



# Product Placement and Prior Notification

- *The effect on Brand Attitude*

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

## **Preface**

This thesis was written by Linn Siri Halberg and Lotta P. de Rijke as a part of the master programs in Strategy and Leadership and Brand Management and Marketing at the Norwegian School of Economics (NHH), in the spring of 2013. The purpose of the thesis is to conceptualize the effects of prior notification of product placements on viewers' brand attitude. It also provides an overview of how these attitudinal outcomes are affected by product placement prominence and program/film liking.

The reason behind the choice of topic for this thesis is the authors' common interest for advertising and marketing, and the current relevance of product placement due to changes in legislation allowing product placement in television series produced in Norway. The inadequate research on the effects of product placement on Norwegian audiences, and more importantly, the lack of research worldwide on the effects of prior notification provided an opportunity to give a valuable research contribution.

We have learned a lot from working on this thesis. It has especially been motivating to work on an issue of current interest that can provide useful information to concept and sponsor managers working for television channels and films sent in Norway and to brand managers who make use of product placements when targeting consumers in Norway.

There are several people we would like to give our thanks to. First of all, we want to thank our supervisor, Einar Brevik, for his guidance, constructive criticism and valuable contributions throughout the process of writing this thesis. We also give our thanks to Espen Barås Bye from TV2 and Marianne Lund from Produktavdelingen AS for their information and input concerning prior notification of product placement in Norwegian television series. Finally, we also thank Persijn M. de Rijke and Hege Landsvik for assistance with the writing process.

19.06.2013

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*Abstract:*

*The aim of this master thesis was to find the effect of prior notification of product placement on Norwegian television series and film viewers' attitude towards product placed brands. We put forward three research questions concerning the relationship between prior notification and brand attitude, a research area that had not previously been studied. The first question is concerned with the relationship between prior notification and brand attitude, whereas the other questions apprehended how the effect would change for different levels of product placement prominence and program liking. In order to answer the research questions, we proposed nine hypotheses, which were based on literature concerning product placement, persuasion knowledge and psychological reactance. Based on our results, the most important implication for Norwegian television channel and film concept and sponsor managers is that prior notification seems to have little influence on the effectiveness of the product placement on brand attitude. Thus, the value of product placements should be considered equal regardless of whether or not prior notification is existent. Different levels of product placement prominence and program liking also seem to yield the same results with regards to outcome on brand attitude. However, we found a significant effect of the independent variable Brand on brand attitude, in addition to interaction effects for Brand in combination with both product placement prominence and program liking. This indicates that decisions regarding the appropriate level of product placement prominence and choice of media channel for conducting product placements should be adjusted to each individual brand.*

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**Part I:**  
**Introduction,**  
**Research Questions &**  
**Research Model**

*Secretive agreements, hidden messages and cheeky solutions. Product placement is controversial and notorious. Now it forces itself into Norwegian television productions.<sup>1</sup>*

(DN.no, 2009)

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<sup>1</sup> The quote is translated from Norwegian to English.

# 1. Introduction, Research Questions and Research Model

## 1.1 Why product placement is an interesting topic

Product placement is recognized as a fast-growing multi-billion-dollar industry (McDonnell & Drennan, 2010) and its growth is expected to outpace that of traditional advertising (BusinessWire, 2006). Global product placement spending increased with almost ten percent to \$7.39 billion in 2011 (PQ Media, 2012 a). The report *PQ Media Global Product Placement Spending Forecast 2012-2016* estimates worldwide product placement spending to nearly double within the timeframe 2012-2016. The growth of product placement is the result of changing consumer habits, new technology and liberalized regulations, which induce brands to invest in alternative marketing solutions (PQ Media, 2012 b). The PQ Media report states that product placement is a “strategic must-have in the consumer brand activation marketing mix” (PQ Media, 2012 a). Williams et al. (2011) emphasize the growing importance of product placement and state that marketers nowadays should have a basic familiarity with how to use the marketing tactic.

Product placements have been extensively used in several media outlets for a considerable amount of time and the advertising method is becoming increasingly popular (Brusse, 2008). Unfortunately, little research has been conducted as to which product placement strategies work effectively (Chan, 2012). In the article *Product placement and its effectiveness: A systematic review and propositions for future research*, Chan (2012, p. 39) states that “the effect of product placement is inconclusive”. The author points to several inconsistencies and gaps within the research area. We therefore see an opportunity to contribute to the research field of product placement.

## 1.2 Why a study on product placement in Norway

On October 19, 2012, the Norwegian government decided in favor of allowing product placement in television series made in Norway by introducing the *EEA Directive on Audiovisual Media Service* (Eckblad & Sørheim, 2012; Lillebø, 2012). The new regulation was adopted from January 1, 2013 and was welcomed by Norwegian television channels,

such as TV2 (Kulturdepartementet, 2012–2013). Managing Associate and media specialist at law office Wiersholm, Rune Opdahl (2012), proposes that the new legislation will end conditions that, until 2013, favored Norwegian television programs produced abroad. Before the new rules came into effect, product placement was allowed in programs sent from channels based in nations such as the US and the UK, but not from channels placed in Norway. This created an advantage for the producers from the former groups. Furthermore, Opdahl (2012) argues that the new legislation will provide marketers with more variety of advertising opportunities in Norway. He also argues that it will stimulate Norwegian productions. Olsen & Samuelsen (2012, p. 136) claim that the legislative change is “lifting the ban on product placement in television” and state that “product placements have evolved as a new alternative advertising vehicle”. In order for Norwegian media producers and marketers to exploit the possibilities of this new “advertising vehicle”, we find it is essential that they know how to use product placement effectively.

The effectiveness of product placements on an audience is influenced by different cultural communication styles (Terlutter, et al., 2008; Terlutter, et al., 2010) and cultural background (Nelson & Devanathan, 2006). Research on product placement is to a large extent carried out by American researchers and is dominated by studies conducted on Americans (Gould, et al., 2000; Tiwsakul & Hackley, 2009; Chan, 2012). Chan (2012) emphasizes that “it is an unrealistic assumption that a given placement will appeal to all cultures” (2012, p. 54) and proposes that more studies in context outside the US should be conducted. The only study on product placement effects that, to our knowledge, has been carried out within a Norwegian context is a field study conducted by the Norwegian researchers Olsen and Samuelsen (2012) on respondents in a cinema setting in Norway.

The few research efforts on product placement focusing on a Norwegian setting makes it both interesting and relevant to study the effects of product placement strategies on a Norwegian audience in more detail. Brand recall, recognition, attitude and purchase intention are all recognized as effect of product placement (Chan, 2012). In the following chapter we argue why we find brand attitude the most appropriate effect to look into in our research study.

### 1.3 Why a study on attitudinal outcomes

Several researchers state that product placement can affect receivers' *brand knowledge*, *brand attitude* and *consumer behavior*, terms that are often referred to as *outcomes* of product placement. Brand knowledge, also called *brand awareness*, is a buyer's ability to identify the brand within the brand's category, either by recognizing or recalling the brand (Rossiter & Percy, 1997, p. 110). Various forms of brand knowledge effects are thus *brand recall* and *brand recognition* (Olsen, 2005). Brand attitude is somewhat more profound than brand knowledge and can be defined as a "buyer's evaluation of the brand (...) and [its] perceived ability to meet requirements". Consumer behavior is related to *purchase intention*, which is a "buyer's self-instruction to purchase the brand or to take purchase related action" (Rossiter & Percy, 1997, p. 110). Of the mentioned product placement outcomes, Chan (2012) recognizes that brand recall, brand recognition and brand attitude are commonly used to measure product placement effectiveness. Shah et al. (2012) state that a positive attitude towards a brand increases purchase likelihood, which is the ultimate goal of most product placements.

Several researchers have discovered some form of connection between product placement and brand attitude (van Reijmersdal, et al., 2007; Cowley & Barron, 2008; Russell, 2002). Research on the brand attitudinal effects of product placement however generates somewhat contradictory results (Balasubramanian, et al., 2006; Chan, 2012).

Some studies (Russell, 2002; Cowley & Barron, 2008; Homer, 2009) find that product placement indeed affects brand attitude. Russell (2002, p. 306) for example concludes that low recognized, natural brand placements can cause positive brand attitude change, whereas incongruent, "out of place" placements affect brand attitude negatively. Cowley and Barron (2008) conclude that obvious product placements can impact brand attitudes negatively when viewers have a high level of program liking. The researchers also find that less obvious product placements and situations when viewers have a low program liking can impact brand attitude positively. Homer (2009) also concludes that product placements can impact brand attitudes. This researcher however finds that repetition of product placements accounts for the attitudinal change.

Other researchers (Babin & Carder, 1996; van Reijmersdal, et al., 2007) put forward that product placement has little or no attitudinal effect. Babin and Carder (1996) conducted an

experimental study among an audience viewing an entire movie. They could not find any significant differences between a treatment group and a control group with regard to attitudes towards the fifteen brands that were product placed in the movie. Van Reijmersdal (2007) studied respondents' overall attitudinal change to the meal replacement brand Slim Fast, but found no changes in the viewers' attitude towards Slim Fast. The researcher states that the lack of significant effects of product placement on brand attitude might be due to the nature of the placements. The brand had been highly integrated into four episodes of an informational television series, using several different product placement strategies. An additional explanation could be that the brand Slim Fast might not be a relevant for the participant in her study.

Even though attitude change often is mentioned as a benefit of product placement, van Reijmersdal et al. (2007) argue that the overall effects of this remain unstudied and Chan (2012, p. 48) concludes that "placement effect in terms of brand evaluation is far from consistent".

Contrary to the unclear research findings concerning product placement and brand attitude, Chan (2012) states that the impact of brand recall and recognition of product placed brands is supported by numerous studies. Chan (2012) bases this conclusion on studies conducted by Babin and Carder (1996), d'Astous and Chartier (2000), Gupta and Lord (1998), Nelson (2002) and Lehu and Bressoud (2009). Although the findings of these researchers find that product placed brands to a large extent are recalled and recognized by viewers, several other researchers (Karrh, 1995; Russell & Belch, 2005) claim that knowledge measures cannot justify the money spent on product placement. This claim is based upon the fact that it is hard to prove that brand knowledge by itself leads to purchase intention.

Furthermore, Heath (2000) suggests that advertisement also can work without being recalled. The reason for this is that brands can be noted both consciously and unconsciously (Brusse, 2008). This phenomenon can be explained by *affective classical conditioning*. Affective classical conditioning is pairing an unconditioned stimulus (in the case of product placement in a television series for example an emotional scene) with a conditioned stimulus (the product placed brand) (Baker, 1999). Bhatnagar, et. al., (2004) state that the effectiveness of product placements ought to be measured by other outcomes than product placement knowledge. Hence, the findings and propositions suggest that recall and recognition of product placements not necessarily will result in desirable outcomes.

Based on her review of studies on product placement, Chan (2012, p. 48) states:

*The higher order effect of brand attitudes and purchase intention could be more attractive to marketers and may be their ultimate goal. Indeed substantial evidence in recent studies shows that recall does not necessarily transfer into attitude or purchase intention (Matthes, et al., 2007; van Reijmersdal, et al., 2007). In other words, gauging brand recall may not be able to reveal placement effect completely.*

Chan (2012) finds that recent studies that seek to measure product placement effectiveness focus more on brand attitude change than on brand knowledge effects. This shows that researchers have moved beyond knowledge effect studies and have acknowledged the need to focus on attitudinal effects instead. Based on the given arguments in this subchapter and in order to obtain a more complete general overview of the effects of product placement, we also see the need to study brand attitude in the perspective of product placement further.

Because we will study the attitudinal effects of product placements in a Norwegian setting, we need to take Norwegian legislation concerning this marketing tactic into account. The following subchapter therefore addresses the need for research concerning the effect of *prior notification*, a condition that Norwegian television channels need to meet in order to be allowed to expose audiences to product placement (Spigseth, 2012).

## 1.4 Why there is a need for research on prior notification

One of the conditions allowing Norwegian television channels to send television series containing product placement is that they have to mark the episodes that contain product placement. This is called *prior notification* and is supposed to inform viewers that they will be exposed to persuasion attempts from product placements (Spigseth, 2012). Head of TV2 Konsept, Espen Barås Bye (2013), explains how TV2 fulfills this condition in more detail: TV2 programs that contain product placements are marked with a notice saying “P Inneholder Produktplassering” (translated: “P Contains Product Placement”) in the upper left corner of the screen. The mark is shown for four seconds at the beginning and end of a television program, as well as after each commercial break (Bye, 2013)<sup>2</sup>. Bye (2013)

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<sup>2</sup> These rules were used by TV2 on February 21, 2013, but may be subject to changes in the future.

acknowledges that they do not know what the effects on brand attitude of showing prior notification to viewers are. The lack of available information on prior notification of product placements is also noted by Chan (2012), who finds that no research on product placement has focused on the effect of prior notification. This means that Norwegian television producers should welcome not only studies regarding product placement on a Norwegian audience, but also studies on the effects of prior notification.

## 1.5 Research questions and research model

Several researchers have found that the degree of product placement prominence, grouping strategies into subtle product placement and prominent product placement, influences brand attitude (Cowley & Barron, 2008; Kozary & Baxter, 2010). Homer (2009) even concludes that the type of placement, i.e. subtle versus prominent, has an important influence on brand attitude. These findings argue that the level of product placement prominence can be used as a variable when studying the effects of different placement strategies on attitudinal behavior.

Viewers are found to actively participate in interpreting product placements, resulting in viewers to be influenced differently (DeLorme & Reid, 1999). Cowley and Barron (2008) argue that program liking affects how focused the viewer will be when he or she watches the television program and thereby how sensitive he or she is to interruption. This makes the level of program liking an additional interesting variable to look into.

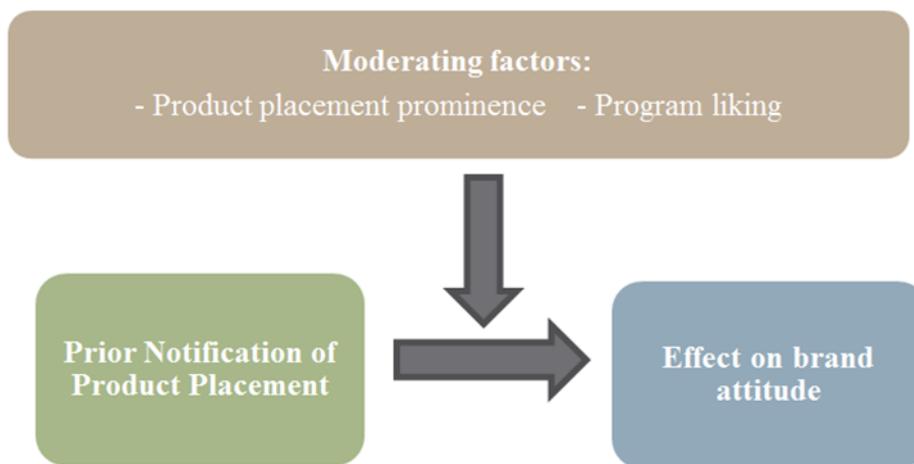
A thesis regarding prior notification of product placement and its effects on brand attitude in television programs in Norway is at present both interesting and highly relevant. Moreover, it is significant to look into how type of placement prominence influences attitudinal outcomes of prior notification of product placement. Finally, it is valuable to study whether the level of viewers' program liking will effect brand attitude change in the context of prior notification of product placement.

Based on the previous arguments we propose the following research questions:

1. *How will prior notification of product placement in television series or films affect Norwegian viewers' brand attitude compared to when viewers are not exposed to prior notification?*

2. *How will the effect of prior notification of product placement, i.e. its effect on viewers' brand attitude, be affected by exposure of different levels of product placement prominence, i.e. subtle versus prominent product placements?*
3. *How will the effect of prior notification of product placement, i.e. its effect on viewers' brand attitude, be affected by viewers' level of television program/film liking?*

Based on the research questions and for the purpose of this thesis, we have developed the following research model:



*Figure 1 Research model*

If this master thesis gives valid conclusions, the information will be valuable for concept and sponsor managers working for television series and films sent in Norway. Furthermore, it will also be valuable for brand managers that work with product placements in Norway.

## 1.6 Structure

In chapter 2 we present a theoretical background that gives an overview of existing literature and research concerning brand attitude, product placement and prior notification. Based on this, we present nine hypotheses, developed for answering our research questions. Chapter 3 reports on the methodology we use to find answers to our research questions. This includes research and instrument design, measurements and data collection. In chapter 4 we present the analysis. We go on to present the results from the data analysis in chapter 5. The following discussion of the results is given in chapter 6. The last chapter, chapter 7, presents

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implications, strengths and restrictions concerning our research and suggestions for future research.

**Part II:**  
**Theoretical Background**

*Although product placements have registered impressive growth, our understanding of consumers' responses to such messages has not fully evolved.*

*(Balasubramanian, et al., 2006, p. 116)*

## 2. Theoretical Background

In this chapter we will present the theoretical framework which makes the foundation for this research. We start by defining *brand attitude* and present empirically supported effects of a positive brand attitude. We will then define *product placement*, give a short presentation of the history of the phenomenon and provide an overview of the marketing technique today. Furthermore, we will present *persuasion knowledge* and *prior notification*. We believe that the mentioned subjects are crucial for the understanding of the attitudinal effects of prior notification of product placement.

Following this section, we will highlight findings from previous research concerning the effects of prior notification and product placement on brand attitude. Based on the theory foundation, we develop several hypotheses.

### 2.1 Outcome: The effect on brand attitude

#### 2.1.1 Defining brand attitude

Despite this long history of attitude research, researchers have yet to agree upon a universal definition of the term *attitude* (Olson & Zanna, 1993). However, researchers do agree that the definition should include the word *evaluation* (Olson & Zanna, 1993). Eagly and Chaiken (1992) for instance argue that attitudes will not form until people respond by evaluating an object. Moreover, the researchers state that, once an attitude has been formed, the attitudes will dispose evaluative responses when the person comes across the object again. Eagly and Chaiken (1998, p. 269) define attitudes as “the sum of positive and negative evaluations of an object”.

