginal Means - Nostalgia Manipulation * Self-reference Manipulation |                        |      |       |                         |       |
|---|------------------------|------|-------|-------------------------|-------|
| Self-reference Manipulation   | Nostalgia Manipulation | Mean | SE    | 95% Confidence Interval |       |
|   |                        |      |       | Lower                   | Upper |
| High  | High                   | 4.11 | 0.130 | 3.86                    | 4.37  |
|   | Low                    | 3.92 | 0.132 | 3.66                    | 4.18  |
| Low   | High                   | 3.63 | 0.121 | 3.39                    | 3.87  |
|   | Low                    | 3.99 | 0.126 | 3.74                    | 4.24  |

Plot - Nostalgia Manipulation \* Self-reference Manipulation



## 6.8 Supplementary Analyses

As our hypotheses have been tested, supplementary analyses of the collected data set were conducted to further clarify and explain the results. Having previously established that nostalgia did not have a direct effect on purchase intention, we investigated nostalgia's direct effect on the participants' attitudes. It was shown that nostalgia has a significant effect on both brand attitude and ad attitude, unlike nostalgia's insignificant direct effect on purchase intention ( $A_{\text{Brand}}$ :  $t(193)=2.18, p=0.015, d=0.312$ ;  $A_{\text{Ad}}$ :  $t(193)=2.24, p=0.013, d=0.322$ ). These results were gathered from an independent samples t-test with a 95% confidence interval. See Appendix D for the independent samples t-test table.

To further examine nostalgia's relationship with attitudes, the interacting effect of self-referencing was tested. Through conducting an ANOVA with a 95% confidence interval, it was shown that the interaction effect between nostalgia and self-reference regarding brand attitude and ad attitude is insignificant ( $A_{\text{Brand}}$ :  $p=0.185, \eta^2=0.009$ ;  $A_{\text{Ad}}$ :  $p=0.362, \eta^2=0.004$ ). This further shows the difference in results when measuring the independent variable's effect on attitudes compared to purchase intention. See Appendix E for ANOVA tables.

Differences between demographic groupings were also examined, where differences between genders were discovered when comparing the responses of females and males. Upon

conducting these analyses, the answers of the respondent who filled in their gender as “other” was excluded, due to the sample size being composed solely of one person. Firstly, a difference in product involvement was identified, through running an independent samples t-test with a 95% confidence interval, showing that females reported a higher result compared to males (female:  $N=134$ ,  $M=4.95$ ,  $SD=1.34$ ; male:  $N=60$ ,  $M=4.42$ ,  $SD=1.37$ ; t-test:  $t(192)=2.50$ ,  $p=0.013$ ,  $d=0.388$ ). Secondly, a difference in level of nostalgia was also noticed, through running an independent samples t-test with a 95% confidence interval, showing once again that females reported higher levels than males (female:  $N=134$ ,  $M=3.30$ ,  $SD=1.57$ ; male:  $N=60$ ,  $M=2.83$ ,  $SD=1.37$ ; t-test:  $t(192)=2.04$ ,  $p=0.043$ ,  $d=0.317$ ). Upon examining these two findings, gender no longer had a significant effect on the level of nostalgia when product involvement and product knowledge were included as a covariate in an ANCOVA with a 95% confidence interval (gender:  $p=0.170$ ,  $\eta^2=0.009$ ). As such, product involvement was shown to have a significant effect on the level of nostalgia, whilst the effect of product knowledge was insignificant ( $P_{\text{Involvement}}$ :  $p=0.009$ ,  $\eta^2=0.035$ ;  $P_{\text{Knowledge}}$ :  $p=0.161$ ,  $\eta^2=0.010$ ). See Appendix F for all tables regarding differences in demographics.

## 7. Discussion

The purpose of our study was to examine how nostalgia marketing affects purchase intention. This was done by testing our hypotheses regarding nostalgia positively affecting purchase intention, and if the interacting effect of self-referencing would amplify nostalgia's positive influence on purchase intention.