#### 2.1.2 Effects of positive brand attitude

Positive brand attitudes are considered to be a desirable goal and a common rationale for undertaking many marketing activities (Kotler & Keller, 2009). A positive brand attitude is found to influence purchase intentions and consumer behavior, and to be an integral part of positive brand image (Keller, 2003; Solomon, et al., 2006; Banytè, et al., 2007). Positive brand attitude should therefore be considered an important goal in product placement strategies.

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## 2.2 Product placement, prior notification, persuasion knowledge and psychological reactance

### 2.2.1 Product placement

#### 2.2.1.1 Defining “product placement”

*Product placement*, by some also called *brand placement*, is “the intentional incorporation of a product (or brand) into editorial content” (Law & Braun, 2000). This definition implies that product placement is not restricted to television series and movies. On the contrary, it means that the more “old-fashioned” placement mediums such as theater plays and books, in addition to the more modern computer games, music videos and blogs can be used as product placement channels as well. The wide range of product placement channels is given by Olsen’s (2005, section 4) description of product placement: “paid inclusion of a brand, verbally and/or visually, in mass media, culture or entertainment products for the purpose of influencing consumer behavior, attitudes or knowledge of the brand”<sup>3</sup>. Olsen’s explanation brings us to the aim of this paper: to measure the effect of product placement on consumer attitudes.

Kretchmer (2004, p. 40) states that to “understand the place and significance of (...) product placement, it is important to recognize that it is not a new phenomenon”. We will therefore proceed to give a short overview of the history of product placement.

#### 2.2.1.2 A historical perspective of product placement

Steven Spielberg’s 1985 movie *ET*, depicting an alien enjoying the peanut candy Reese’s Pieces, was credited with causing sales of the candy to increase by 65 percent within three months. The agreement between the film producers of *ET* and the producers of Reese’s Pieces is often referred to as the beginning of product placement (Baker, 2004; Balasubramanian, et al., 2006). Although this product placement caused many marketers to understand product placements’ commercial impact (McCarty, 2004; Hawkins, & Mothersbaugh, 2007; Fell, 2011), the collaboration between producers of media and producers of goods has a much longer history.

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<sup>3</sup> The definition is translated from Norwegian to English. The original Norwegian definition given by Olsen (2005) is the following: «Betalt inkludering av en merkevare, verbalt og/eller visuelt, i massemedia, kultur- eller underholdningsprodukter med det formål å påvirke forbrukeratferd, holdninger eller kjennskap til merkevaren.»

The embedment of products in mediated messages extends as far back as the realization of the 1920's radio and 1940's television commercials. At that time, show directors and sponsor managers regularly developed integral relationships and sponsors often controlled the entirety of programs. While for example Mike Wallace delivered the CBS news simultaneously as he pitched Bond suites, NBC reporter Swayze had a burning Camel cigarette on an ashtray on his desk, which the camera at the end of the broadcast zoomed in on (Turner, 2004).

In 1929, about 55 percent of radio programs were paid for and created by advertisers (MacDonald, 1979), and in 1957 the same applied for more than 30 per cent of television programs (Head & Sterling, 1982). However, even though ad agencies funded a significant part of the young mediums, "this silver lining had a cloud", as Turner (2004) puts it. Already during the 1920s and the beginning of the 1930s, the growth of product placements began to decline (Balasubramanian, et al., 2006). Not only did product placement arrangements put producers at the mercy of advertisers, but national scandals arose when rumors spread that advertorial scripts regularly were used in docudramas, and that programs to a large extent were controlled by ad agencies (Barnouw, 1970; Metz, 1976). Consumers' view of radio and television channels as independent innocent vehicles was wrecked and by 1968 no more than three percent of radio and television programs were created by advertisers (Head & Sterling, 1982). Nevertheless, this was not the end of product placement. Instead, the marketing tactic has taken on a new force and meaning (Kretchmer, 2004).

Product placement's uneven history seems to be closely connected to how viewers perceive and feel about product placement. This makes it interesting to study how people today respond to it.

### ***2.2.1.3 Today's product placement***

Nowadays, the average Norwegian consumer is exposed to about 3 500 advertising exposures daily (Boostcom Media, 2012). As advertising pressure increases, consumers are becoming better at shielding themselves from advertising. Growing competition from new entertainment products, increased fragmented media consumption and tools that allow viewers to zap and DVR-record has during the last years given consumers the opportunity to avoid advertising messages to a larger extent than ever before. According to Kiley (2006), as much as two-thirds of television viewers channel-surf during commercial breaks, mute or skip advertisements, because they find them irrelevant or irritating. This makes it difficult to

reach the target audience (Brusse, 2008). Due to this, advertisers are again forced to search for alternative ways to communicate brand messages (Olsen, 2005; Balasubramanian, et al., 2006).

Product placement re-emerged around the year 2000, when marketers were on the lookout for a marketing tactic that enabled the promotional message to be integrated within editorial content (Rohem, et al., 2004; PQ Media, 2012 b). The new trend is called “advertainment” and is described as entertainment functioning as advertisement or advertisement that performs as entertainment (Kretchmer, 2004). Product placement is acknowledged to be a cost-effective method for reaching target viewers (Russell & Stern, 2006), and is seen as a way for advertisers to withdraw some of their lost influencing power (PropStar Placements Inc., 1999-2012). In many countries today, product placement is again recognized as an important practice within integrated marketing and advertising (The Economist, 2005). Take the US as an example: In 2006, more than 1 000 American firms specializing in product placement had used product placement as the basis for innumerable multi-million dollar marketing campaigns (Balasubramanian, et al., 2006). Van Reijmersdal, et al. (2009) believe that product placement has become the industry’s advertising future.

While the new paradigm between entertainment and advertisement continues to grow, critics are expressing concerns. Worries about product placement’s pervasive form of advertising, and the possible overexposure of mediated messages to unsuspecting and inexperienced youth is at particular debate (Kretchmer, 2004). The expressed concerns explain why product placement is riskier than conventional advertising (Williams, et al., 2011). Moreover, it may be the main explanation why the Norwegian experience within the field of product placement is so limited (Olsen, 2005). Despite the concerns present in Norway, the new EU directive on product placement liberalized the Norwegian marketing regulations in January 2013. Consequently, product placement is gradually becoming more present in the country (Opdahl, 2012). The Norwegian product placement concerns along with the growth of product placement in Norway, makes it relevant to assess how Norwegians today are affected by exposure to it.

Not all product placements have been labeled as “successful” (Olsen, 2005). This indicates that product placement must be done in certain ways in order to achieve the desired attitudinal effects. We will now proceed to address the effect of prior notification on product

placement and look into the moderating variables that are thought to influence the outcome of product placement strategies: Product placement prominence and program liking.

### **2.2.2 Prior notification and persuasion knowledge**

*Persuasion knowledge* is an activated attitude towards a persuasion attempt (Friestad & Wright, 1994). Boush et al. (1994) operationalize persuasion knowledge as a stable attitude that can be activated during persuasion. More specifically, persuasion knowledge comprises knowledge about actors, themes and outcomes of the persuasion process (Friestad & Wright, 1995).

Friestad and Wright (1995) argue that audiences who are capable of detecting a persuasion attempt indulge in counter-arguing and, consequently, develop more negative attitudes towards the brand. This is supported by Russell (2002), who claims that persuasion knowledge can impede mere exposure effects: If the audiences realize that the product placements are placed there to affect their judgments they may counter-argue product placement just as they do traditional advertising messages. Prior notification is, according to Friestad and Wright (1994), expected to activate knowledge of the persuasion attempt. This implies that prior notification ultimately can create higher levels of persuasion knowledge, and, when noticed, can result in an unfavorable evaluation of the brand placed (Chan, 2012). In *An examination of the effects of activating persuasion knowledge on consumer response to brands engaging in covert marketing*, Wei et al. (2008) accordingly detect negative attitudes when there was a presence of persuasion knowledge among viewers exposed to product placement.

### **2.2.3 Prior notification and psychological reactance**

Clee and Wicklund (1980) note that consumers are accustomed to having freedom of choice, and when this freedom is threatened it can influence how the consumer reacts. The researchers argue that attempted interpersonal influence, including pressure from advertising, can backfire and induce the recipient of the influence attempt to do the opposite. *Reactance theory* is a psychological theory dealing with people's reactions to threatened and eliminated freedoms. *Reactance* is described as "the motivational state of the person whose freedom is threatened" (Clee & Wicklund, 1980, p. 389).

Tiwsakul, et al. (2005, p. 98) state that a product placement is "placed in a non-promotional entertainment context" and that their "promotional intent is not made explicit". Several

researchers also claim that product placements are less likely to evoke psychological reactance compared to regular advertising (d'Astous & Chartier, 2000; Edwards, et al., 2002). Yet, Matthes, et al. (2007) claim that product placements under certain conditions can create strong psychological reactance among audiences. Most noteworthy, the authors find that reactance may be induced if product placements occur with high frequency, the audience has a low degree of involvement or if the audience is conscious of the persuasion attempt. As such, prior notification can, as noted above, lead to higher levels of persuasion knowledge, and consequently, evoke reactance.

Because prior notification of product placement will make the promotional intent of this marketing tactic more evident, we believe it is likely that prior notification will interfere with the expected outcomes on viewers' attitudes caused by product placements. This leads us to our first hypothesis, one that takes into account the predicted unfortunate effect of prior notification on the intended, and by some researchers (d'Astous & Séguin, 1999; Russell, 2002; Matthes, et al., 2007) discovered, positive attitudinal effect of product placement:

H1: *Prior notification followed by an exposure of product placement will be less effective in producing a positive brand attitude as compared to no notification prior to the exposure of the product placement.*

## 2.3 Moderating variables: Product placement prominence and program liking

### 2.3.1 Product placement prominence

#### 2.3.1.1 Defining "product placement prominence" and grouping product placements

Product placements can differ in several ways. A product placement can for instance be visual, verbal or both. It can be brief or shown on screen for a long time, and it can be an important part of the story or insignificant to the plot (McCarty, 2004). This has resulted in many different formulated types of product placement. Among different product placement execution characteristics, the prominence level of product placement is often addressed (Chan, 2012). Homer (2009) states that a number of researchers have found differences in the outcomes due to different levels of product placement prominence. Moreover, D'Astous and Seguin (1999) have found that one main way to classify product placements into groups

is by labeling them according to their level of prominence. Based on Homer's (2009) and d'Astous' and Seguin's (1999) findings, we choose to study the effect of different types of product placement according to prominence level.

Gupta and Lord (1998, p. 49) define the word *prominence* as "the extent to which the product placement possesses characteristics designed to make it a central focus of audience attention". Lehu and Bressoud (2009) go on to explaining that prominence, among other elements, is linked to the duration and size of the placement on the screen, the number of times the product or brand appears in a scene, and the placement's screen location. Subsequently, researchers speak of *prominent placements* and *subtle placements*. Chan (2012, p. 54) argues that "the inconsistent effects found on prominence suggest future research is required to adopt a more consistent definition of it". Due to the apparent need to study product placement based on a more consistent definition, we base our research in this paper on the definition that we find the most clear and concrete from previous research articles focusing on product placement prominence. Cowley and Barron (2008, p. 92) characterize prominent placements as "(1) connected to the plot, (2) mentioned more than once or on the screen for more than five seconds, and (3) either audio or audio-visual". Furthermore, they describe subtle placements as "props only" that are "(1) visual, (2) not related to the plot, and (3) seen only briefly".

We find Cowley and Barron's definitions explanatory and easy to apply. The article *When Product Placement Goes Wrong. The Effects of Program Liking and Placement Prominence* (Cowley & Barron, 2008), where the researchers introduce the two definitions, has been cited by almost 100 authors (Google Scholar). Based on these two points we choose to use Cowley and Barron's (2008) definitions of prominent product placement and subtle product placement.

### *2.3.1.2 The effects of product placement prominence*

Feelings associated with a scene will, according to McCarty (2004), be transferred to the product placed brand. The researcher argues that the psychological processes following an exposure of a product placement, where the product for instance only is seen, i.e. a form of subtle product placement (Cowley & Barron, 2008), may be as simple as this (McCarty, 2004). Russell (1998) suggests that products placed in the background, again a type of subtle product placement (Cowley & Barron, 2008), often are processed by the non-conscious association between the product brand and the medium. Following these arguments, subtle

product placement merely requires the viewer to make an association between the response to the scene and the placed brand.

According to Russell (1998), product placements that are highly integrated in the plot, involve a higher order form of processing. The concept *transformational advertising* is by Puto and Wells (1984, p. 638) explained as “advertising that transforms or changes the experience of using a product such that the product becomes more than it would otherwise be, making it ‘richer, warmer, more exciting, and/or more enjoyable’”. A viewer’s experience can similarly be transformed as a consequence of the brand being embedded in the plot. Instead of just seeing the brand as a functional object, it becomes a brand that is considered in the story’s context. This way, the brand can be influenced by characteristics of the story’s characters and the lifestyles presented in the series (McCarty, 2004). Consequently, we find that a prominent product placement is a very different and psychologically more complicated phenomenon than a subtle product placement. Due to this finding, we see the relevance in developing and researching hypotheses concerning the attitudinal effects of both subtle and prominent product placement. Based upon H1, we therefore also propose the following hypotheses:

H2: *Prior notification of product placement followed by an exposure of subtle product placement will be less effective in producing a positive brand attitude compared to an exposure of subtle product placement where the viewer is not notified about product placement.*

H3: *Prior notification of product placement followed by an exposure of prominent product placement will be less effective in producing a positive brand attitude compared to an exposure of prominent product placement where the viewer is not notified about product placement.*

Van Reijmersdal, et al. (2009, p. 5) state that prominence plays an important role in forming the response of a product placement and advocates that “the higher the perceived prominence of a placement, the more negative the placement attitudes and beliefs”. According to the researchers, this can be explained by theories of ad skepticism and persuasion knowledge. As people realize that they are affected, they will come up with counterarguments. This view is supported by previous findings presented in the article *Product Placements. The Impact of Placement Type and Repetition on Attitude*, where

Homer (2009) emphasizes that “in your face”, meaning obvious, promotional messages can prevent persuasion. This was also confirmed by a study Homer (2009) conducted herself: Data from an experiment concerning the effects of subtle and prominent placements and repetition on attitude concludes that positive brand attitudes decrease when placements are prominent, whereas consumer attitude change is more positive in subtle product placement cases. Product placement agency PropStar Placements (1999-2012) affirmatively states that product placement works best as a subtle form of advertising when it comes to the effect on consumer brand attitude. Since product placement initially is supposed to be a way of advertising that overcomes the irritation factor associated with commercials (Fell, 2011), we expect prominent product placements to lack the positive features originally associated with the marketing tactic. Finally, Cowley and Barron (2008) also conclude that subtle product placements are less likely to affect brand attitudes negatively, something the researchers link to the fact that these placements are less noticeable.

The research findings concerning the different outcomes of prominent and subtle product placement has resulted in the following two hypotheses:

H4: *Prior notification of product placement followed by an exposure of subtle product placement will be more effective in producing a positive brand attitude compared to prior notification of product placement followed by an exposure of prominent product placement.*

H5: *No prior notification of product placement followed by an exposure of subtle product placement will be more effective in producing a positive brand attitude compared to no prior notification of product placement followed by an exposure of prominent product placement.*

## **2.3.2 Product placement and program liking**

### **2.3.2.1 Defining “program liking”**

The second of the moderating factors in the research model is *program liking*. In the article *Feeling and Liking Responses to Television Programs: An Examination of Two Explanations for Media-Context Effects*, Murry et al. (1992) examine how television program liking affects viewers' evaluations of commercials. Here, the authors define program liking as “a summary evaluation of the experience of viewing a television program” (Murry, et al., 1992, p. 442). In this paper we use the same definition of program liking.

### 2.3.2.2 *The effects of program liking*

Because little research has been done when it comes to the effect of product placement and program liking on brand attitude, we will base our hypotheses concerning this factor on the few research findings that are available.

We first study whether hypothesis H1 would change if the viewer has a high or low degree of program liking. Therefore, we include the following two hypotheses in our research:

H6: *Prior notification of product placement followed by an exposure of product placement when the viewer has a high degree of program liking will be less effective in producing a positive brand attitude compared to an exposure of product placement where the viewer is not notified about product placement and has a high degree of program liking.*

H7: *Prior notification of product placement followed by an exposure of product placement when the viewer has a low degree of program liking will be less effective in producing a positive brand attitude compared to an exposure of product placement where the viewer is not notified about product placement and has a low degree of program liking.*

Results of a study conducted by Cowley and Barron (2008) show that prominent product placement can impact brand attitudes negatively by viewers with a high level of program liking. On the contrary, the researchers found that prominent placements can impact brand attitudes positively by viewers with a low level of program liking. The effects are explained by the belief that people who are affectively focused on a television series are more sensitive to disruptions. Based upon the researchers' explanation and because we also find it reasonable to believe that television series viewers with a high program liking will be more affectively focused on a television series and therefore be more sensitive to disruptions, we propose the following hypotheses:

H8: *Prior notification of product placement followed by an exposure of product placement when the viewer has a high degree of program liking will be less effective in producing a positive brand attitude compared to prior notification of product placement followed by an exposure of product placement when the viewer has a low degree of program liking.*

H9: *No prior notification of product placement followed by an exposure of product placement when the viewer has a high degree of program liking will be less effective in producing a positive brand attitude compared to no prior notification of product placement followed by an exposure of product placement when the viewer has a low degree of program liking.*

H8 and H9 study the same effect as Cowley and Barron (2008). Our study however involves both a group with respondents subjected to prior notification and a group of respondents not subjected to prior notification.

## 2.4 Research model with associated hypotheses

The following figure shows the research model prepared for this study. The foundation for the model is provided by figure 1 from chapter 1 and the model is further developed by including associated hypotheses presented in the previous subchapters.

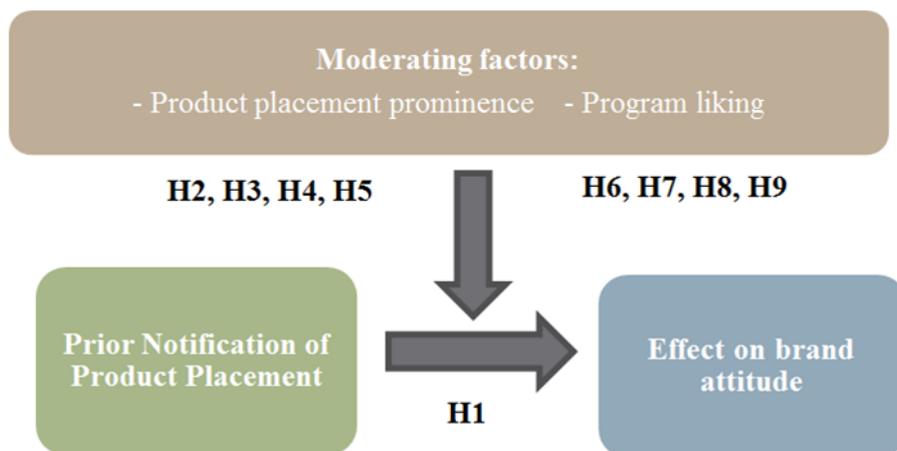


Figure 2 Research model with associated hypotheses

**Part III:**  
**Methodology**

*Consumers continuously witness the blurring lines between entertainment and marketing. It is increasingly difficult to differentiate the two because sometimes promotion is in the form of entertainment and other times entertainment is in fact a sale pitch.*

*(Chan, 2012, p. 40)*

### 3. Methodology

This chapter explains the methodological approach for answering the research questions outlined in chapter one. In this chapter we describe the research and instrument design, the measurement instruments and the data collection procedure of the study.

#### 3.1 Research design

A research design is the general plan outlining how to answer research questions (Saunders, et al., 2009). This study seeks to find the effects of prior notification on the effectiveness of product placement with regards to brand attitude. In addition, it will provide an analysis on how product placement prominence, i.e. subtle and prominent placements, and program liking will moderate the effect of prior notification. Explanatory research studies a situation or a problem in order to explain the relationships between variables (Saunders, et al., 2009). As such, this study can be defined as explanatory. In addition, this study is also deductive in its nature. A deductive approach focuses on testing a theoretical proposition by the employment of a research design specifically designed for the purpose of its testing (Saunders, et al., 2009).

The hypotheses submitted in chapter 2 imply that the purpose of this study is to find a cause-effect relationship among variables. Churchill and Iacobucci (2005) note that experiments can be referred to as causal research, and that an experimental approach often provides more convincing evidence of causal relationships compared to exploratory or descriptive designs. The rationale is that an experiment offers the researcher control over the manipulation of the presumed casual factor. Consequently, the researcher can be more confident that the relationships discovered are “true” relationships (Churchill & Iacobucci, 2005). An experiment is defined as “a research strategy that involves the definition of a theoretical hypothesis; the selection of samples of individuals from known populations; the allocation of samples to different experimental conditions; the introduction of planned change on one or more of the variables; and measurement on a small number of variables and control of other variables” (Saunders, et al., 2009, p. 591). Based on the logic presented above, this study is conducted within the experimental framework.

The experiment is conducted as a 2 x 2 x 2 factorial design. The distribution of the research groups are as follows in Table 1:

	No prior notification	Prior notification
Prominent product placement Brand 1: Oreo Cookies	Research group 1	Research group 2
Subtle product placement Brand 1: Oreo Cookies	Research group 3	Research group 4
Prominent product placement Brand 2: Bing	Research group 5	Research group 6
Subtle product placement Brand 2: Bing	Research group 7	Research group 8

*Table 1 Overview of research groups*

The research is designed as a comparative study with the intention to assess the implications of prior notification under different conditions. Based on this we decided not to include a control group. The method for gathering data is aligned with the “after-only” design, which implies that the respondents’ attitudes towards the brand were not measured prior to the stimuli. The rationale for this approach is that we by measuring attitudes prior to stimuli can influence the results of the experiment by creating a situation where the respondent is more likely to notice the purpose of the study. According to Churchill and Iacobucci (2005), the “after-only” design has some weaknesses. First of all, the lack of data gathering prior to the exposure of stimuli provides the opportunity for the sample to have selection biases, as it is impossible to know whether the experimental groups are similar. Churchill and Iacobucci (2005) note that the problem of selection biases can be solved through randomly selecting and assigning the respondents to different experimental groups. Secondly, it is impossible to control that the experimental groups are similar. Finally, the “after-only” design is not a particularly good design for addressing absolute change. Despite these flaws, the design is still a highly popular method for gathering experimental data (Churchill & Iacobucci, 2005), and we find it appropriate for this study.

In order to efficiently collect and save data, and to secure enough respondents, we used questionnaires. Saunders, et al. (2009) note that questionnaires allow collection of large amounts of data from a sizeable population. In addition, a questionnaire can generate findings

that are representative for the whole population for a low cost (Saunders, et al., 2009). However, by using questionnaires instead of conducting a laboratory experiment, we lose the opportunity to control the response situation. As such, external sources of error may be present in the results of the experiment.

The experiment is designed through semi-short questionnaires. The respondents are randomly assigned to one of in total eight blocks in the questionnaire. Each of these blocks starts with a short clip from one out of four different movies or television series; Real Steel, Mission Impossible 3, The Vampire Diaries or Friends. All of the clips contain either a subtle or a prominent placement of one out of two brands: Oreo Cookies or Bing. In four out of the eight clips the respondent is informed of the product placement in the beginning of the clip, i.e. prior notification. After watching the clip, the respondent is asked to answer questions created to measure his or her degree of program liking, attitude toward the brand and intention to buy/use. In addition, the respondent is asked to answer the same questions with regards to two competing products in each product category: the cookies Ballerina Nougat and Dots Double-Sjoko Cookies and the search engines Google and Kvasir. The inclusion of other brands is done to prevent the respondents from finding out the purpose of the study. The rationale for this is that when respondents know the purpose of a study, he or she is inclined to answer in compliance with this purpose (Saunders, et al., 2009).

The following table outlines the eight different blocks of the questionnaire that the respondents could be assigned to:

Research group/ block	Movie/ television series	Brand	Product placement strategy	Prior notification
1	Friends	Oreo Cookies	Prominent	No
2	Friends	Oreo Cookies	Prominent	Yes
3	Mission Impossible 3	Oreo Cookies	Subtle	No
4	Mission Impossible 3	Oreo Cookies	Subtle	Yes
5	The Vampire Diaries	Bing	Prominent	No
6	The Vampire Diaries	Bing	Prominent	Yes
7	Real Steel	Bing	Subtle	No
8	Real Steel	Bing	Subtle	Yes

*Table 2 Overview of experimental blocks*

## 3.2 Instrument design

### 3.2.1 The placements

In order to achieve high authenticity, this study uses actual product placements, rather than placements created for this purpose only. To be able to compare the results from subtle and prominent product placements strategies, we need to study brands with product placements that fulfill the requirements for both strategies. To define whether the product placement strategy is prominent or subtle, Cowley and Barons (2008, p. 92) definition is used:

*Prominent placements is characterized as (1) connected to the plot, (2) mentioned more than once or on the screen for more than five seconds, and (3) either audio or audio-visual. Subtle placements are props only. They are (1) visual, (2) not related to the plot, and (3) seen only briefly.*

In order to see if the results are applicable to different product categories, we also choose two different brands with very diverse usages; Bing and Oreo Cookies. The former has a subtle placement in the movie *Real Steel*, and a prominent placement in the television series *The Vampire Diaries*. The latter has a subtle placement in the movie *Mission Impossible 3* and a prominent placement in the television series *Friends*. The decision is mainly practical. However, we chose to actively avoid brands we know have a very strong brand positions in Norway. The rationale for this is that attitudes for brands with a strong position resist most attempts at change (Olson & Zanna, 1993). As such, it may be difficult to attain significant experimental effects when using brands with strong positions. Since both Bing and Oreo Cookies have strong competitors in their Norwegian markets, we consider them to be suitable alternatives for this particular study. Ideally we should pre-test the brands with regards to their brand positions, but due to limited resources and time is not considered to be an option.

### 3.2.2 Placement descriptions

The clips are cut and edited to fit the purpose of this study. In addition, signature introduction or other familiar features from the movie or television series are edited into the clip prior to or following the sequence containing the product placement, based on what is considered the most natural. This is done to conceal the product placement and in addition create a familiarity of the clip in order to provide the respondent with more information prior to the questions regarding program liking. Each clip is approximately two minutes long.

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In order to make the experiment as realistic as possible we decided to use the same method as TV2 when notifying the respondents of the product placement. The clips that contains product placements are marked with a notice saying “P Inneholder Produktplassing” (translated: “P Contains Product Placement”) in the upper left corner of the screen. The mark is shown for four seconds at the beginning of the clip. The mark used in our study is found below, and is the exact same as the mark used by TV2<sup>4</sup>.



*Figure 3 Prior notification mark*

By comparing the results from the identical questions from the blocks with and without prior notification, we can study the effects of notifying the audiences of product placements.

### *3.2.2.1 Prominent placement of Oreo Cookies*

The clip containing the prominent placement of Oreo Cookies is obtained from the television series Friends. The clip has no introductory sequence, and the scene containing the product placement starts immediately. The clip lasts for about two minutes, including an ending sequence containing the signature introduction of the television series. The scene containing the product placement is a sequence where four of the main characters, Phoebe, Joey, Chandler and Ross, discuss one of Ross’ dating experiences, while Joey attempts a new personal best in eating cookies. Throughout the two minute long clip, Oreo Cookies is mentioned once after 10 seconds with the Phoebe’s sentence “Joey is stuffing 15 Oreos in his mouth”. In addition, a plate with Oreo Cookies is shown three times for a total of 13 seconds (five, three and five seconds respectively) in a period of one and a half minute. Moreover, the product placement of Oreo Cookies is an integrated part of the story, as they are referring to the cookies several times and because Joey is eating the cookies throughout the sequence attempting the record. For instance, at the end of the scene, Joey states “I did it” with his mouth full of Oreo Cookies.

Prior notification, for the experimental cell containing this, is marked by “P Inneholder Produktplassing” (“P Contains Product Placement”) in the top left corner of the clip for four seconds. The notification starts immediately after the clip starts.

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<sup>4</sup> The mark is used with permission from Espen Barås Bye from TV2 Konsept.

For pictures of the sequences containing prior notification and product placement please see appendix 1.1.1.

### *3.2.2.2 Subtle placement of Oreo Cookies*

The clip containing the subtle placement of Oreo Cookies is obtained from the movie Mission Impossible 3. The clip lasts for about two minutes and starts with the signature introduction of the movie, followed by the sequence containing the product placement of Oreo Cookies. The sequence takes place in a 7-eleven store, where the main character, Ethan Hunt, is having a conversation with the IMF-agent John Musgrave. Oreo Cookies is seen once, for about four seconds, among several other products on the shelves in the store. Throughout the time on the screen, Oreo Cookies is out-of-focus and seen only briefly in the bottom right corner of the screen. Oreo Cookies is merely a prop in the scene, and is thus not an integrated part of the story.

Prior notification, for the experimental cell containing this, is marked by “P Inneholder Produktplassing” (“P Contains Product Placement”) in the top left corner of the clip for four seconds. The notification starts immediately after the introductory sequence is finished.

For pictures of the sequences containing prior notification and product placement please see appendix 1.1.2.

### *3.2.2.3 Prominent placement of Bing*

The clip containing the prominent placement of Bing is obtained from the television series The Vampire Diaries. The clip starts with an introductory sequence containing the logo and sound of the television series before moving on to a scene where the main character, Elena Gilbert, talks on the phone. The sequence containing the product placement starts about one minute into the clip and lasts for about a minute. It consists of a scene where Elena and her friend research and discuss the adoption of Elena on a computer. Throughout the two minute long clip, Bing is mentioned once in the following sentence “I bing’d it.” and the brand’s logo is shown on a PC screen four times for a total of 11 seconds (three, four, three and one second(s) respectively). The product placement is clearly an integrated part of the story, as they use Bing as the search engine for researching the adoption.

Prior notification, for the experimental cell containing this, is marked by “P Inneholder Produktplassing” (“P Contains Product Placement”) in the top left corner of the clip for four seconds. The notification starts immediately after the introductory sequence is finished.

For pictures of the sequences containing prior notification and product placement please see appendix 1.1.3.

#### **3.2.2.4 Subtle placement of Bing**

The clip containing the subtle placement of Bing is obtained from the movie *Real Steel*. The clip has no introductory sequence, and the scene containing the product placement starts immediately. The clip lasts for about two minutes, including an ending sequence containing the logo and signature tune of the movie. The clip containing the product placement is obtained from a fighting scene where robots controlled by the main characters in the movie fight in front of an audience. Bing is seen on one of several billboard ads in the arena. The billboard containing the Bing ad is shown twice, after about seven and 50 seconds, for about two seconds each time. Both times the product placement is seen only briefly in the background of the fight. Bing functions as a prop in the scene and the product placement is not an integrated part of the story.

Prior notification, for the experimental cell containing this, is marked by “P Inneholder Produktplassing” (“P Contains Product Placement”) in the top left corner of the clip for four seconds. The notification starts immediately after the clip has started.

For pictures of the sequences containing prior notification and product placement please see appendix 1.1.4.

### **3.2.3 Ethics**

The original content, on which the clips in this study are based, are protected by copyrights. As such, we had to make sure that we could legally use edited clips from movies and television series in our study. We found the alternatives, creating our own clip or using printed scenes from television series or movies, less appropriate because they would create a less realistic experimental condition. We contacted lawyer Camilla Moe (2013) from Advokathjelpen and she informed us that the relevant framework in our case was the American copyright law. She further concluded that we were not infringing copyright laws as long as the clips are used for educational and research purposes only. Her statement is backed up by a change in US copyright law from 2010, which states that exceptions from the laws regarding copyrights are accepted if the content is used for academic, non-commercial purposes. Moreover, it also states that editing of material is accepted when used for academic purposes (US Copyright Office, 2010).

Based on the information provided by Camilla Moe (2013), and the US Copyright Office, we decided that it was acceptable to use and edit clips for the purpose of academic research. We only used original content when editing the clips. In addition, we avoided distributing the clips freely by uploading the clips to the questionnaire instead of video sharing sites. As such, we could control who had access to the clips. Moreover, we only enabled each respondent to see the clip once, meaning that the respondents had limited access to the material.

### 3.3 Measurements

In order to measure the effects of the independent variable, prior notification of product placement, and the moderating variables, product placement prominence and program liking, on brand attitude, we had to gather data on the respondents brand attitude and degree of program liking.

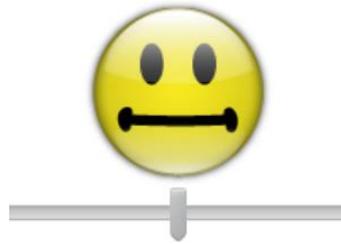
To mask the intention of the study, we also decided to include questions regarding the respondents' involvement in the clips. This was aligned with the stated purpose of the study, i.e. a study on the topic of television series and movies. In addition, for the same reason we included questions measuring the brand attitude towards two close competitors of each brand, Ballerina Nougat and Dots Double-Sjoko Cookies in the Cookies category, and Google and Kvasir in the search engine category.

For the complete design of the questionnaire, please see appendix 2.

#### 3.3.1 Brand attitude

##### 3.3.3.1 Attitudes based on evaluations

As given in chapter 2 Eagly and Chaiken (1998, p. 269) define attitudes as “the sum of positive and negative evaluations of an object”. Moreover, William (1986) also argues that brand attitudes are the overall evaluations of a brand. The emphasis on the word *evaluation* leads us to ideas of how one can measure attitudes. In order to get an overall evaluation of the brands in question, Oreo Cookies and Bing, we asked the respondents to state their comprehensive belief of the brand on a five point scale, by moving the marker under a smiley face, cf. Figure 4. The same question was included for the competing brands.



*Figure 4 Measurement of comprehensive evaluations*

### **3.3.3.2 Attitudes as a function of associations**

Several researchers state that attitudes are characterized as associative networks of interconnected beliefs and, as previously mentioned, evaluations (Fazio, 1990; Pratkanis & Greenwald, 1989, according to Olson & Zanna, 1993).

Keller (1993) argues that even though different brand models have been suggested when it comes to brand attitude measurement, a widely accepted approach is based on a multi-attribute formulation. Here, brand attitudes are seen as a function of the associated benefits and attributes that are seen as salient for the brand. One of the most influential multi-attribute models in this respect (Bettman, 1986, according to Olson & Zanna, 1993) is the expectancy-value model proposed by Fishbein and Ajzen (1975). This model sees attitudes as a multiplicative function of (1) the salient beliefs a consumer has about the product or service and (2) the evaluative judgment of these beliefs. This means that their model takes into account both the extent to which consumers believe the brand has certain benefits and characteristics as well as their view on how bad or good it is that the brand has these benefits and characteristics (Keller, 1993).

The findings and propositions from attitude researchers argue that we ought to measure product placement viewers' beliefs that the product placed brands have certain characteristics. Moreover, it also means that we have to measure their judgment of how important these characteristics are for the particular brands.