After analyzing the data from our experiment, we can observe that nostalgia in itself does not affect consumer's purchase intention. However, when interacting with self-referencing, nostalgia has a significant effect on purchase intention. This is an interesting finding, as it indicates a complexity to nostalgia as a phenomenon, since it is seemingly hard to predict how nostalgia will behave and may vary depending on context. The nostalgia manipulation in this study refers to general themes of adolescence, such as hanging out with friends and watching movies, while the self-referencing manipulation engages the respondent to reminisce specifically about their experiences with the advertised product. Combining positive nostalgic memories and product experience creates a context allowing the respondent to connect the advertised product with nostalgic memories. This is similar to the findings of Zhou et al. (2019), as their nostalgia manipulation of food labels was referring to memories related to food, leading them to establish a relationship between nostalgia and purchase intention. Furthermore, the authors stressed the importance of evoking a contextually correct nostalgia, explaining how "grandma's fried tofu" is more likely to be perceived as authentic compared to "grandma's pizza", as their research was conducted in China (Zhou et al., 2019). As such, nostalgia marketing has a stronger effect on purchase intention when it strives to evoke situational nostalgia related to the advertised product, in contrast to trying to evoke nostalgia without context to the advertised product.

From a business perspective, it would be favorable to guarantee a desirable outcome when deciding on, for example, a marketing strategy. As such, using nostalgia without relevant context in relation to the advertised product and target audience might be an inappropriate tool in marketing when the goal is to ascertain purchase, which is displayed by our result. However, the absence of a significant relationship with purchase intention does not deem nostalgia as inefficient. Instead, the pair might be mismatched and, in turn, produce a misleading and irrelevant picture, as having the intent to purchase is to have the intent to act, while to reminisce is a passive action. A notion confirmed by previous research findings, illustrating that certain variables indeed amplify the effect of nostalgia, consequently displaying a significant positive relationship with purchase intention only when mediated by other market-driven variables, such as brand attitude (Ju et al., 2016; Seounmi & Jin, 2017). As such, it is plausible that nostalgia's full potential lies with its possibility to extend emotions onto a situation or object, thus implying that its relationship with brand or ad attitude might be of more importance.

Along with this, Ju et al. (2016) suggest that nostalgia is better suited as a marketing tool striving to affect these brand-related constructs positively. This confirms our findings, and

leads us to believe that while nostalgia might not be directly related to purchase intention, it might still benefit from a favorable consumer-brand relationship. Therefore, nostalgia marketing might be most appropriately utilized during campaigns that capitalize on consumers having a good brand experience. This would explain why previous studies often investigate nostalgia's relationship with more abstract variables, such as brand loyalty, consumer experience, or brand attachment (Ju et al., 2016; Muehling, 2013; Muehling & Pascal, 2011; Rana et al., 2021; Seounmi & Jin, 2017). Nevertheless, it is imperative to understand the behavior of nostalgia in its entirety, to enable its value and utility, which includes knowledge about its relationship with different types of market-driven variables.

Another interesting finding was the relationship between nostalgia and purchase intention with the interacting effect of self-referencing. When processing the advertised message with self-referencing absent, there was no significant effect of nostalgia on purchase intention. From the perspective of self-referencing theory, this suggests that nostalgia marketing might be intertwined with the concept of self, especially regarding how an individual processes information in relation to themselves. Wildschut et al. (2006) explained that as long as the nostalgic element is perceived as some part of the self, whether directly related to the individual or a part of an extended perception of the self, the individual can experience a nostalgic feeling. As such, nostalgia is arguably by default a self-referencing concept, where any information is required to be self-referent to a certain extent for it to be recognized as nostalgic. This suggests that nostalgia and self-referencing go hand in hand, and that nostalgia fails to evoke emotions when detached from the individual's perception of self.

Insights derived from this observation explain why self-referencing would succeed in operating as an interacting variable between nostalgia and purchase intention. However, it could also depend on the notion that it is possible to experience something as nostalgic unaccompanied of the direct individual and personal relatedness, such as feeling nostalgic for a product you know was popular when your parents were young (Muehling & Pascal, 2011; Wildschut et al., 2006). Nevertheless, this phenomenon does not necessarily indicate that a consumer is interested in buying the actual product, which justifies the insignificant relationship between nostalgia and purchase intention. If an advertisement elicits a self-referencing process, it reasonably becomes more relevant and interesting to the consumer, explaining the significant interacting effect of self-reference on the relationship between nostalgia and purchase intention.