We conducted a pretest to find suitable characteristics<sup>5</sup> for the questionnaire. This was done through ten short qualitative interviews with students that ended their education at the Norwegian School of Economics (NHH) half a year or a year prior to this study. Four of the

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<sup>5</sup> Here characteristics refer to the associated benefits and attributes that are seen as salient for the brand from the expectancy value model.

participants had a bachelor degree, while the remaining six had a master's degree. This population was chosen in order to prevent that the respondents from the pretest were subjected to the actual experiment, while at the same time making sure that the pretest sample had a similar background as the research sample. The interviews were conducted individually and consisted of two parts. In the first part the respondents were asked what they associated with search engines, and in the second part they were asked what they associated with cookies. This meant that we had ten respondents for each of the two categories. The characteristics were then categorized by grouping characteristics measuring similar aspects into categories. Eight categories were chosen, based on frequency and importance of the characteristics, for each of the two product categories. The following table lists the eight characteristics for each brand:

Characteristics	
Cookies	Search engines
Good taste	User friendly
Healthy	Informative
Quality	Useful
Creates coziness	Efficient
Provides energy	Practical
Fits as serving to guests	Provides good results
Exiting taste	Precise
Innovative product	Quality

*Table 3 Characteristics*

For a full outline of the characteristics found in the pre-test, and the categories they are placed within, please see figure 3.1 and 3.2 in appendix 3.0.

In line with the expectancy value model, we had to measure both to what degree that characteristics are associated with a brand and the relative importance of the different characteristics. Thus, we asked the respondents in the questionnaire to range the eight characteristics from most important to least important, before answering to what degree they associated the brand with the different characteristics. This was done to check that the characteristics from the pretest seemed important for the respondents in the actual study. If

one or several characteristics would tend to be evaluated as less important, this could be a reason to remove them from further analysis, especially if they show an opposing trend compared to more important characteristics. Following the ranking question, the respondents were asked to what degree they associated the characteristics with either Bing or Oreo Cookies. In addition, the respondents were asked to evaluate to what degree they associated the characteristics with two other brands for each product category: Google and Kvasir and Ballerina Cookies and Dots Double-Sjoko Cookies. This was done in an attempt to conceal the purpose of the questionnaire, and thereby prevent skewed results.

Dillman (2007, according to Saunders, et al. 2009, p. 368) states that opinion variables “record how respondents feel about something and what they believe is true or false”. Moreover, rating questions, especially the Likert-style rating scale, in which the “respondent is asked how strongly he or she agrees or disagrees with a statement” (Saunders, et al., 2009, p. 378), is often used to collect opinion data. We therefore used a seven point Likert Scale ranging from “highly disagree” to “highly agree”.

### *3.3.3.3 Attitudes based on a semantic differential scale*

The characteristics used to measure attitude for the two brands individually do not measure the same elements across the two brands. Consequently, in order to conduct an across-brands analysis, we had to find a general measurement. A frequently used scaling tool for measuring attitudes is the semantic differential scale. Typically, the scale is a seven point bipolar rating scale using adjectival opposites (Al-Hindawe, 1996). According to Al-Hindawe (1996), this scaling method has two advantages. First of all, it is easy to implement for the researcher and to understand for the respondent. Secondly, it provides the respondents with the opportunity to have extreme, mild or neutral opinions. A pilot study is recommended to find suitable pairs of adjectives (Al-Hindawe, 1996). However, as noted previously, the research design demands that we use a general set of adjective pairs. We therefore based our adjectives on Murry, et al. (1992), who also used the following ten adjective pairs to measure brand attitude:

Adjective pairs	
1	Bad – Good
2	Unfriendly - Friendly
3	Negative - Positive

4	Uninteresting – Interesting
5	Unattractive - Attractive
6	Unfavorable - Favorable
7	Foolish - Wise
8	Harmful - Beneficial
9	Unlikeable - Likable
10	Unpleasant – Pleasant

*Table 4 Adjective pairs*

#### ***3.3.3.4 Attitudes as a function of ranking competitors***

Barnard & Ehrenberg (1990) argue that ranking is a suitable measure for expressing consumers' preferences towards different brands based on certain attributes or statements. With ranking, the authors propose that the respondents should place a set of brands in an order, so that the brand ranked the highest is the most closely associated with a statement or the attribute in question. Since we already measure brand attitude based on different characteristics, we wanted to use ranking as a method for assessing respondents' overall evaluation of the product placed brand, and the two close competitors. Thus, the respondents were asked to rank Bing, Google and Kvasir, and Dots Double Sjoko-Cookies, Oreo Cookies and Ballerina Nougat, based on their overall preference. The measurement was used to see whether or not product placement of a brand results in a higher ranking.

#### ***3.3.3.5 Attitudes as a function of intention to buy or use***

As noted in chapter 2.1.2, attitudes can predict and explain purchase behavior (Solomon, et al., 2006). This implies that there is a link between attitudes and intention to use or buy a product. Thus, even though the main focus of this study is the effectiveness of product placements under different conditions with regards to brand attitude, an inclusion of statements measuring the intention to use or buy the placed brand seems valuable.

The statements were measured on a seven point Likert-scale ranging from “highly disagree” to “highly agree”. The first statement measured intention to buy or use within the next four weeks, while the second measured whether or not the respondent would use/buy the specific product, i.e. Oreo Cookies or Bing, the next time he or she bought cookies/used a search engine. We also included a question measuring whether or not the respondent had used or

bought the product in the last four weeks. The reference point, four weeks, was chosen since we assumed that students use search engines regularly. If Bing was not used in the last four weeks one can assume that the respondents use the product very rarely. The same goes for Oreo Cookies. One can thus assume that these brands are consumables.

### 3.3.2 Program liking<sup>6</sup>

Program liking is defined as “a summary evaluation of the experience of viewing a television program” (Murry, et al., 1992, p.442 ). We use a five-item program liking scale to measure program liking. The scale is based upon the six-item scale used by Cowley & Barron (2008) and Murry, et al. (1992). We decided to remove one of the original questions, “I disliked watching the clip, more than I dislike watching most other television series/movies”. The rationale for this is that the negatively phrased questions could be confusing for the respondents, since all the other questions were phrased positively. The responses were measured on a seven point Likert scale ranging from “highly disagree” to “highly agree”.

The following five questions were used to measure program liking:

1	If I had the opportunity I would have watched this television series/movie
2	I enjoyed watching this clip
3	If I knew this series/movie would be shown on television, I would look forward to watching it
4	I liked watching this clip from Friends/The Vampire Diaries/Mission Impossible 3/Real Steel more than I enjoy most other television series/movies
5	There is something about this clip that appeals to me

*Table 5 Program liking questions*

The respondents’ answers can be influenced if they have a biased opinion of the movie or television series prior to watching the clip. Due to this possibility, we included a question asking whether or not the respondents previously had watched the television series or movie. This gave us the opportunity to examine if having watched the television series or movie prior to the experiment had a noteworthy effect.

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<sup>6</sup> In this context, program liking includes both television series liking and film liking.

## 3.4 Data collection

### 3.4.1 Population

A study on the effects of prior notification of product placement in a Norwegian context should desirably be conducted on everyone subjected to product placement in Norway. Representative sampling is the most commonly associated with questionnaire-based research strategies where you need to make inferences from your sample about a population in order to meet your research objectives (Saunders, et al., 2009). Based on this, representative sampling seems appropriate for this study. Unfortunately, we do not have the resources to create and conduct a study on such a large population. To collect data efficiently we decided to go with students from NHH.

This limitation of the research sample implies that the results from the study cannot automatically be generalized to the entire Norwegian population. The sample is mainly business students ranging from 18 to 29 years old. Priority is put on identifying effects, and hence, generalizations are left for future studies. The reason behind this priority is that the topic of the study, prior notification, is a fairly new research topic. This implies that finding the effects of prior notification under different conditions should be emphasized before generalizations.

This does not imply that the study is irrelevant. First of all, segmentation of different groups is a general advertising tool (Keller, 2003), implying that the results of this study at the least are valuable to those marketers that are targeting students, and/or, individuals in the age group 18-29 years. Moreover, this group is highly subjected to situations where product placements might occur. According to *Norsk Mediebarometer 2012*, conducted by Statistics Norway, individuals in the age group 16 to 24 years are the most eager to go to the cinema. Moreover, grouped after education level, students with university or college level education have the highest percentage with regards to who has attended the cinema in the last 12 months. The report also states that even though individuals with higher education watch less television than most other groups, 75 percent of highly educated people watch television with an average of 102 minutes a day. Moreover, highly educated individuals are the largest group of Internet consumers with 93 percent actively using the Internet, and this group spends most hours on the internet per day. This group also watches television and series online. As such, students between 18 and 29 years old are definitely a relevant group to study with regards to product placement effectiveness. It is also important to note that since

marketing is a mandatory course at the first year of the NHH bachelor degree, the sample might have a higher level of persuasion knowledge than the general public. Friestad and Wright (1994) for instance state that persuasion knowledge can be developed through learning and experience. This implies that marketers might experience a more difficult situation influencing this particular group.

### **3.4.2 Sampling frame and procedure**

It is important that the sample is representative of the population studied. If the sample frame is not complete, i.e. that some cases are excluded, the research is not representative of the overall population, and the conclusion drawn from the study can be faulty (Saunders, et al., 2009). The sample for the study was randomly selected among NHH students. The students were contacted through email and asked to participate in a study regarding television series and movies. The questionnaire was accessible for a total of three weeks, and we had no control over when and where participants conducted the questionnaire. As such, the results may be subject to disturbances from the environment and the time when the questionnaire was conducted.

The students were randomly assigned to one of the eight different blocks of the questionnaire. This randomization is considered important to secure a representative sample of the population (Saunders, et al., 2009). In order to provide an equal number of respondents for each block, the program was manipulated into randomly assigning the respondents while at the same time evenly distributing the respondents among the different blocks.

One should note that since it is up to the students to choose whether or not to participate in the experiment, the sample might be subject to the problems regarding experimental mortality.

### **3.4.3 Sample size**

Saunders, et al. (2009) state that generalizations about a population based on data from a representative sample is based on statistical probability. This implies that a larger sample size reduces the likely error of prediction (Saunders, et al., 2009). Saunders, et al. (2009) further claim that four factors decide the appropriate sample size. First of all, the desired confidence in the data, that is the level of certainty that the characteristics of the data collected will represent the characteristics of the total data, is considered important for

deciding the sample size. Secondly, the tolerable margin of error, i.e. the accuracy you require for any estimates made from your sample, should be an included deciding factor. Furthermore, the number of categories into which you subdivide your data, as many statistical techniques have a minimum threshold of data cases for each cell, must be taken into consideration. Finally, the size of the population from which your sample is drawn matters to a certain degree.

According to Saunders, et al. (2009), almost any textbook on statistical analysis highlight that in order to prevent spurious effects from occurring, the data analyzed must be normally distributed. Statistics show that the larger the absolute size of a sample, the more closely its distribution will be to normal distribution and that this relationship, known as the central limit theorem, will occur even though the population from which the sample is drawn is not normally distributed (Saunders, et al., 2009). It is a common belief that between 20 and 30 respondents per block is satisfactory for achieving the assumption of normal distribution. For instance, Saunders et al. (2009) claim that a sample size of 30 usually results in a sampling distribution for the mean that is close to a normal distribution (Saunders, et al., 2009). As such, the total number of respondents in our study should be at least  $n = 20 \times 8 = 160$  and preferably  $n = 30 \times 8 = 240$  or more.

Arild Schanke (2013), employed at the Information and Service Department at NHH, and responsible for distribution of questionnaires at NHH, estimated, based on previous experiences, a response rate of less than 20 percent. Based on this we estimated a sample size of at least  $n = X \times 0.2 = 240$ ,  $X = 1200$ . Since we predicted that the response rate could be lower than 20 percent, as we believe that students are more predisposed to answer questionnaires with a personal relevance, such as course evaluations, we increased the sample size to 1300 students. The final sample consisted of 1000 bachelor students and 300 master students.

#### **3.4.4 Implementation of experiment**

The time span of a master thesis at NHH is generally six months. This time limitation makes it logical to conduct a cross-sectional study, which can be defined as “the study of a particular phenomenon (or phenomena) at a particular time” (Saunders, et al., 2009, p. 590). The experiment was, as previously noted, conducted through a questionnaire. The sample frame was contacted via email and asked to participate in a study regarding television series and movies. A link to the questionnaire was enclosed in the email, and the respondents could

choose whether to conduct the questionnaire, and when and where to do so. The questionnaire was available for a total of three weeks, and a reminder was sent out two weeks into the questionnaire, and three days prior to the closing of the questionnaire.

The respondents were randomly assigned to one of the eight questionnaire blocks. However, in order to reach the goal of at least 16, and hopefully 30, respondents for each block, we chose to distribute the blocks randomly, but evenly, over time.

We decided to forgo the opportunity to increase the number of respondents by incentivizing the respondents by rewarding them with the possibility to win a gift. This decision was made in order to avoid respondents with wrong incentives skewing the results of the experiment.

**Part IV:**  
**Analysis**

*A word that comes up a lot in our work is seamless. Subtly rendered. A blurring of the lines between advertising and entertainment. That's the way placements have to function to be successful. People prefer to see a can of Pepsi or some other familiar brand rather than one that just says "Soda". But nobody wants to pay to see a commercial. You have to pay just the right amount of attention to the product to get this effect.*

(*"It's a Wrap"*, 1995, p. 4, cited in Fournier & Dolan, 1997, p. 7)

## 4. Analysis

This chapter starts with a descriptive analysis of the obtained data. We then proceed with factor analyses to create new variables, before we go on to assess the measurements based on the assumptions for parametric tests. Finally, this chapter contains the tests of the hypotheses. All tests are conducted by using SPSS Statistics version 20.

We analyze all the data by conducting across-brands and within-brand tests. The approaches of the analyses and the preliminary tests are summarized in this chapter, whereas the results from the hypotheses tests can be found in chapter 5. A complete overview of the tests can be found in the appendix.

### 4.1 Data description

We conducted a descriptive analysis of the data set in order to control the distribution of the sample. The sampling size was 1 300 students, consisting of 1 000 bachelor students and 300 master students. A total of 431 respondents started the questionnaire, while 187 completed it. We can only use data from completed questionnaires, since completing the questionnaire meant that the respondent gave us permission to use the data. The final sample is thus  $n=187$  respondents, and the response rate of the questionnaire is consequently  $187/1\ 300= 0.145$ , i.e. 14.5 percent.

The responses are distributed relatively evenly among the eight different experimental blocks, and the distribution with regards to prior and no prior notification are 90 and 97 respondents respectively. Moreover, men and women represent 50.8 and 49.2 percent of the responses respectively. The age of the respondents are ranging from 18 to 29, with a predominance of the age groups 21 to 23 years and 24 to 26 years old. This age distribution makes sense, since the sample consists of students. For a complete distribution of the data set, please see appendix 4.1.

Out of the 187 respondents, 28 stated that the purpose of the study was the effectiveness of product placements, or something similar to this. Out of the 28, 13 respondents fulfilled the criteria for understanding the purpose of the questionnaire. The two criteria were: (1) understanding that the questionnaire measured the effects of product placements, and (2) less than 30 seconds spent on the question “What do you think this questionnaire is measuring?”.

The time limit was set to 30 seconds since respondents spending more time on the question are most likely not aware of the purpose of the questionnaire before thinking it through at the end, and as such, their answers are probably not influenced by this knowledge. Out of the 13 respondents eight were excluded from the data set, since the remaining five had been subjected to prior notification and therefore had information that the clips contained product placements. The eight respondents were distributed as follows: four from research group 1, three from research group 5 and one from research group 7. The distribution makes sense, since research group 1 and 5 were subjected to prominent product placements.

The new sample consists of 179 respondents. For a complete overview of the distribution of the respondents with regards to knowledge of product placement, see appendix 4.2. The distribution of the data, after excluding the eight respondents, can be found in appendix 4.3.

In order to control for normal distribution of the data, we studied the *Kurtosis* and *Skewness* values of the variables. According to Field (2009) a normal distribution is characterized by Kurtosis and Skewness values equal to 0. The further away the Kurtosis- and Skewness values are from 0, the larger the probability that the data is not normally distributed. Positive Kurtosis values indicate a heavy-tailed and pointy distribution and negative values of Kurtosis indicate a light-tailed and flat distribution. Positive Skewness values indicate a pile-up of scores on the left of the distribution. Negative values, on the other hand indicate a pile-up on the right (Field, 2009). Field (2009) argues that the critical value for both Kurtosis and Skewness is considered to be the absolute value of 1. However, other scholars argue that Kurtosis can, in fact, be higher (Davis & Pecar, 2010; Keller, 2009). This provides some freedom to use common sense in the evaluation of the variables with regards to Kurtosis. The Kurtosis and Skewness values for the variables are found in appendix 4.4.

The following variables have Kurtosis and/or Skewness values above the critical threshold:

Variable	Skewness	Kurtosis
<b>Across-brands analysis</b>		
Rank	Satisfactory	Somewhat unsatisfactory
IntentionUse1	Unsatisfactory	Unsatisfactory
IntentionUse2	Unsatisfactory	Unsatisfactory
Adjective2 (Unfriendly-Friendly)	Satisfactory	Somewhat

		unsatisfactory
Adjective7 (Foolish-Wise)	Satisfactory	Somewhat unsatisfactory
<b>Oreo Cookies</b>		
Characteristic2_Oreo (Healthy)	Unsatisfactory	Satisfactory
<b>Bing</b>		
Rank_Bing	Satisfactory	Somewhat unsatisfactory
IntentionUse1_Bing	Unsatisfactory	Unsatisfactory
IntentionUse2_Bing	Unsatisfactory	Unsatisfactory

*Table 6 Variables with Kurtosis and/or Skewness values above the critical threshold*

Unsatisfactory Kurtosis and/or Skewness values can be a sign that the variables do not have a normal distribution (Field, 2009). Field (2009) argues that normal distribution is one important requirement for parametric tests, and thus, we need to consider excluding these variables from further research. Kurtosis and Skewness values for all the variables can be found in appendix 4.4.

It is especially important to note that the Kurtosis and Skewness values for IntentionUse\_Bing and IntentionUse2\_Bing are well above the threshold. 68 out of 90 respondents strongly disagree with the statement that they will use Bing within the next four weeks, and 79 out of 90 respondents strongly disagree with the statement that they will choose Bing the next time they use a search engine, cf. Tables 4.4.4 and 4.4.5 in appendix 4.4. We assume that the low scores on intention to use is a sign that Bing has a low market share in the Norwegian search engine market. This is backed up by figure 4.4.6, which shows that 79 out of 90 respondents have not used Bing the last four weeks. Intention to use with regards to Bing can thus be regarded as close to static, meaning that it will not be influenced by product placements. As such, we see no point in including intention to use for Bing in our further analysis.

It is natural to assume that the unsatisfactory Skewness and Kurtosis values for the across-brands analysis with regards to the two measurements of intention to use are a result of Bing's weak position in the market. As such, using these variables in a future analysis may

provide worthless results, and we have therefore decided to exclude them from further analysis.

The other variables with unsatisfactory values, Rank, Adjective2, Adjective7, Characteristic2\_Oreo and Rank\_Bing, will be included in further analysis. The rationale for this is two folded. First of all, several of these variables have Skewness values within the limits and Kurtosis values that are below the absolute value of 2. Based on this we assess them to be satisfactory with regards to the assumption of normal distribution. Secondly, we believe that these variables will provide important information in the further analysis.

## 4.2 Factor analysis

According to Field (2009) a principal component analysis (PCA) is conducted when the analysis is concerned with establishing which linear components exist within the data set and how a particular variable might contribute to that component. Field (2009) further argues that in order to conduct the PCA the data has to be suited for factor analysis. Kaiser-Meyer Oklin (KMO) and Bartlett's Test of Sphericity are commonly used tests to assess the suitability of factor analysis (Field, 2009).

The KMO represents "a ratio of the squared correlation between variables to the squared partial correlation between variables" (Field, 2009, p. 647) and can be used on both individual and multiple variables. According to Field (2009) the values of the KMO test varies between 0 and 1. A value of 0 indicates diffusion in the correlations pattern, meaning that a factor analysis is likely to be unsuitable. A value near 1, on the other hand, indicates that the factor analysis should give reliable factors. Field (2009, p.647) argues that values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and values above 0.9 are superb. The lower limit is considered to be 0.6 (Field, 2009).

Bartlett's Test of Sphericity is conducted in order to find out whether a matrix is proportional to an identity matrix, meaning that the covariance is 0 and the variances are almost equal. If the Bartlett's test is significant, it implies that the correlations between the variables are significantly different from 0, which is considered a good result with regards to the suitability of a factor analysis. Bartlett's upper limit is 0.05 (Field, 2009).

Appendix 5.0 presents the KMO values and the Bartlett's tests. The KMO values and the Bartlett's test reveal that the data is well suited for factor analysis, cf. Table 5.1.2, 5.2.2 and 5.3.2.

Since a factor analysis was found to be appropriate, we conducted a PCA for the two brands combined and for each of the two brands individually. The variables Rank and Evaluation were not included in the PCA. The rationale for this is that Rank is measured on a three point ranking scale and Evaluation on a five point Likert scale, and consequently it would be misleading to combine these variables with other variables measured on a seven point Likert scale. In addition, the two variables measuring intention to use were excluded from the across-brand analysis and for the within-brand analysis of Bing, based on the arguments presented in chapter 4.1. In the factor analysis we included the adjectives for the across-brand analysis, while for the within-brand analysis of Oreo Cookies and Bing we used the characteristics. We excluded the characteristics for the across-brand analysis since they measure different aspects across the two brands, and are consequently not appropriate as a combined measurement.

Field (2009) argues that eigenvalues associated with a variate indicate the substantive importance of the factor. Based on this, it is logical to retain only the factors with high eigenvalues in a PCA. SPSS uses the Kaiser's criterion, i.e. retaining all factors with eigenvalues greater than 1, by default. Field (2009) argues that the Kaiser's criterion often overestimates the number of factors to retain, and suggests using the scree plot to decide if an eigenvalue is large enough to represent a meaningful factor. The cut-off point for selecting variables should, according to Field (2009), be at the point of inflexion at the scree plot, i.e. where the slope of the line changes dramatically.

The first PCA conducted for the across-brands analysis finds three components. However, since the scree plot and the factor transformation matrixes can be difficult to interpret, we decided to conduct a factor rotation. A factor rotation effectively rotates the factors axes so that the variables are loaded maximally to only one factor (Field, 2009). Field (2009) argues that a direct oblimin rotation is the standard method if a non-orthogonal solution is desired – that is, one in which the factors are allowed to be correlated. In an Oblimin rotation the factor matrix is split in a pattern matrix and a structure matrix (Field, 2009). The pattern matrix contains the factor loadings and is preferable for interpretive reasons because it contains information on the unique contribution of a variable to a factor. The structure

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matrix also includes the relationship between factors and is considered a useful double-check of the results from the pattern matrix (Field, 2009). Field (2009) states that, by looking at the pattern matrix, we should note the component for which each variable has the highest loading. In addition, all variables that load highly onto this variable, meaning loadings above 0.4, should be marked. The same procedure should be conducted on the structure matrix in order to double check the results. It is essential to understand “what the factors represent by looking for common themes in the items that load onto them” (Field, 2009, p. 669).

The rotated solution for the across-brands analysis finds three components, gathering all components of program liking together, and gathering seven of the ten adjectives together. The three adjective pairs not included with the others were Unfriendly-Friendly, Uninteresting-Interesting and Unattractive-Attractive. We decided to run a new PCA excluding these adjectives. The rationale for this is that these adjective pairs seem to be less important for the formation of attitudes than several of the other adjective pairs. The second PCA gathered the variables into two groups; the variables measuring program liking in one group and the seven adjectives in another. However, since the scree plot, found in figure 5.1.1, indicated a solution with three components, we decided to conduct an Oblimin rotation. The rotated solution indicated two components. This result is logical, and as such, we decided to create two new variables, one named ProgramLiking consisting of the five variables measuring program liking variables and the other one consisting of the seven adjectives and named Attitude. The two components explain 75.5 percent of the variance. The results from the PCA for the across-brands analysis can be found in appendix 5.1.

The first PCA for the within-brand analysis of Oreo Cookies finds four components, however, since the scree plot and the factor transformation matrixes was difficult to interpret, we decided to conduct an Oblimin rotation. The rotated solution finds four components, grouping all variables measuring of program liking together, the two variables for intention to use together, and splitting the characteristics into two components, one with six of the characteristics and the second with the remaining two. The two remaining characteristics are “innovative product” and “healthy”, which are considered less important than several of the other factors by the respondents. The two variables scored 3.47 and 2.00 out of 8 respectively, cf. Table 3.3. Cookies are generally not seen as healthy, and their usage and functions are more related to coziness than health. Consequently, it is rational that the characteristic “healthy” is not that important. Moreover, it make sense that innovation is considered to be less important with regards to cookies. When it comes to food, taste and the

function of the food are probably more important for the consumer than innovation in the product category. Based on this, we decided to run a new PCA excluding the two characteristics. The second PCA indicated three variables. However, since the scree plot indicated several small cut-off points, we conducted an Oblimin rotation to be certain of the result. The rotated solution also grouped the variables into three groups: the variables measuring program liking, the variables measuring intention to use and the six characteristics formed three different components. This result made sense, and as such, we decided to create three new variables, one consisting of program liking, the second consisting of intention to use and the last consisting of the characteristics. The three new variables were named ProgramLiking\_Oreo, Attitude\_Oreo and IntentionUse\_Oreo. The three components explain 68.7 percent of the variance in the data set. The results from the PCA can be found in appendix 5.2.

The first PCA for the within-brand analysis of Bing finds two components. However, since the scree plot indicated a cut-off point after three components, we decided to conduct an Oblimin rotation. The rotated solution also finds two components, grouping the five variables measuring program liking together, and the eight characteristic variables together. This distribution of variables make sense, and as such, we decided to create two new variables, the first consisting of the variables measuring program liking, and the second consisting of variables measuring attitude. The two new variables were named ProgramLiking\_Bing and Attitude\_Bing. The two components explain 81.5 percent of the variance in the data set. The results from the PCA can be found in appendix 5.3.

### 4.3 Reliability tests

To control that the new variables found in chapter 4.2, consist of measurement variables that are in fact related, we had to check their reliability. According to Field (2009), Cronbach's Alpha is the most common measure of scale reliability. Consequently, to assess the new variables' reliability, we used the Cronbach's Alpha values. A Cronbach's Alfa value between 0.7 and 0.8 is often referred to as acceptable. Values substantially lower than this are commonly an indication of an unreliable scale (Field, 2009).

All new variables have a Cronbach's Alpha value of 0.8 or higher, and as such, they are considered reliable. The Cronbach's Alpha values for all the new variables can be found in appendix 6.

## 4.4 The variables

This chapter provides an overview of the variables that will be used in the further analysis. The variables are presented in two tables, one for the dependent variables and one for the independent variables and the covariate.

The following table outlines the dependent variables for this study. It contains the name of the variables, the measurements that are included in the variable and the context for usage.

Variable	Consists of	Usage
<b>Dependent variables</b>		
Attitude	Adjective1 (Bad-Good) Adjective3 (Negative-Positive) Adjective6 (Unfavorable-Favorable) Adjective7 (Foolish-Wise) Adjective8 (Harmful-Beneficial) Adjective9 (Unlikeable-Likeable) Adjective10 (Unpleasant-Pleasant)	Across-brands analysis, and within-brand analysis
Evaluation	Evaluation	Across-brands analysis, and within-brand analysis
Rank	Rank	Across-brands analysis, and within-brand analysis
Attitude_Oreo	Characteristic1_Oreo (Good taste) Characteristic3_Oreo (Quality) Characteristic4_Oreo (Creates coziness) Characteristic5_Oreo (Provides energy) Characteristic6_Oreo (Fits as serving to guests) Characteristic7_Oreo (Exciting taste)	Within-brand analysis of Oreo Cookies
IntentionUse_Oreo	IntentionUse1_Oreo IntentionUse2_Oreo	Within-brand analysis of Oreo Cookies
Attitude_Bing	Characteristic1_Bing (User friendly) Characteristic2_Bing (Informative) Characteristic3_Bing (Useful) Characteristic4_Bing (Efficient) Characteristic5_Bing (Practical) Characteristic6_Bing (Provides good results) Characteristic7_Bing (Precise) Characteristic8_Bing (Quality)	Within-brand analysis of Oreo Cookies

*Table 7 Dependent variables*

The following table outlines the independent variables and the covariate. It contains the name of the variables, the different treatment conditions for each variable and the context for

the use of the variables. For the covariate, ProgramLiking, the table also shows the measurements that are included in the variable.

Variable	Consists of	Usage
<b>Independent variables/covariate</b>		
Research_Group	Research_Group 1 = No prior notification, prominent placement, Oreo Cookies Research_Group 2 = Prior notification, prominent placement, Oreo Cookies Research_Group 3 = No prior notification, subtle placement, Oreo Cookies Research_Group 4 = Prior notification, subtle placement, Oreo Cookies Research_Group 5 = No prior notification, prominent placement, Bing Research_Group 6 = Prior notification, prominent placement, Bing Research_Group 7 = No prior notification, subtle placement, Bing Research_Group 8 = Prior notification, subtle placement, Bing	Non-parametric tests conducted as an overall test
Group_Brand	Group_Brand 1 = Oreo Cookies Group_Brand 2 = Bing	Independent variable in MANCOVA/ANCOVA conducted as an overall test
Group_PriorNotification	Group_PriorNotification 1 = No prior notification Group_PriorNotification 2 = prior notification	Independent variable in MANCOVA/ANCOVA conducted as an overall test
Group_Prominence	Group_Prominence 1 = Subtle product placement Group_Prominence 2 = Prominent product placement	Independent variable in MANCOVA/ANCOVA conducted as an overall test
Group_PN_Prominence	Group_PN_Prominence 1 = No prior notification, subtle product placement Group_PN_Prominence 2 = Prior notification, subtle product placement Group_PN_Prominence 3 = No prior notification, prominent product placement Group_PN_Prominence 4 = Prior notification, prominent product placement	Independent variable in ANOVA conducted on hypotheses H2-H5
Group_PN_ProgramLiking	Group_PN_ProgramLiking 1 = No prior notification, low program liking Group_PN_ProgramLiking 2 = Prior notification, low program liking Group_PN_ProgramLiking 3 = No prior notification, high program liking Group_PN_ProgramLiking 4 = Prior notification, high program liking	Independent variable in ANOVA conducted on hypotheses H6-H9
ProgramLiking	ProgramLiking1 ProgramLiking2	Covariate in MANCOVA and ANCOVA analysis

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	ProgramLiking3 ProgramLiking4 ProgramLiking5	
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*Table 7 Independent variables and the covariate*

## 4.5 Parametric tests

### 4.5.1 MANCOVA

We find the Multivariate Analysis of Covariance (MANCOVA) a suitable tool to answer the research questions presented in chapter 1. MANCOVA is a statistical procedure that uses the F-ratio to test the overall fit of a linear model while controlling for the effect of one or several covariates have on two or more outcome variables (Field, 2009). A covariate is a variable that is not a part of the main experimental manipulation, but is expected to have an influence on the dependent variables. MANCOVA allows us to exert a stricter experimental control by taking account of confounding variables. This control provides us with a purer measure of the effects of the experimental conditions (Field, 2009). In addition, by including a covariate MANCOVA will reduce the chance of the occurrence of a Type II-error, i.e. that no effect is found when in reality an effect exist (Field, 2009).

The covariate in our study is program liking. The MANCOVA will test the influence of prior notification, product placement prominence and brand on different measurements of brand attitude, while taking into account that program liking may also affect the attitudinal outcomes. Brand attitude is measured by Attitude, Evaluation and Rank. This will provide us with information for both the across-brands analysis and within-brand analyses. In addition, we will conduct the MANCOVA to assess the effect of prior notification, product placement prominence and program liking on Attitude\_Oreo and IntentionUse\_Oreo.

In order to conduct MANCOVA five assumptions have to be fulfilled: random sample and independent observations, normal distribution, homogeneity of variance and covariance, independence of the covariate and treatment effects and homogeneity of regression slopes. We will now turn to assess the data with regards to these assumptions.

#### *4.4.1.1 Assumption 1: Random sample and independent observations*

MANCOVA requires random sampling and independent observations (Field, 2009). This requirement was ensured, as described in chapter 3.4.2, through our choice of research design and sampling procedure. The research design required that respondents performed the

experiment individually, which was facilitated by the fact that respondents were given individual links. The respondents were also informed that the questionnaire block they were assigned to was one of eight different blocks, and the assignment was the result of a random selection. This made it easier to ensure that respondents did not communicate with each other, and that activities that could break the requirement of independence between observations occurred.

#### *4.4.1.2 Assumption 2: Multivariate normality*

The second assumption requires multivariate normality within the research groups across the dependent variables collectively. Field (2009) claims that since the assumption of multivariate normality cannot be tested on SPSS, the only practical solution is to check the assumptions of univariate normality for each of the dependent variables. This solution is both practical, because it is easy to implement, and useful, since univariate normality is a necessary condition for multivariate normality. Nevertheless, the solution does not guarantee multivariate normality (Field, 2009).

One way of testing for normality is by checking the Skewness and Kurtosis values for the variables. As previously noted, the threshold used in this thesis for Skewness is the absolute value of 1, while for Kurtosis the threshold is somewhat higher and subject to common sense.

The Skewness and Kurtosis values for all the variables are within the appropriate range, and thus the variables can be considered normally distributed, cf. Table 7.1.1, 7.2.1 and 7.3.1 in appendix 7.

Secondly, Field (2009) states that the Kolmogorov-Smirnov and the Shapiro-Wilk tests are suitable for testing for normality. The two tests compare scores in the sample to a normally distributed set of scores with the same standard deviation and the same mean. A significant value, i.e. a p-value less than 0.05, indicates a deviation from normality. If the p-value is higher than 0.05 the test is non-significant, meaning that the sample distribution probably is normal and not significantly different from a normal distribution (Field, 2009).

The Kolmogorov-Smirnov and the Shapiro-Wilk tests are significant for the following variables:

Variable	Research Group(s)
Attitude	5
Evaluation	All
Rank	All
ProgramLiking	6
IntentionUse_Oreo	2, 3 and 4
Attitude_Bing	5

*Table 8 Variables with unsatisfactory values for Kolmogorov-Smirnov or Shapiro-Wilk*

A complete overview of the Kolmogorov-Smirnov and Shapiro-Wilk tests can be found in Table 7.1.2, 7.2.2 and 7.3.2 in appendix 7.

The Kolmogorov-Smirnov and the Shapiro-Wilk tests tend to give significant results for small deviations from normality given a fairly large sample size. This implies that a significant test does not necessarily tell us whether the deviation from normality is large enough to bias any statistical procedures (Field, 2009). Based on this, Field (2009) notes that in order to make an informed decision about the extent of non-normality one should also look at histograms, normal Q-Q chart plots, detrended Q-Q plots and box plots.

Histograms with the normal distribution overlaid give an instant picture of the data distribution. In order to suggest normal distribution, the figure should show a rough bell shaped distribution (Huizingh, 2007). Normal distribution plots indicate to what extent the observed distribution approximate normal distribution. The normal distribution is given by a straight line and the observed distribution is presented as a string of points. The normal Q-Q chart plots the values you would expect to get if the distribution was normal against the actual values observed in the data. If the data is normally distributed, the values observed should fall along the line (Huizingh, 2007). If the line consistently sags below it or consistently rises above it, the Kurtosis is not normally distributed. An S-shaped curve indicates that Skewness is a problem (Field, 2009). The detrended Q-Q-plot also shows differences between observed values and expected values of a normal distribution. If the distribution is normal, the points in this model should cluster in a horizontal band around the value 0 and not show a pattern (Huizingh, 2007). A box plot is a histogram that graphically shows how each interval or category accounts for the proportion of total observations (Park, 2008). If the data is normally distributed, the figure should not reveal significant outliers,

meaning values more than 1.5 times the interquartile range above the 75<sup>th</sup> or below the 25<sup>th</sup> percentile (Huizingh, 2007). However, Huizing (2007) further notes that unless the outliers are extreme, i.e. marked with a star in the box plot, they should not be considered a substantial violation of the normality assumption.