Similar to previous studies, we establish that there is a significant relationship between nostalgia and both brand and ad attitude (Holotová, Kádeková & Košičiarová, 2020; Ju et al., 2016; Muehling, 2013; Muehling & Pascal, 2011; Seounmi & Jin, 2017). We also observed an insignificant interacting effect of self-reference, meaning that nostalgic emotions can influence the attitude towards a product, regardless of the level of self-referencing. Furthermore, we could establish that brand and ad attitude have a significant effect on purchase intention. An observation that would indicate that purchase intention indeed is influenced by, and might correlate with, the attitude of the consumer, a notion previously established by several researchers (Ju et al., 2016; Pascal, Spratt & Muehling, 2002; Seounmi

& Jin, 2017; Spears & Singh, 2004). Therefore, one could expect that what affects attitude would correlate with how attitude impacts purchase intention, yet this is not demonstrated in our experiment. We found that although nostalgic emotions might improve the consumer's attitude towards a product, it does not suggest that the consumer wants to purchase the product. This contrasting effect of nostalgia regarding attitudes and purchase intention suggests an ambivalent relationship, possibly influenced by more factors than revealed in this study.

Apart from establishing that self-referencing has an interacting effect with nostalgia, our results indicate that product involvement has a significant relationship with the perceived level of nostalgia. This suggests that product involvement and nostalgia have a more interconnected relationship than currently noted in previous research, and might be a strong predictor for when nostalgia is an efficient marketing tool. This is not a far-fetched concept, since nostalgia is an emotional state and a high involvement indicates engagement. The more engaged and involved you are, the more emotionally connected you become. For instance, claiming that Lionel Messi is a talentless player might not cause a reaction from a person with no interest in football. However, it would definitely have caused commotion if stated in Buenos Aires during the World Cup Final of 2014. This line of thinking leads us to believe that nostalgia marketing would be most effective when advertising high involvement products. Such as Samsung's successful marketing campaign "Growing Up", which incorporates both nostalgia and self-referencing in regards to a high involvement product (Samsung Malaysia, 2017). Consequently, this would mean that a high involvement with the product or brand leads to a higher susceptibility to a nostalgic advertisement.

Our study included product involvement as a control variable to examine its relationship with purchase intention. We predicted that product involvement could explain a part of the consumer's purchase intention, regardless of what level of manipulation they had experienced. This made the correlation between product involvement and nostalgia an interesting finding, since their relationship was not considered prior to conducting the study. Along with this, we found that females had higher product involvement. This was established by conducting supplementary analyses after running initial tests showing females reporting higher levels of nostalgia than males. We could then conclude that product involvement was the cause of the significant difference in level of nostalgia, not gender. However, given that the study only examines one product category, we can not generalize this finding further; thus, establishing a difference in product involvement between genders would require further research. Nevertheless, product involvement appears to be a more important variable than predicted when studying nostalgia marketing.

# 8. Conclusion

## 8.1 Conclusion

From our research, we can conclude that *H1* is not supported, as nostalgia has no direct effect on purchase intention. However, *H2* is supported, as nostalgia has a significant effect on purchase intention when interacting with self-referencing. Furthermore, we found that nostalgia has a significant effect on brand and ad attitude. In line with this, our results show that nostalgia improves the brand experience, and influences consumer decision-making when interacting with self-referencing elements. By this, we conclude that nostalgia's performance is determined by the context in which it is applied, as the effect of nostalgia is increased when it is directly associated with the individual and personally relatable. The insights from this study shed light on the influence of nostalgia on consumer behavior, contributing to a deeper understanding of the circumstances it can be utilized in marketing strategy. Beyond this, we found a relevant interacting effect by using self-referencing theory, further explaining how nostalgia marketing affects purchase intention. Our findings regarding nostalgia's relationship with purchase intention complement existing research to expand the knowledge of nostalgia marketing.

Conclusions can still be drawn upon our finding regarding our first hypothesis, even though the hypothesis was not accepted. For instance, employing nostalgia marketing does not necessarily affect consumers' willingness to buy a certain product. However, the absence of a direct correlation is not equal to a non-existent relationship. It simply indicates that an increased purchase intention is not achieved by implementing sensations of nostalgia alone. Instead, influencing purchase intention should be pursued by focusing on more appropriate mechanisms, such as brand attitude, which in turn benefits from the effect of nostalgia. Therefore, we cannot accept our first hypothesis, illustrating that it is essential to understand how nostalgia marketing interacts with different market-driven variables to capitalize on its effects.

Our study shows that evoking a high level of self-referencing heightens the effect of the nostalgic advertisement, in turn eliciting a high purchase intention. Therefore, we accept our second hypothesis regarding the interacting effect of self-referencing in relation to nostalgia and purchase intention. This finding demonstrates a positive relationship between nostalgia and purchase intention when facilitated by appropriate variables - revealing that it is the intrinsic motivational factors of the consumer decision-making process that primarily benefit from evoking nostalgia. In other words, it is the self-referencing elements of reminiscing of our experiences that positively relate to purchase intention when extended onto the product. As such, to benefit from nostalgia marketing, the advertised context becomes increasingly important since it will decide whether the ad relates to the individual, thus positively influencing purchase intention.

After testing our hypotheses, our study confirms findings of previous research regarding nostalgia marketing's potential to affect consumer's purchase intention positively, but with the notion that they require certain assisting elements. The effect of nostalgia is dependent on the situation and context with which it is applied, evident in our experiment, as it behaves differently when analyzing its effect on different variables. Therefore, it is necessary to properly understand nostalgia to attach appropriate elements that facilitate its effect. As such, nostalgia's effect on purchase intention is determined by which component it strives to affect and its relationship with purchase intention. For instance, attitudes were shown to affect purchase intention directly, and in turn, nostalgia may positively influence attitudes. One could argue that this suggests that nostalgia would contribute to an increased purchase intention by positively impacting the consumer's attitude. However, it builds on the assumption that what affects attitude will also affect purchase intention, and as shown in our study, this assumption is not always correct. As such, it becomes improper to assume the effects of their relationship without fully understanding how the variables interact. Therefore, we can derive from our experiment that nostalgia and purchase intention does not always have a correlating relationship but instead depend on interacting variables, and if misapplied, the effect of nostalgia may prove to be insignificant.

Expanding from our hypotheses, our study also shows that nostalgia has a significant effect on consumer attitudes, in contrast to its insignificant effect on purchase intention. Therefore, we can establish that nostalgia and attitudes have a consequential relationship, where nostalgia can influence attitudes - a finding substantiating our previous conclusion, further revealing how nostalgia interacts with different market-driven variables. In light of how nostalgia differently affects attitudes and purchase intention, we can conclude that variables affecting consumer attitudes do not necessarily affect purchase intention, and vice versa. However, as this was not hypothesized nor thoroughly tested, this remains an indication, since a definite conclusion cannot be drawn without further research.

Furthermore, the discovery of product involvement having a significant effect on the individual's perceived level of nostalgia displays the importance of including variables influencing the individual's nostalgic emotions. However, further research is necessary to firmly conclude that product involvement has a significant effect on an individual's susceptibility to nostalgia marketing, as this was not tested in detail due to it not being hypothesized.

## 8.2 Theoretical Implications

By applying self-referencing theory in our experiment, we were able to see the nature of nostalgia more clearly. When self-referencing elements were absent, nostalgia interacted differently, indicating a connection between nostalgia and individual information processing. Although that insight sparked many questions, the theory suggested why nostalgia behaved as it did with different market-driven variables. More precisely, since self-referencing did have an interacting effect, we understood that nostalgia was more related to emotion and attitude

than decision-making. This insight provided us with the observation that nostalgia is bound by how an individual processes it.

However, self-referencing theory only takes into account the perspective of the individual. Forming attitudes, behaviors, and purchasing decisions may be affected by more factors than derived solely from that person. The need to be accepted by the collective is a major influencing factor in our lives, and is a pillar stone on which marketing acts upon. As such, the theory only answers one part of the question and therefore may require complementing perspectives to fully understand the effects of nostalgia, such as how aspirational reference groups and social connectedness might influence our attitudes.

Nevertheless, our study demonstrates that self-referencing theory is a relevant theory to clarify and explain the effects of nostalgia marketing. In relation to our experiment, the theory served as a suitable tool to define and interpret processes that occur within the individual when exposed to advertising and emotional messages. Although it cannot motivate consumers' purchase intention, it does consider key components explaining how individuals process messages containing nostalgia, which is highly relevant in understanding nostalgia marketing. As such, self-referencing theory can educe insight when studying nostalgia because of the importance of understanding how the consumer processes information and advertisements.