The most proper way to determine the normality of the variables would be to analyze each of the variables within each research group. However, since there are eight research groups and four variables to be tested within each group, this would imply analyzing a total of 256 plots (excluding the additional plots for within-brand analysis of Oreo Cookies and Bing). Instead, we have chosen to analyze and attach the plots for each variable across the research groups and for Oreo Cookies and Bing individually. Since the plots for the variables within each research group tend to be fairly similar to the plots across the research groups, this should provide a satisfactory overview.

Attitude is not considered to have a perfect normal distribution due to some outliers observed in the box plot, however none of them are marked with a star. Moreover, the variable's histogram is bell-shaped, the normal Q-Q plot is satisfactory and the detrended normal Q-Q-plot does not show a pattern, which overall makes the variable satisfactory. The histogram of variable Evaluation shows a rough bell-shaped distribution a bit skewed to the right. The variable's box plot reveals some outliers, none of which are marked by a star. This indicates that the variable is not perfectly normal distributed. However, the values of Evaluation fall along the line in the normal Q-Q-plot and the points in the detrended normal Q-Q-plot cluster in a horizontal band around 0. Overall, we regard Evaluation as satisfactory for further analysis. The histogram of Rank is bell-shaped, the values of the variable in the normal Q-Q-plot fall along the line, the points in the detrended normal Q-Q-plot cluster in a horizontal band around the value 0 and do not show a pattern. Furthermore, the box plot of Rank does not contain any outliers. Based on this, we find that the value Rank is normally distributed. Finally, ProgramLiking has a bell shaped histogram, the normal Q-Q plot and the detrended Q-Q plot seem satisfying, and the box plot shows no outliers. Overall, ProgramLiking is considered to be satisfying.

When it comes to Oreo Cookies and Bing, we find the variables Attitude<sup>7</sup> for both brands, ProgramLiking\_Oreo, ProgramLiking\_Bing, Attitude\_Bing, Attitude\_Oreo and Rank for

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<sup>7</sup> Measured by the adjective pairs

Bing to be normally distributed. This is despite the fact that some of these variables have outliers, although none of them are marked by a star, or a slight skewness in the histogram. The histograms of Rank\_Oreo and IntentionUse\_Oreo are somewhat skewed to the left, whereas the histogram of Evaluation\_Oreo is skewed to the right. The box plot of the latter variable also has some outliers. Furthermore, the normal Q-Q-plots of Evaluation\_Oreo, Rank\_Oreo and Intention\_Oreo do not fall perfectly along their Q-Q-plot lines. Finally, Evaluation\_Bing has some outliers in the box plots and the histogram of Evaluation\_Bing is a bit skewed to the right. Overall, this indicates that the variables Rank\_Oreo, IntentionUse\_Oreo, Evaluation\_Oreo and Evaluation\_Bing are not perfectly normal distributed. For an overview of the normal distribution histograms and plots, see appendix 7.

Based on the analysis presented above, there is some uncertainty with regards to the normal distribution of several variables. This uncertainty implies that it would be appropriate to conduct additional analysis with regards to the variables that show signs indicating that they are not normally distributed. We will therefore conduct “assumptions-free” non-parametric tests for the variables that show uncertainty towards the assumption of normal distribution to compare results. The following table summarizes the result of the analysis of the normality plots:

Variable	Assumption of normal distribution
Attitude	Satisfying
Evaluation	Uncertain with regards to Oreo and Bing
Rank	Uncertain with regards to Oreo
ProgramLiking	Satisfying
Attitude_Oreo	Satisfying
IntentionUse_Oreo	Uncertain
Attitude_Bing	Satisfying

*Table 9 Summary of the assumption of normality for the variables*

#### **4.4.1.3 Assumption 3: Homogeneity of variance and covariance**

The third assumption for MANCOVA states a need for homogeneity of variance and covariance. Field (2009) recommends the Levene’s test as a preliminary test for this assumption. Levene’s test tests the null hypothesis that the variances in different groups are equal, meaning that the differences between the variances are 0. The Levene’s test is

significant at a p-value less than 0.05, which indicates that the alternative hypothesis, that the variances in the two groups are significantly different, is supported. A support for the alternative hypothesis implies a violation of the assumption, which is often referred to as homoscedasticity (Field, 2009). However, the Levene's test does not account for the fact that MANCOVA has several dependent variables. Field (2009) therefore recommends the Box's Test of Equality of Covariance Matrices as an additional measurement. The Box's Test of Equality of Covariance Matrices tests whether the covariance matrices for the dependent variables are significantly different (Field, 2009). If the p-value is below 0.05 the test is significant, and the covariance matrices are considered to be different.

The tables containing Levene's and Box's tests for across-brands analysis and for within-brand analysis show that all the variables, except Rank, have p-values higher than 0.05 for both Levene's test and Box's tests, cf. appendix 8.0. This implies that, except for Rank, the variables show homogeneous variances and covariance. Field (2009) argues that Levene's test is not necessarily the best way to judge whether variances are unequal enough to cause problems. Regardless, we already decided to conduct a non-parametric test to see if the result is in correspondence with the results of the MANCOVA for Rank.

#### *4.4.1.4 Assumption 4: Independence of the covariate and treatment effect*

MANCOVA is only appropriate if the covariate is independent from the experimental effect. If the covariate and the experimental effect are not independent the treatment effect is obscured, spurious treatment effects can occur and at the very least the interpretation of the MANCOVA is compromised (Field, 2009). According to Field (2009), this problem can be avoided by randomizing participants to experimental groups. Because we randomized the distribution of the questionnaire, we are fairly certain that the assumption of independence of the covariate and the treatment effect is fulfilled.

#### *4.4.1.5 Assumption 5: Homogeneity of regression slopes*

MANCOVA assumes homogeneity of regression slopes, which implies that the relationship between the dependent variable(s) and the covariate is the same in each of the treatment groups (Field 2009). In order to test the assumption of homogeneity of regression slopes a customized model of the MANCOVA is conducted. If the customized test provides significant interaction effects, the assumption of homogeneity of regression slopes is violated (Field, 2009).

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For the across-brand analysis we find an interaction effect between Group\_Brand and ProgramLiking, which indicates a breach in the assumption of homogeneity of regression slopes, cf. Table 9.1 in Appendix 9.0. We do not find any other interaction effects between the covariate and the independent variables. The tables containing all the interaction effects can be found in Appendix 9.0.

Owen and Froman (1998) state that if the analysis shows significant interaction effects between the covariate and one or several independent variables, the analysis may be subjected to faulty conclusions. They further claim that if you remove the variance associated with the covariate, you also remove some of the variance associated with the independent variable. Thus, the removal of the variance of the covariate reduces the variance of the dependent variable which is accounted for by the independent variable (Owen & Froman , 1998). The implications of our interaction effect between Group\_Brand and ProgramLiking is that some of the variance of brand attitude explained by Brand is removed due to the removal of the variance caused by ProgramLiking. Since Brand still has a highly significant effect on brand attitude ( $p = .00$ ), cf. appendix 10.1, we find the breach in the assumption to be less relevant. Thus we find that MANCOVA to be a suitable test for assessing the hypotheses. As an additional test of the reliability of the results from MANCOVA, we also conduct non-parametric tests.

#### **4.5.2 ANCOVA**

In the within-brand analysis of Bing, we assess brand attitude based on four measurements: Attitude, Evaluation, Rank and Attitude\_Bing. The first three are included in the MANCOVA test, and we will run an Analysis of Covariance (ANCOVA) on the last variable. ANCOVA is a statistical procedure that uses the F-ratio to test the overall fit of a linear model controlling the effect that one or more covariates have on one outcome variables (Field, 2009).

ANCOVA is built on similar assumptions as MANCOVA, apart from one exception. ANCOVA requires univariate normality instead of multivariate normality in the data (Field, 2009). Since SPSS has no tests for multivariate normality, Field (2009) suggests assessing the assumptions by checking the univariate normality even for MANCOVA, cf. chapter 4.4.1.2. Since ANCOVA only has one dependent variable, Field (2009) recommends conducting the Levene's test to assess the homogeneity of variance and covariance. The Levene's test is already conducted as a preliminary test for Attitude, Evaluation and Rank.

We therefore only had to test *Attitude\_Bing*, which had a p-value higher than 0.05. We also conducted a test of homogeneity of regression slopes, which found no interaction effects, cf. appendix 9.3. This implies that all the assumptions for using ANCOVA are satisfying, except for some uncertainty with regards to normality.

### **4.5.3 ANOVA**

In addition to using MANCOVA and ANCOVA to answer the research questions and hypotheses presented in chapter 1 and 2 respectively, we also conduct ANOVA tests for the hypotheses. ANOVA is a statistical procedure that uses the F-ratio to test the overall fit of a linear model (Field, 2009). There are two main reasons for including ANOVA in this study. First of all, ANOVA provides an opportunity to assess the trends in the data under different combinations of prior notification and program liking. MANCOVA/ANCOVA provides no such opportunity since program liking is considered a covariate in these tests. The second reason for including ANOVA is that we found a breach for the assumption of homogeneity of regression slopes, cf. chapter 4.4.1.5. This breach implies that the results of MANCOVA can be somewhat unreliable. Based on this, we conduct ANOVA to assess whether the results are corresponding, and thus more reliable.

ANOVA is built on similar assumptions as MANCOVA, apart from a few exceptions. First of all, ANOVA does not have a covariate, and thus, the assumption of independence of the covariate and the treatment effect are not relevant. The same applies for homogeneity of regression slopes and homogeneity of covariance. As with ANCOVA, ANOVA requires univariate, rather than multivariate normality. The data fulfills all the assumptions for conducting ANOVA tests, except for some uncertainty with regards to the normal distribution of *Evaluation*, *Rank* and *IntentionUse\_Oreo* and the breach in the assumption regarding homogeneity of variance for *Rank*. We have already decided to conduct non-parametric tests for these variables in order to secure that our results are reliable.

There are some important differences between MANCOVA/ANCOVA and ANOVA. The former tests treat the means for each combination of factors as means adjusted for the effect of the covariate. This is not the case for ANOVA. In MANCOVA program liking is considered a covariate, which indicates that the variable is continuous. Program liking is not a treatment factor, however Grace- Martin (2009) claims that it does not matter if the variable is something you manipulated or something you are controlling for, as long as it is categorical it can be used as an independent variable. We have consequently recoded the

data for program liking into two groups for the ANOVA tests: low program liking and high program liking. High program liking has program liking values between 4 and 7, while low program liking has values between 1 and 4. The factor is named Group\_ProgramLiking. The use of program liking as an independent variable implies that we cannot control for the implicit effect of program liking which might arise through other variables. This also indicates that for hypotheses H1 through H5, program liking will not be included in the tests at all. In this context it is important to note that even though program liking is not included in the actual test, it can influence the brand attitude indirectly through the other variables. Our rationale for excluding factors, is that we are only interesting in the specific combinations listed in H1 through H9. We also think that the combination of ANOVA and ANCOVA/MANCOVA tests will provide the necessary information to answer the research questions. MANCOVA/ANCOVA are considered superior to its ANOVA counterpart in the respects of increased statistical power and control, as long as the covariate is considered appropriate (Grace-Martin, 2009).

## 4.6 Non- parametric tests

If the assumptions for parametric tests are violated, Field (2009) suggests conducting non-parametric tests. Non-parametric tests are known as assumption-free tests since they make fewer restrictions on the data on which they can be used (Field, 2009). However, there are no parametric tests that include covariates. To assess the reliability of the parametric tests we therefore have to use Mann-Whitney and Kruskal-Wallis tests. The Mann-Whitney test is considered the assumption-free equivalent to the t-test, and the test is used to compare the means in two groups (Field, 2009). The Kruskal-Wallis test is the assumption-free equivalent to conducting an ANOVA, and the test is used when the purpose is to find differences among several independent groups (Field, 2009).

We find Evaluation, Rank and IntentionUse\_Oreo to be uncertain with regards to the assumption of normal distribution, cf. chapter 4.4.2. In addition, Rank also appears to be violating the assumption of homogeneity of variance, cf. chapter 4.4.3. Consequently, in order to be certain that the results from the ANCOVA, MANCOVA and ANOVA make sense, we will also conduct the Mann-Whitney and the Kruskal-Wallis tests for these variables. However, we would like to note that these tests are not completely equivalent to the MANCOVA and ANCOVA tests.

If a Kruskal Wallis or a Mann-Whitney test provides significant results, we have to conduct a Post hoc Games-Howell test in order to find out which experimental groups that differ significantly with regards to brand attitude. The Games-Howell test is considered the most powerful Post hoc tests when the assumptions for parametric tests are violated (Field, 2009).

## **Part V:**

# **Results**

*The latest trend in the advertising is to make it, well,  
less advertorial.*

(Neer, 2003)

## 5. Results

This chapter contains a summary of the results from the tests conducted to answer the research questions and assess the hypotheses. The chapter is divided into two main parts. The first presents the overall results of the tests, while the second breaks the results down into the three research question by addressing the nine hypotheses.

### 5.1 Overall effects: MANCOVA/ANCOVA

In this chapter we present the overall effects of the independent variables and the covariate on the dependent variables. The chapter focuses on the overall effect of prior notification, product placement prominence and program liking, in addition to looking into the effect of brand and interaction effects.

#### 5.1.1 Prior notification, product placement prominence and program liking

To test the overall relationship between brand, prior notification, product placement prominence and program liking, we conducted a MANCOVA. We used Group\_Brand, Group\_PriorNotification and Group\_Prominence as independent variables and ProgramLiking as the covariate. The dependent variable, brand attitude, was measured by Attitude, Evaluation and Rank for both the across-brands and the within-brand analyses.

The test shows no significant effect of prior notification, product placement prominence or program liking on brand attitude. For Attitude the  $p$ -values for prior notification, prominence product placement and program liking are  $p = .238$ ,  $p = .07$  and  $p = .642$  respectively. For Evaluation the significance levels are  $p = .140$  for prior notification,  $p = .318$  for product placement prominence and  $p = .456$  for program liking. Rank has  $p = .699$ ,  $p = .927$  and  $p = .492$  for prior notification, product placement prominence and program liking respectively. The results from the contrasts tests support that no significant relationship between the independent variables and the dependent variables exist. The results can be found in appendix 10.1.1.

We conducted an additional MANCOVA for the within-brand analysis of Oreo Cookies. This test used Group\_PriorNotification and Group\_Prominence as independent variables and ProgramLiking as the covariate. The dependent variable, brand attitude, was measured by

Attitude\_Oreo and IntentionUse\_Oreo. In addition, an ANCOVA test was conducted using Attitude\_Bing as the dependent variable, Group\_PriorNotification and Group\_Prominence as independent variables and ProgramLiking as the covariate.

The tests show no significant effect of prior notification, product placement prominence or program liking on brand attitude. For Attitude\_Oreo the p-values for prior notification, product placement prominence and program liking are  $p = .252$ ,  $p = .075$  and  $p = .284$  respectively. IntentionUse\_Oreo has significance levels of  $p = .198$  for prior notification,  $p = .097$  for product placement prominence and  $p = .090$  for program liking. For the within-analysis of Bing we found the following p-values for Attitude\_Bing:  $p = .141$ ,  $p = .133$  and  $p = .810$ . The results from the contrasts tests support that no significant relationship between the independent variables and the dependent variables exist. The results can be found in appendix 10.1.2 and 10.1.3.

Since the variables Evaluation, Rank and IntentionUse\_Oreo showed some uncertainty with regards to the assumption of normal distribution, we also conducted non-parametric tests to assess the reliability of the results. We conducted a Kruskal-Wallis test on Evaluation and Rank using research groups as the independent variable. The test found significant results for the two variables with p-values of  $p = .00$  for both. We conducted a Games-Howell test to figure out which research groups differed significantly. The test showed that only research groups with different brands were significantly different. No effect of prior notification and product placement prominence on brand attitude was found using the test. This thus supports previous results.

### **5.1.2 The effect of the product placed brand**

The MANCOVA for the across-brands analysis found that the treatment effect, Brand, is significantly related to brand attitude, measured by the variables Attitude, Evaluation and Rank, with p-values of  $p = .00$  for all these three measurements. The results can be found in Table 10.1.1.4 in appendix 10.1.1.

### **5.1.3 Interaction effects**

An interaction effect is defined as “an effect on a dependent variable of two or more independent variables in combination” (Field, 2009, p. 279). Interaction effects represent effects that are not detected when the independent variables are analyzed by themselves (Field, 2009). We find two significant interaction effects for the across-brands analysis. The

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first interaction effect is the combined effect of Brand and Prominence on brand attitude, measured by Attitude ( $p = .035$ ), cf. Table 10.1.1.3 in appendix 10.1.1. This implies that the combination of Brand and Prominence has a significant effect on Attitude. The effect size explains how much of the total variance is explained by the independent variable (Field, 2009). For the combination of Brand and Prominence the effect size is calculated to 0.026, which indicates that the combination of the two independent variables explains 2.6 percent of the variance in Attitude. This effect is thus fairly low. The second interaction that has a significant effect on brand attitude is the combination of Brand and ProgramLiking, with  $p = .00$  for all the three measurements, cf. Table 9.1 in appendix 9. The combination of the two variables explains 21.1, 26.3 and 31.9 percent of the variances in Attitude, Evaluation and Rank respectively. Thus, this interaction effect is fairly substantial. This interaction effect is a breach of the assumption of homogeneity of regression slopes, cf. chapter 4.4.1.5. The rationale for conducting MANCOVA despite the violation of the assumption is explained in chapter 4.4.1.5.