### 8.3 Managerial Implications

Knowing the role of self-referencing in nostalgia marketing can have important implications for marketing managers and be beneficial when constructing nostalgic marketing campaigns and advertisements. Our findings disclose that the effect of nostalgia marketing on purchase intention is increased when it is personally associated with the individual, and when the viewer can relate to the ad. However, marketing managers need to keep in mind that when measuring the brand and ad attitudes of the consumers, an insignificant effect of self-reference might occur. Therefore, to properly utilize nostalgia as a marketing strategy, marketing managers need to be aware of the importance of context regarding nostalgia and its varying effects on market-driven variables.

Furthermore, applying nostalgia as a marketing tool is quite complicated, as it requires much knowledge about the intended target audience. When designing our test, we found it hard to evoke nostalgia amongst all respondents assigned to the high nostalgic experiment conditions. After analyzing why this was, it became clear that it was a consequence of personal connection to the message and product. Those with lower product involvement also showcased lower susceptibility with nostalgia, suggesting that a person needs to firstly care about what is advertised for nostalgia to affect. A fairly reasonable notion, as we would be more engaged with products or messages related to our perception of our own identity. Therefore, for nostalgia to perform as desired, marketing managers must first examine if consumers can personally relate to what is advertised, and how to make it relatable if they are not.

The lack of support for our first hypothesis, combined with the support for our second hypothesis, constitutes essential insights for marketing managers. By establishing that nostalgia and purchase intention does not have a direct relationship unless interacting with self-referencing, we could comprehend the abstract components of nostalgia. Applying nostalgia within the correct context of the advertised product is required to enable its potential and benefits, thus producing an effect on purchase intention.

## 8.4 Limitations

We are aware that our findings have been impacted by the research design and sample, meaning our study has certain limitations. Regarding our research design, we examine nostalgia marketing through a single product category. Given the finding regarding product involvement's significant relationship on the level of nostalgia, the product category is likely to have impacted the findings of the study. Analyzing nostalgia marketing through several product categories would have strengthened the generalizability of the findings.

Along these lines, our ad contained a visual representation of two pairs of jeans. This can also affect respondents' purchase intention, as the product's aesthetics can influence consumer interest. As such, another advertisement design may have resulted in a different outcome than our study, however, how much it would vary is uncertain.

Regarding our sample, we saw that the study obtained an unequal distribution of genders, where females were overrepresented and demonstrated a higher product involvement regarding jeans than males. The overrepresentation of females limits our findings, as we also established that product involvement has a significant relationship with the perceived level of nostalgia. Therefore, the unequal distribution of genders together with the product category of jeans impacts our study more than limiting its generalizability, as it can have affected our findings as well.

As our study contained linguistic nuances in the messages manipulating the stimuli, we deemed it necessary to recruit native English speakers to collect appropriate test results. This led us to receive a majority of responses from England, and possibly skew the results unintentionally. However, we are unsure to what extent this might affect the study, as we lack insight regarding if nostalgia differs between cultures and nationalities.

Furthermore, analyzing a specific generation's attitudes and purchase intention might also have impacted the result. However, no significant differences between the ages could be found, although the age of the respondents ranged between 20-41. This means that age did not matter within our sample, but it might not be applicable for all conditions.

The theoretical framework brought further limitations to our research, as self-referencing theory examines and explains an individual's cognitive process of interpreting and encoding information. The absence of theories explaining the social as well as the consumer behavior

perspective of nostalgia marketing limits the initial research design, thus the findings. As such, our study would have benefitted from including perspectives that involve the influence of the social environment on consumer behavior.

Despite these limitations, we have been able to draw significant conclusions from the results of our experiments, thus contributing to the field of research.

## 8.5 Future Research

In light of our findings and limitations, we have formulated several suggestions for future research in the field of nostalgia marketing. The suggestions contain research questions that we either could not examine ourselves, given our limited time frame, or discovered while conducting our research.

We recommend future research regarding the relationship between product involvement and level of nostalgia, as we found indications of a significant relationship. This can be accomplished by studying the effect of nostalgia marketing through high and low engagement products to examine if there exists a significant difference. Regardless of research design, it would be rewarding to review the role of product involvement regarding nostalgia marketing, to gain a deeper understanding of their relationship.