## 5.2 Results of the hypotheses

In this chapter we will break down the results from the tests, by addressing the research questions and the nine associated hypotheses.

### 5.2.1 Prior notification

First of all, we find no overall significant effect of prior notification on brand attitude in the across-brands MANCOVA, measured by the variables Attitude, Evaluation and Rank, cf. chapter 5.1.1 and appendix 10.1.1. The same applies to the within-brand analyses of Oreo Cookies and Bing, cf. chapter 5.1.1 and appendix 10.1.2 and 10.1.3.

We also conducted ANOVA tests to assess whether the relationship presented in hypothesis H1 holds. The independent variable for this test was Group\_PriorNotification. The across-brands analysis found no significant effect of prior notification on brand attitude, measured by Attitude, Evaluation and Rank ( $p = .955$ ,  $p = .441$  and  $p = .696$  respectively). For the within-brand analysis of Oreo Cookies, the significance levels also indicated no significant relationship between prior notification and brand attitude, measured by Attitude, Attitude\_Oreo, Evaluation, Rank and IntentionUse\_Oreo ( $p = .255$ ,  $p = .683$ ,  $p = .825$ ,  $p = .858$  and  $p = .155$  respectively). The same applies for the within-brand analysis of

Bing, measured by Attitude, Evaluation, Rank and Attitude\_Bing ( $p = .439$ ,  $p = .320$ ,  $p = .284$  and  $p = .603$  respectively). The results of the tests can be found in appendix 10.2.

The results of the Mann-Whitney tests are in accordance with findings presented above. The across-brands analysis found no significant results between prior notification and brand attitude, measured by Evaluation and Rank ( $p = .471$  and  $p = .702$  respectively). The same applies for the within-brand analysis of Oreo Cookies, where brand attitude was measured by Evaluation, Rank and IntentionUse\_Oreo ( $p = .678$ ,  $p = .711$  and  $p = .212$  respectively). The within-brand analysis of Bing had the following p-values:  $p = .256$  and  $p = .600$  for Evaluation and Rank respectively, meaning that this effect is not significant either. These results can be found in appendix 10.5.2.

Hypothesis H1 was thus rejected for the across-brands analysis and the within-brand analyses of Oreo Cookies and Bing with a 95 percent significance level.

### **5.2.2 Prior notification and product placement prominence**

We find no overall significant effect of prominence on brand attitude in the across-brands analysis, measured by the variables Attitude, Evaluation and Rank, cf. chapter 5.1.1 and appendix 10.1.1. The same applies to the within-brand analyses of Oreo Cookies and Bing, cf. chapter 5.1.1 and appendix 10.1.2 and 10.1.3.

We again conducted ANOVA tests to assess whether the relationship presented in hypotheses H2 through H5 hold. The independent variable for this test was Group\_PN\_Prominence. The across-brands analysis found no significant effect of the four combinations of prior notification and product placement prominence on brand attitude, measured by Attitude, Evaluation and Rank ( $p = .965$ ,  $p = .889$  and  $p = .982$  respectively). For the within-brand analyses of Oreo Cookies and Bing, the tests also did not find a significant relationship between prior notification, product placement prominence and brand attitude, measured by Attitude, Attitude\_Oreo, Evaluation, Rank and IntentionUse\_Oreo for Oreo Cookies ( $p = .284$ ,  $p = .485$ ,  $p = .420$ ,  $p = .945$  and  $p = .248$  respectively) and Attitude, Evaluation, Rank and Attitude\_Bing for Bing ( $p = .325$ ,  $p = .356$ ,  $p = .554$  and  $p = .952$  respectively). The results can be found in appendix 10.3.

The results of the Kruskal-Wallis tests are in accordance with the findings presented above. The across-brand analysis found no significant results between prior notification, product

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placement prominence and brand attitude, measured by Evaluation and Rank ( $p = .889$  and  $p = .983$  respectively). The same applies to the within-brand analysis of Oreo Cookies, where brand attitude was measured by Evaluation, Rank and IntentionUse\_Oreo ( $p = .346$ ,  $p = .928$  and  $p = .307$  respectively). The within-brand analysis of Bing had p-values of  $p = .452$  and  $p = .950$  for Evaluation and Rank respectively. The results can be found in appendix 10.5.3.

The hypotheses H2 through H5 were thus rejected for the across-brands analysis and the within-brand analyses of Oreo Cookies and Bing with a 95 percent significance level.

### 5.2.3 Prior notification and program liking

The covariate ProgramLiking was not significantly related to brand attitude, measured by the variables Attitude, Evaluation and Rank, cf. chapter 5.1.1 and appendix 10.1.1. The same applies to the within-brand analyses of Oreo Cookies and Bing, cf. chapter 5.1.1 and appendix 10.1.2 and 10.1.3.

We again conducted ANOVA tests to assess whether the relationship presented in hypotheses H6 through H9 hold. The independent variable for this test was Group\_PN\_ProgramLiking. The across-brands analysis found no significant effect of the four combinations of prior notification and program liking on brand attitude, measured by Attitude, Evaluation and Rank ( $p = .142$ ,  $p = .063$  and  $p = .183$  respectively). For the within-brand analyses of Oreo Cookies and Bing, the tests also indicated no significant relationship between prior notification, product placement prominence and brand attitude, measured by Attitude, Attitude\_Oreo, Evaluation, Rank and IntentionUse\_Oreo for Oreo Cookies ( $p = .184$ ,  $p = .504$ ,  $p = .547$ ,  $p = .800$  and  $p = .253$  respectively) and Attitude, Evaluation, Rank and Attitude\_Bing for Bing ( $p = .319$ ,  $p = .458$ ,  $p = .450$  and  $p = .937$  respectively). The results can be found in appendix 10.4.

The results of the Kruskal-Wallis tests are in accordance with the findings presented above. The across-brand analysis found no significant results between prior notification, product placement prominence and brand attitude, measured by Evaluation and Rank ( $p = .052$  and  $p = .180$  respectively). The same applies for the within-brand analysis of Oreo Cookies, where brand attitude was measured by Evaluation, Rank and IntentionUse\_Oreo ( $p = .671$ ,  $p = .708$  and  $p = .307$  respectively). The within-brand analysis of Bing had the following

p-values:  $p = .377$  and  $p = .934$  for Evaluation and Rank respectively. The results can be found in appendix 10.5.4.

The hypotheses H6 through H9 were thus rejected for the across-brands analysis and the within-brand analyses of Oreo Cookies and Bing with a 95 percent significance level.

**Part VI:**  
**Discussion**

*If you notice it, it's bad. But if you don't notice it, it's  
worthless.*

(Erwin, 2003)

## 6. Discussion

In chapter 2 we put forward some hypotheses regarding the effects of prior notification on viewers' brand attitude under different conditions on viewers' brand attitude. In chapter 5 we presented the results of the hypotheses tests, which rejected all the nine hypotheses. The results imply that we do not find any significant support for H1 through H9, meaning that we cannot state anything for certain about the main effects of prior notification and the moderating variables level of prominence and level of program liking on brand attitude.

In this chapter we will look at the trends in the data material regarding the hypotheses. We will then turn to discuss the results and their lack of significance. Finally, at the end of this chapter, we will conclude on our research.

### 6.1 Trends

The following chapter outlines the trends in the data for the three research questions and their associated hypotheses. The relationships and trends discussed in the following chapter are not significant, which implies that the discussion is only intended to be an indication of how the data material behaves. Thus, the relationships with regards to trends cannot be regarded as scientifically proven.

#### 6.1.1 Prior notification

Research question 1 addresses the relationship between brand attitude and prior notification of product placement. Hypothesis H1, which is associated with research question 1, assumed that product placement will be less effective in producing a positive brand attitude when viewers are exposed to prior notification compared to when viewers are not exposed to prior notification. Overall, the trends from the MANCOVA test for the across-brands analysis finds that product placement prominence is positively related to brand attitude, measured by Attitude and Evaluation ( $b = .334$  and  $b = .280$ ), and negatively related measured by Rank ( $b = -.069$ ). The trends from the ANCOVA test conducted on the within-brand analysis of Bing supports this positive relationship ( $b = .560$  for Attitude\_Bing). For the within-brand analysis of Oreo Cookies, the trends from the MANCOVA test however imply that prior notification results in a less positive brand attitude compared to when viewers are not notified of the product placement. The b-values for Attitude\_Oreo and

IntentionUse\_Oreo are  $b = -.364$  and  $b = -.561$ . The results can be found in appendix 10.1.1, 10.1.2 and 10.1.3.

We also look for trends in the means of the different treatment groups. For the across-brand analysis the trends are mixed, but somewhat more in favor of than opposing to H1. Brand attitude measured by Evaluation and Rank are higher when the respondent is not notified of the product placement than when he or she is subjected to prior notification. For Attitude the trends are in contradiction to the proposed relationship between prior notification and brand attitude.

The trends in the within-analysis of Oreo Cookies show contradictory results with regards to H1. Brand attitude measured by Attitude, Attitude\_Oreo and IntentionUse\_Oreo are opposing to the hypothesis, whereas Evaluation and Rank are in line with the proposed relationship. The trends in the within-brand analysis of Bing show support for H1. Attitude, Attitude\_Bing, Evaluation and Rank, all have higher means for respondents not subjected to prior notification compared to respondents notified of the product placement, and are thus in line with the proposed hypothesis.

The trends can be found in the MANCOVA and ANCOVA tests in appendix 10.1. The ANOVA tests show similar trends, cf. appendix 10.2. The following table summarizes the trends concerning H1:

<b>Prior notification and brand attitude</b>					
<b>Across-brand analysis</b>					
<b>Hypothesis</b>	<b>Attitude</b>	<b>Evaluation</b>		<b>Rank</b>	
H1	Opposing	Supporting		Supporting	
<b>Within-brand analysis Oreo Cookies</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Oreo (associations)</b>	<b>Evaluation</b>	<b>Rank</b>	<b>Intention to use</b>
H1	Opposing	Opposing	Supporting	Supporting	Opposing
<b>Within-brand analysis Bing</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Bing (associations)</b>	<b>Evaluation</b>		<b>Rank</b>
H1	Supporting	Supporting	Supporting		Supporting

*Table 10 Trends H1*

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The contradictory trends from the variable Attitude in the within-brand analysis of Oreo Cookies and Bing can possibly be explained by the fact that this measuring variable involves adjective-pairs of the brands, which might not be entirely adapted and suitable to capture an overall attitude towards the two different brands. Oreo Cookies and Bing have very different usage situations, which implies that one measurement might fit better for one of the two brands. This can explain why the trends in the within-brand analysis of Oreo Cookies are opposing the hypothesis, while the trends of the within-brand analysis of Bing are supporting the hypothesis.

There are some opposing trends concerning H1. These are given by Attitude in the across-brands analysis and Attitude, Attitude\_Oreo and IntentionUse\_Oreo in the within-brand analysis of Oreo Cookies. A possible explanation for these opposing trends can be that respondents who were exposed to prior notification appreciate television series producers' honesty concerning their use of product placement. However, when studying how many of the respondents subjected to the product placement of Oreo Cookies who understood that they had been subjected to product placement, the persuasion knowledge difference between respondents who had been subjected to prior notification and the respondents who had not been notified is almost non-existent. Of the remaining 15 respondents who stated that the questionnaire had something to do with product placements, i.e. those who did not answer in less than 30 seconds and were still included in the analyses, eight had been exposed to product placement of Oreo Cookies. Five of the eight respondents had been exposed to prior notification, whereas three had not been notified. Adding to this, we also note that of the respondents subjected to product placement of Oreo Cookies, 48 respondents had been exposed to prior notification, whereas 41 had not been notified, cf. appendix 4.3. This difference justifies that a few more respondents had persuasion knowledge in the prior notification group compared to the no prior notification group. Consequently, the argument of viewers appreciating the honesty of prior notification falls short as there does not seem to be a difference between the groups in understanding that they are exposed to product placement.

Overall, the results concerning the first hypothesis reveal the expected trend that prior notification reduces brand attitude to some extent, although the effects are marginal, and in some cases contradictions appear. The results are therefore only partially in line with Chan's (2012) prediction that prior notification can create higher levels of persuasion knowledge and, if noticed, result in an unfavorable evaluation of the brand placed, cf. chapter 2.2.

### 6.1.2 Prior notification and product placement prominence

Research question 2 looks into how product placement prominence will affect the influence of prior notification of product placement on brand attitude. The MANCOVAs and ANCOVA show no significant effect for prominence on brand attitude. The trends even indicate that product placement prominence overall has a slightly positive effect on brand attitude. For instance, the three variables in the across-brands analysis, Attitude, Evaluation and Rank, have b-values that imply a positive relationship between product placement prominence and brand attitude ( $b = .334$ ,  $b = .280$  and  $b = .016$  respectively), cf. Table 10.1.1.4 in appendix 10.1.1. However, for the within-brand analyses the results are mixed. Attitude\_Oreo and Attitude\_Bing support a positive relationship between product placement prominence ( $b = .280$  and  $b = .559$  respectively) while IntentionUse\_Oreo indicate a negative relationship between the two variables ( $b = -.718$ ), cf. Table 10.1.2.4 and 10.1.3.3 in appendix 10.1.2 and 10.1.3. The trends imply that product placement prominence on an overall basis is expected to have a positive influence on brand attitude. However, the trends are very marginal, and the results state that product placement prominence had no significant effect on brand attitude.

In order to break down the analysis in accordance with the hypotheses we look at the trends in means between the different treatment groups.

The first two hypotheses associated with research question 2, H2 and H3, assumed that brand attitude would be less positively affected if the viewers were exposed to prior notification compared to when they were not exposed to prior notification, both in the case of subtle product placement and prominent product placement respectively.

The trends in the across-brands analysis are mixed, but somewhat more in favor of than opposing to H2. Brand attitude measured by Evaluation and Rank are higher when the respondent is not notified of the product placement than when he or she is subjected to prior notification. For Attitude the trends are in contradiction to the proposed relationship between prior notification and brand attitude. For H3 the trends for all the variables measuring brand attitude are supporting the hypothesis.

The trends in the within-brand analysis of Oreo Cookies show contradictory results with regards to H2. Brand attitude measured by Attitude\_Oreo and Evaluation are in favor of the hypothesis, whereas Attitude, IntentionUse\_Oreo and Rank are opposing to the proposed

relationship. For H3, all the variables measuring brand attitude, except for Rank, show trends that go in the opposite direction of what the hypothesis predicted. For the within-brand analysis of Bing, the trends support H2 and H3 for all the measurements of brand attitude, except Attitude\_Bing, which is opposing to H2 .

H4 and H5, which are associated with research question 2, expected brand attitude to be higher for viewers exposed to subtle product placements compared to viewers exposed to prominent product placements, given prior notification and no prior notification respectively.

The trends in the across-brands analysis are somewhat more opposing to than in favor of H4 and H5. For Evaluation and Rank the trends are in contradiction to the proposed relationships in H4 and H5. For Attitude, the trends are however in line with the hypotheses.

The within-brand analysis of Oreo Cookies only shows contradictory trends with regards to both H4 and H5. This implies that regardless of whether the respondents are subjected to prior notification or not, prominent product placement tends to show higher brand attitudes compared to subtle product placement.

For the within-brand analysis of Bing, the trends in the are somewhat more in favor than opposing to H4. All the measurements of brand attitude, except for Rank, are supporting the proposed relationship of H4, i.e. that subtle product placements result in higher brand attitudes compared to prominent product placements, given prior notification. The trends for H5 are however less in line with what we predicted. Here, Attitude is the only measurement of brand attitude that supports the hypothesis.

The trends can be found in the MANCOVA and ANCOVA tests in appendix 10.1.1 The ANOVA tests show similar trends, cf. appendix 10.3. The following table summarizes the trends concerning H2 through H5:

<b>Prior notification, product placement prominence and brand attitude</b>			
<b>Across-brand analysis</b>			
<b>Hypothesis</b>	<b>Attitude</b>	<b>Evaluation</b>	<b>Rank</b>
H2	Opposing	Supporting	Supporting
H3	Supporting	Supporting	Supporting
H4	Supporting	Opposing	Opposing

H5	Supporting	Opposing	Opposing	Opposing	Opposing
<b>Within-brand analysis Oreo Cookies</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Oreo (associations)</b>	<b>Evaluation</b>	<b>Rank</b>	<b>Intention to use</b>
H2	Opposing	Supporting	Supporting	Opposing	Opposing
H3	Opposing	Opposing	Opposing	Supporting	Opposing
H4	Opposing	Opposing	Opposing	Opposing	Opposing
H5	Opposing	Opposing	Opposing	Opposing	Opposing
<b>Within-brand analysis Bing</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Bing (associations)</b>	<b>Evaluation</b>	<b>Rank</b>	
H2	Supporting	Opposing	Supporting	Supporting	Supporting
H3	Supporting	Supporting	Supporting	Supporting	Supporting
H4	Supporting	Supporting	Supporting	Supporting	Opposing
H5	Supporting	Opposing	Opposing	Opposing	Opposing

*Table 11 Trends H2-H5*

The mixed results of the variables concerning H2 and H3 indicate that the trends of H1 become less clear when controlling the effect of prior notification versus no prior notification for subtle and prominent product placements. The mixed results make it challenging to find a direction for the relationship concerning the two hypotheses. Overall, the trends are somewhat more in favor than opposed to these two hypotheses, although it should be emphasized that the differences in means are mostly marginal, and that the brand attitude variables considered as a whole neither support nor oppose the hypotheses. Furthermore, and most importantly, the results reported in chapter 5.2 and given in appendix in 10.1, 10.2 and 10.3, show that the associated across-brand and within-brand analyses do not show significant differences. We have therefore not found support for H2 and H3. This means that we, when controlling for subtle and prominent product placements, did not find support for Chan's (2012) general prediction that prior notification and persuasion knowledge will affect brand evaluation negatively.