Future research should attempt to establish if there exists any difference in susceptibility of nostalgia marketing between different demographics. Is nostalgia marketing more effective with certain age groups or nationalities? What is the difference in the perception of nostalgia in different cultures? Further insight into demographic differences regarding nostalgia marketing would benefit marketing managers when constructing advertising campaigns and choosing their target audience.

Nostalgia marketing can be applied to several different advertising mediums. Our study applied nostalgia marketing in still image advertising, combining a picture with text. Future research could examine if there is a difference of effect when using nostalgia marketing with different mediums. Perhaps a commercial with moving images and accompanying music can elicit a higher level of nostalgia than a printed ad? Or maybe there are different effective mediums depending on the product category? There are several relevant aspects to consider when researching this matter, and further insight would be of importance for both the field of research and marketing managers.

We predict that nostalgia will continue to be a popular aspect of marketing strategies, which is why we firmly believe that further insight regarding its effect will impact the field of research regarding consumer behavior. This is evident by the results of our research, as well as our suggestions for future research.

As combining the comfort of the past with the excitement of the unknown future appears to be a recipe for success, we simply need to discover the best ingredients.

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# Appendix A

## Nostalgia Items

### Level of Nostalgia with ten items

#### *Independent Samples T-Test - Level of Nostalgia with ten items - Pre-test*

|                    |             |           |      |       |                 |               |             | 95% Confidence Interval |              |
|--------------------|-------------|-----------|------|-------|-----------------|---------------|-------------|-------------------------|--------------|
|                    |             | Statistic | df   | p     | Mean difference | SE difference | Effect Size | Lower                   | Upper        |
| Level of Nostalgia | Student's t | 2.40      | 78.0 | 0.009 | 0.814           | 0.339         | Cohen's d   | 0.538                   | 0.0782 0.991 |

Note. H<sub>a</sub> High > Low

#### *Reliability Analysis - Level of Nostalgia with ten items - Pre-test*

| Scale Reliability Statistics |       |
|------------------------------|-------|
| Cronbach's $\alpha$          |       |
| scale                        | 0.977 |

| Item Reliability Statistics                      |  |
|--|--|
|  | if item dropped<br>Cronbach's $\alpha$ |
| Reminds me of the past                           | 0.977                                  |
| Helps me recall pleasant memories                | 0.976                                  |
| Makes me feel nostalgic                          | 0.974                                  |
| Makes me reminisce about a previous time         | 0.974                                  |
| Makes me think about when I was younger          | 0.980                                  |
| Evokes fond memories                             | 0.974                                  |
| Is a pleasant reminder of the past               | 0.974                                  |
| Brings back memories of good times from the past | 0.973                                  |
| Reminds me of the good old days                  | 0.974                                  |
| Reminds me of good times in the past             | 0.973                                  |

### Level of Nostalgia with four items

#### *Independent Samples T-Test - Level of Nostalgia with four items - Pre-test*

|                    |             |           |      |       |                 |               |             | 95% Confidence Interval |            |
|--------------------|-------------|-----------|------|-------|-----------------|---------------|-------------|-------------------------|------------|
|                    |             | Statistic | df   | p     | Mean difference | SE difference | Effect Size | Lower                   | Upper      |
| Level of Nostalgia | Student's t | 3.01      | 78.0 | 0.002 | 0.978           | 0.325         | Cohen's d   | 0.675                   | 0.204 1.14 |

Note. H<sub>a</sub> High > Low

*Reliability Analysis - Level of Nostalgia with four items - Pre-test*

| Scale Reliability Statistics |                     |
|------------------------------|---------------------|
|                              | Cronbach's $\alpha$ |
| scale                        | 0.908               |

| Item Reliability Statistics             |  |
|---|--|
|   | if item dropped<br>Cronbach's $\alpha$ |
| Reminds me of the past                  | 0.863                                  |
| Helps me recall pleasant memories       | 0.885                                  |
| Makes me feel nostalgic                 | 0.861                                  |
| Makes me think about when I was younger | 0.912                                  |

# Appendix B

## Questionnaire

### Part 1

#### **Research Regarding an Advertisement for Jeans**

##### **Gender**

- Female
- Male
- Other
- Prefer not to say

##### **Age**

- 20-25
- 26-30
- 31-35
- 36-41

##### **What is your nationality?**

Example: England

---

##### **All information and responses published will be completely anonymous.**

- I consent to participate in this survey and that my responses will be collected.

##### **Please enter your unique Prolific ID**

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## Part 2

**Please rate the following statements regarding jeans.**

### **I perceive jeans as...**

Unimportant      1      2      3      4      5      6      7      Important

### **Jeans...**

Do not matter to me   1      2      3      4      5      6      7      Matter a lot to me

### **I feel very knowledgeable about jeans**

Strongly disagree   1      2      3      4      5      6      7      Strongly agree

### **If I had to purchase jeans today, I would need to gather very little information in order to make a wise decision**

Strongly disagree   1      2      3      4      5      6      7      Strongly agree

### **I feel very confident about my ability to tell the difference in quality among different brands of jeans**

Strongly disagree   1      2      3      4      5      6      7      Strongly agree

Part 3

**Please rate the following statements regarding the jeans advertisement below.**

[a still image ad is shown here, as seen in Appendix C]

**How much do you want to purchase a pair of jeans from Hello Denim?**

Not at all            1        2        3        4        5        6        7        Very much

**I would definitely like to try Hello Denim**

Not at all            1        2        3        4        5        6        7        Very much

**I would like to purchase from Hello Denim the next time I consider buying jeans**

Not at all            1        2        3        4        5        6        7        Very much

## Part 4

**Please rate the following statements regarding the jeans advertisement below.**

[the same still image ad is shown here as in previous section]

**Reminds me of the past**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**Helps me recall pleasant memories**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**Makes me feel nostalgic**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**Makes me think about when I was younger**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**The ad made me think about my own experiences with jeans**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**The ad seemed to be written to reflect my experience with jeans**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**The ad seems to be related to me personally**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

**I can easily picture myself using the product in the ad**

Strongly disagree    1    2    3    4    5    6    7    Strongly agree

Part 5

Please rate the following statements below.

**How did you perceive the ADVERTISEMENT?**

Boring                    1      2      3      4      5      6      7      Interesting

**How did you perceive the ADVERTISEMENT?**

Unlikeable            1      2      3      4      5      6      7      Likeable

**How did you perceive the ADVERTISEMENT?**

Bad                      1      2      3      4      5      6      7      Good

**How did you perceive the BRAND?**

Unappealing        1      2      3      4      5      6      7      Appealing

**How did you perceive the BRAND?**

Unlikeable            1      2      3      4      5      6      7      Likeable

**How did you perceive the BRAND?**


Bad                      1      2      3      4      5      6      7      Good

# Appendix C

## Advertising Stimuli

**RELIVE YOUR MEMORIES**

There's no time like the past.  
Teenage romances, hanging out with friends  
and watching movies on DVD.  
Revive the nostalgia,  
with these timeless jeans!



Remember your old stiff jeans that were unpleasant to wear.  
Now imagine yourself wearing our comfortable, soft and  
stretchy high quality denim shaped after how you move.  
They will fit you perfectly.

**HELLO DENIM**  
Jeans made for you.

*Group 1: High Nostalgia & High Self-referencing*

## RELIVE YOUR MEMORIES

There's no time like the past.

Teenage romances, hanging out with friends  
and watching movies on DVD.

Revive the nostalgia,  
with these timeless jeans!



Jeans made from high quality denim. Developed with the proper materials and manufactured in our own factories. Thoroughly tested in our laboratories to ensure quality and washability.

**HELLO DENIM**

Jeans made for everyone.

*Group 2: High Nostalgia & Low Self-referencing*

## THE YEAR OF 2021

There's no time like the present.

Smartphones, video calls  
and streaming movies online.

Live in the now,  
with these modern jeans!



Remember your old stiff jeans that were unpleasant to wear.  
Now imagine yourself wearing our comfortable, soft and  
stretchy high quality denim shaped after how you move.  
They will fit you perfectly.

**HELLO DENIM**

Jeans made for you.

*Group 3: Low Nostalgia & High Self-referencing*

## THE YEAR OF 2021

There's no time like the present.

Smartphones, video calls  
and streaming movies online.

Live in the now,  
with these modern jeans!



Jeans made from high quality denim. Developed with the proper materials and manufactured in our own factories. Thoroughly tested in our laboratories to ensure quality and washability.

**HELLO DENIM**

Jeans made for everyone.

*Group 4: Low Nostalgia & Low Self-referencing*

# Appendix D

## Independent Samples T-Test - Attitudes

### *Independent Samples T-Test - Attitudes*

|                |             |      |     |                 |               |             |           | 95% Confidence Interval |        |       |
|----------------|-------------|------|-----|-----------------|---------------|-------------|-----------|-------------------------|--------|-------|
|                | Statistic   | df   | p   | Mean difference | SE difference | Effect Size | Lower     | Upper                   |        |       |
| Brand Attitude | Student's t | 2.18 | 193 | 0.015           | 0.439         | 0.202       | Cohen's d | 0.312                   | 0.0269 | 0.595 |
| Ad Attitude    | Student's t | 2.24 | 193 | 0.013           | 0.494         | 0.220       | Cohen's d | 0.322                   | 0.0364 | 0.605 |

Note. H<sub>a</sub> High > Low

# Appendix E

## Nostalgia \* Self-reference Effect on Attitudes

### *ANOVA - Ad Attitude*

|  | Sum of Squares | df  | Mean Square | F       | p     | $\eta^2$ |
|--|----------------|-----|-------------|---------|-------|----------|
| Self-reference Manipulation                          | 0.0125         | 1   | 0.0125      | 0.00529 | 0.942 | 0.000    |
| Nostalgia Manipulation                               | 12.3942        | 1   | 12.3942     | 5.22495 | 0.023 | 0.027    |
| Self-reference Manipulation * Nostalgia Manipulation | 1.9791         | 1   | 1.9791      | 0.83430 | 0.362 | 0.004    |
| Residuals  | 453.0752       | 191 | 2.3721      |         |       |          |

### *ANOVA - Brand Attitude*

|  | Sum of Squares | df  | Mean Square | F     | p     | $\eta^2$ |
|--|----------------|-----|-------------|-------|-------|----------|
| Self-reference Manipulation                          | 0.532          | 1   | 0.532       | 0.268 | 0.605 | 0.001    |
| Nostalgia Manipulation                               | 10.077         | 1   | 10.077      | 5.080 | 0.025 | 0.027    |
| Self-reference Manipulation * Nostalgia Manipulation | 3.506          | 1   | 3.506       | 1.767 | 0.185 | 0.009    |
| Residuals  | 378.902        | 191 | 1.984       |       |       |          |

# Appendix F

## Differences Between Demographics

### *Group Descriptive - Differences Between Female/Male Regarding Product Involvement*

|                     | Group  | N   | Mean | Median | SD   | SE    |
|---------------------|--------|-----|------|--------|------|-------|
| Product Involvement | Female | 134 | 4.95 | 5.00   | 1.34 | 0.116 |
|                     | Male   | 60  | 4.42 | 4.50   | 1.37 | 0.177 |

### *Independent Samples T-Test - Differences Between Female/Male Regarding Product Involvement*

|                     |             | Statistic | df  | p     | Mean difference | SE difference | 95% Confidence Interval |       | Effect Size | 95% Confidence Interval |        |       |
|---------------------|-------------|-----------|-----|-------|-----------------|---------------|-------------------------|-------|-------------|-------------------------|--------|-------|
|                     |             |           |     |       |                 |               | Lower                   | Upper |             | Lower                   | Upper  |       |
| Product Involvement | Student's t | 2.50      | 192 | 0.013 | 0.523           | 0.209         | 0.110                   | 0.936 | Cohen's d   | 0.388                   | 0.0790 | 0.695 |

### *ANCOVA - Level of Nostalgia (Fixed Factor: Female/Male)*

|                     | Sum of Squares | df  | Mean Square | F    | p     | $\eta^2$ |
|---------------------|----------------|-----|-------------|------|-------|----------|
| Product Knowledge   | 4.19           | 1   | 4.19        | 1.98 | 0.161 | 0.010    |
| Product Involvement | 14.81          | 1   | 14.81       | 6.99 | 0.009 | 0.035    |
| Female/Male         | 4.03           | 1   | 4.03        | 1.90 | 0.170 | 0.009    |
| Residuals           | 402.62         | 190 | 2.3721      |      |       |          |