The results of H4 and H5 are very mixed. This implies that we cannot predict that prominent product placements will be less effective in influencing brand attitudes positively as compared to subtle product placements, under the conditions prior notification and no prior

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notification. There is reason to believe that the effectiveness of a prominence level is somewhat connected to the brand being placed, cf. chapter 5.1.3. The mixed findings from previous studies imply that the effectiveness of product placement prominence strategies on brand attitude does not have a straight forward relationship. The appearing complicated relationship between product placement prominence and brand attitude is likely to involve several other mediating factors. One example is program liking, which will be discussed in the following chapter.

### **6.1.3 Prior notification and program liking**

Research question 3 looks into how program liking will influence the effect of prior notification of product placement on brand attitude. The MANCOVA and ANCOVA tests show no significant relationship between brand attitude and program liking. However, the tests show that program liking has an overall negative trend on brand attitude. The variables Attitude and Evaluation for the across-brands analysis show that program liking has a negative effect on brand attitude ( $b = - .026$  and  $b = - .043$  respectively), whereas Rank ( $b = .024$ ) shows the opposite effect, cf. Table 10.1.1.4 in appendix 10.1.1. For the within-brand analysis, Attitude\_Oreo and IntentionUse\_Oreo also support that program liking has a negative effect ( $b = - .098$  and  $b = - .213$  respectively), cf. Table 10.1.2.4 in appendix 10.1.2. The same goes for Attitude\_Bing ( $b = - .024$ ), cf. Table 10.1.3.3 in appendix 10.1.3. However, none of the effects are significant, and the trends are very marginally negative.

Research question 3 is associated with four hypotheses. To assess whether or not trends in the data support the proposed relationships for these hypotheses, we have to look at different combinations of prior notification and program liking. To do so, we used ANOVA.

The first two hypotheses associated with research question 3, H6 and H7, predicted a less positive effect on brand attitude when respondents are exposed to prior notification compared to when they are not, given both a low and a high degree of program liking.

The trends in the ANOVA across-brands analysis are mixed for H6. Brand attitude measured by Attitude and Rank are higher when the respondent is notified of the product placement compared to when he or she is not notified. For Evaluation the trends are supporting the proposed relationship between prior notification, program liking and brand attitude. The

variables Attitude and Rank are supporting the predicted effect of H7, whereas Evaluation is opposing the hypothesis.

The trends in the within-brand analysis of Oreo Cookies are mostly in favor of H6. Attitude measured by the variables Attitude, Attitude\_Oreo, Evaluation and Rank are supporting the proposed relationship between prior notification, program liking and brand attitude. The only variable for Oreo Cookies which shows a contradicting result is IntentionUse\_Oreo. For H7, all the variables in the within-brand analysis of Oreo Cookies are in contradiction with the predicted effect.

Brand attitude measured by Attitude, Attitude\_Bing and Evaluation are opposing to H6, whereas Rank shows that the two conditions prior notification and no prior notification have equal means, given low program liking. All the variables concerning H7 in the within-brand analysis of Bing are supporting the hypothesis.

The last two hypotheses of this study, H8 and H9, are also associated with research question 3. The two hypotheses expect a less positive effect on brand attitude when the respondent has a high degree of program liking compared to when he or she has a low degree of program liking, both in the case of prior notification and no notification respectively.

All the trends in the ANOVA across-brands analysis are opposing to H8 and H9.

All the variables concerning H8 in the within-analysis of Oreo Cookies are supporting the hypothesis. The trends concerning H9 are going in the opposite direction, i.e. opposing H9, except for Rank.

When it comes to the within-brand analysis of Bing, all the variables concerning H8 are opposing to our prediction, while all the variables concerning H9 are supporting our prediction.

The overall effect of program liking found by MANCOVA and ANCOVA are in appendix 10.1. The trends in means from the ANOVA tests are quoted in appendix 10.4. The following table summarizes the trends from the ANOVAs concerning hypothesis H6 through H9:

<b>Prior notification, program liking and brand attitude</b>					
<b>Across-brand analysis</b>					
<b>Hypothesis</b>	<b>Attitude</b>	<b>Evaluation</b>	<b>Rank</b>		
H6	Opposing	Supporting	Opposing		
H7	Opposing	Supporting	Supporting		
H8	Opposing	Opposing	Opposing		
H9	Opposing	Opposing	Opposing		
<b>Within-brand analysis Oreo Cookies</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Oreo (associations)</b>	<b>Evaluation</b>	<b>Rank</b>	<b>Intention to use</b>
H6	Supporting	Supporting	Supporting	Supporting	Opposing
H7	Opposing	Opposing	Opposing	Opposing	Opposing
H8	Supporting	Supporting	Supporting	Supporting	Supporting
H9	Opposing	Opposing	Opposing	Supporting	Opposing
<b>Within-brand analysis Bing</b>					
<b>Hypothesis</b>	<b>Attitude (adjectives)</b>	<b>Attitude_Bing (associations)</b>	<b>Evaluation</b>	<b>Rank</b>	
H6	Opposing	Opposing	Opposing	Equal	
H7	Supporting	Supporting	Supporting	Supporting	
H8	Opposing	Opposing	Opposing	Opposing	
H9	Supporting	Supporting	Supporting	Supporting	

*Table 12 Trends H6-H9*

The mixed results of the variables concerning H6 and H7 indicate that the trends of H1 become less clear when controlling the effect of prior notification versus no prior notification for low and high program liking. When it comes to H8 and H9, it is challenging to single out an overall trend, since the results are contradictory. The trends from the ANOVA across-brands analysis concerning H8 and H9 are opposing to our predicted effect of program liking on brand attitude. This implies that there might be a marginal trend indicating that higher program liking increases brand attitude. The elaboration likelihood model (ELM), is an extensively used persuasion model which summarizes how consumers process persuasive communication messages (Cacioppo, et al., 1984). According to the model, the factors context, message, individual, brand and the advertisement itself influence

a consumer's cognitive involvement with a message (Tellis, 2004). In relation to this, Chan (2012, p. 47) argues that "external characteristics such as attractiveness of the source can bring about immediate attitude change". Furthermore, Chan (2012) argues that according to ELM, this type of attitude change is typically based on peripheral positive or negative features of the message or the communication context rather than the content of promotional messages. If this is true, the relation between message and communication context on the one hand and attitude change on the other hand could explain the appearing positively transmitting effect of higher program liking to higher "brand liking", i.e. the more positive effect on brand attitude. Furthermore, it could also explain the opposite relation: how lower program liking can cause a lower brand attitude.

According to DeLorme and Reid (1999), viewers actively engage in interpreting product placed brands, but are not equally influenced by it. Moreover, one can argue that differences in processing can be an important mediating factor of brand persuasiveness, something that might have interfered with the trends and results of H8 and H9. For instance, a viewer with a low program liking might be less motivated to process content and pay attention to the television series or movie. This indicates that product placements in a television series/movie with low program liking might need a more prominent or obvious product placement strategy in order to draw attention. In contradiction, Cowley and Barron's (2008) study finds product placements in programs/movies with high program liking are less effective because viewers find it disturbing. Thus, it makes sense to assume that subtle product placements and natural product placements, i.e. product placements that fit the plot and the television series/movie, should provide better results than prominent product placements that seem out-of-place in the program, when the viewer has a high degree of program liking. These mechanisms can explain part of the contradictions in our results. Chan (2012) argues that little research has examined the effect of cognitive processing on product placement persuasion, something that appears relevant when it comes to our unclear findings in this case.

It should however be noted that the trends in the ANOVA across-brands analysis concerning H8 and H9 are in contradiction with the overall marginal trends from the MANCOVA and ANCOVA tests. For the ANOVA tests we divided respondents into high and low program liking categories, putting respondents with extremely low program liking and almost neutral program liking in the same category. In the MANCOVA and ANCOVA tests program liking is treated as a covariate, and thus operates as a continuous variable. Based on this, we

believe that the trends from the MANCOVA and ANCOVA tests are more reliable compared to the contradictory trends of the ANOVA test. Regardless, it is difficult to state anything specific regarding the relationship between prior notification of product placement, program liking and brand attitude since none of the tests are significant.

## 6.2 The effect of the product placed brand

As given in chapter 5.1.2, one of the treatment effects, Brand, has a significant positive relationship with brand attitude ( $p = .00$  for all the measurements). It makes sense that brand is the most important factor in brand attitude.

The trends for the within-brand analysis of Bing concerning most of the hypotheses are more in favor of the predicted effects than the trends for the within-brand analysis of Oreo Cookies. One reason for this could be that Bing has a weak position in the search engine market compared to its strong competitor Google, as can be seen in Tables 4.4.6 and 4.4.7 in appendix 4.0. Olson and Zanna (1993) claim that attitudes for brands with a strong position are more resistant to attempts of change. Brands that have a stable position in the market can have stronger initial brand attitude, which affect brand cognition in the context of a persuasion attempt. Brand cognition is important in the creation of brand attitudes that follow from marketing communication attempts. For instance, strong brand attitudes are found to be more resilient towards persuasion attempts than less stable brand attitudes (Mitchell & Olson, 1981). This relationship has been proven by applying the expectancy-value attitude theory (Fishbein & Ajzen, 1975; Mitchell & Olson, 1981) and models of persuasion (Greenwald, et al. 1968, Cacioppo, et al. 1984). As such, brand cognition, which is part of the process of creating brand attitude, can be different for brands that have diverse market positions. These factors may explain why the trends from the tests conducted on Bing are more in favor with the predictions in the hypotheses. In our case, Oreo Cookies is a typical example of a brand with a stronger market position, while Bing can be seen as an example of a brand with a less strong market position. Based on this, we argue that viewers' attitude differences after having been subjected to product placement can be greater for Bing than for Oreo Cookies, which is operating in a more crowded market. It appears logical that the brand attitude for a brand with a strong position, such as Oreo Cookies, will be less affected by prior notification as compared to a brand with a less strong market position, such as Bing.

## 6.3 Interaction effects

As given in chapter 5.1.3, we find an interaction effect between Brand and Prominence and an interaction effect between Brand and Program liking, cf. appendix 10.1.1. and 9.1 respectively.

The combination of Brand and Prominence explains 2.6 percent of the variance in Attitude, cf. Table 10.1.1.3 in appendix 10.1.1. H4 and H5 compared the effects of prominent versus subtle product placements, given the conditions prior notification and no prior notification respectively. The trends from H4 and H5 concerning Oreo Cookies show that the brand performs better with regards to brand attitude for prominent product placements compared to subtle product placements. This can also be confirmed by the scatter plot of the interaction effect given in Figure 10.1.1.1 in appendix 10.1.1. For Bing, the trends are mixed concerning H4, but are overall more in favor of than opposing to the hypothesis. The within-brand analysis of Bing concerning H5 however shows the opposite trend. Overall, Bing performs better with regards to brand attitude for subtle product placements compared to prominent product placements, cf. Figure 10.1.1.1 in appendix 10.1.1. This implies that that the brand itself influences how product placement prominence affects brand attitude.

It is likely to believe that viewers accept a product placement of a brand they evaluate favorably to a larger extent than a product placement of a brand which they evaluate less favorably. Because a subtle product placement is harder to take notice of as compared to a prominent product placement, it is likely to believe that this former type of product placement will work better for a less favorably evaluated brand. This could be a possible reason for the interaction effect between Brand and Prominence in this study, in addition to the differences regarding trends for Oreo Cookies and Bing.

Although Brand and Prominence in combination explain part of the total variance by the individual variable, Brand and Program liking in combination explain more of the variance, cf. chapter 5.1.3. The combination of the two variables explains some of the variance for Evaluation and Rank, in addition to Attitude, with 26.3, 31.9 and 21.1 percent respectively.

One possible explanation of the interaction effect between Brand and Program liking could be that viewers who like a program dislike being interrupted by commercial interests to a larger extent if they already have an unfavorable evaluation of the brand (Cowley and Barron 2008). On the other hand, if the viewer has a favorable evaluation of the brand, the

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disruption from product placement might be limited. This indicates that the influence of program liking on brand attitude can be different depending on the brand. Furthermore, we note that respondents exposed to product placement of Bing have an overall lower program liking than respondents exposed to product placement of Oreo Cookies, cf. Figures 7.3.17 and 7.2.21 respectively in appendix 7. Additionally, respondents exposed to the product placement of Oreo Cookies generally show a higher brand attitude than respondents exposed to product placement of Bing. The combination of a lower degree of program liking and a lower brand attitude towards Bing versus a higher degree of program liking and a higher brand attitude towards Oreo Cookies may explain the interaction effect.

## 6.4 Lack of significant results

There are two possible explanations for the rejection of H1 through H3, H6 and H7. Either there simply might not be a difference between the group exposed to prior notification and the group not exposed to prior notification in terms of brand attitude. This implies that prior notification has no effect on brand attitude. Or there might be an attitudinal effect of prior notification, as can be indicated by the trends reported in chapter 6.1, but the effect is weak. Furthermore, the manipulation of the stimuli could also have been too weak. Only 11 of the in total 97 respondents subjected to prior notification understood that the questionnaire measured the effects of product placement, cf. appendix 4.2. This implies that the remaining 86 respondents have not noticed the prior notification mark. Nevertheless, since we chose to use the same prior notification mark as TV2, a lack of effect in this research ought to be consistent with a non-appearing attitudinal effect when prior notification is conducted in real-life.

Balasubramanian et al. (2006) argues that research concerning the attitudinal effect of product placements generates mixed findings. The varied findings concerning product placement and its attitudinal effects are also stressed in chapter 1.3. The history of product placement research and its associated contradictory attitudinal findings can be seen as an indication that it is either very challenging to capture the attitudinal effect of product placement, including different prominence types, or it should be taken as a hint that more mediating factors concerning this relation exist which most researchers, including us, until today have not been able to recognize and take into account. Either way, our contradictory and insignificant results regarding H4 and H5, which compared the effect of different

product placement prominence levels given the conditions prior notification and no prior notification, can be seen as yet another unclear amendment to the existent contrary research results concerning the attitudinal effects of different product placement types.

The trends concerning H8 and H9 are unclear as compared to what one can predict based on the attitudinal research results on program liking and product placement conducted by Cowley and Barron (2008). As given in chapter 2.3.2.2, these researchers have found that prominent placement can impact brand attitudes negatively by viewers with a high level of program liking and positively by viewers with a low level of program liking. In our research, we did not look into pure prominent product placements when it comes to H8 and H9, but instead studied a combination of prominent and subtle product placements. Cowley and Barron (2008, p. 95) state that “the brand attitude of both HPL [high program liking] viewers and LPL [low program liking] viewers was unchanged after exposure to a subtle placement”. We consequently justify our decision of not taking product placement prominence level into account when studying the attitudinal effect of program liking by the fact that Cowley and Barron (2008) did not find significant attitude changes in the case of subtle product placements. This made us predict that the overall combined effect of the two prominence level types would give the same results as Cowley and Barron’s (2008) research on prominent product placements and high program liking. When measuring the effect of program liking in the case of prior notification, our results however appear mixed as compared to Cowley and Barron’s (2008) research. We can think of three possible explanations for this. First of all, subtle product placement might have interfered with the combined effect of subtle and prominent product placements after all, which are opposing to the argumentations of Cowley and Barron (2008). Secondly, there is a possibility that Cowley and Barron’s (2008) findings change to some extent when prior notification is given. An argument against the second proposed explanation is that, as mentioned previously, few of the respondents subjected to prior notification expressed persuasion knowledge. Finally, it seems like there is a trend that respondents exposed to product placement of Bing have a lower program liking than respondents exposed to product placement of Oreo Cookies. In addition, respondents exposed to the product placement of Oreo Cookies tend to show a higher brand attitude than respondents exposed to product placement of Bing. The combination of a lower degree of program liking and a lower brand attitude towards Bing versus a higher degree of program liking and a higher brand attitude towards Oreo Cookies may have influenced the results.

## 6.5 Conclusion

We predicted that prior notification of product placement would cause a less positive effect on brand attitude compared to when no prior notification of product placement is given (H1). We did not find any significant results concerning this prediction. This implies that we cannot with certainty answer research question 1, concerning the effect of prior notification of product placement in television series/films on Norwegian viewers' brand attitude compared to when viewers are not exposed to prior notification. The trends are somewhat in favor of the hypothesis, indicating that prior notification has an effect. However, the differences are marginal, and the results are to some degree contradictory.

The next four hypotheses, H2 through H5, were put forward to find an answer to research question 2, which looks into how the effect of prior notification of product placement on brand attitude would be affected by different levels of product placement prominence. We are unfortunately not able to answer this research question since the results of the associated hypotheses are insignificant. In addition, the trends are mixed. We did however find a significant interaction effect between Brand and Prominence on Attitude. This implies that the combination of Brand and Prominence explains some of the variance in the dependent measurement variable Attitude.

The last four hypotheses, H6 through H9, dealt with research question 3, which addresses how the effect of prior notification on brand attitude is affected by viewers' level of program liking. We rejected the hypotheses associated with this research question as well. The data associated with the hypotheses is not significant. This means that we unfortunately cannot give an answer to research question 3. We did however find that Brand and Program liking combined amount to a significant interaction effect which influences brand attitude measured by the variables Attitude, Evaluation and Rank.

**Part VI:**  
**Implications,**  
**Strengths and Restrictions &**  
**Suggestions for Future Research**

*Recent research on product placement is beginning to move beyond simply documenting the memory or evaluative effects of the phenomenon and considering the underlying psychological processes. Future research should focus on understanding the psychological processes that relate to product placement in relation to variables that will help researchers understand how product placement works.*

(McCarty, 2004, p. 57)

## 7. Implications, Strengths and Restrictions and Future Research

This chapter contains three parts. The first is a short overview of the potential implications of the results found in this study. The next contains an outline of the strengths and restrictions concerning the research conducted, while the last part presents suggestions for future research within the topic of product placements.

### 7.1 Implications

The results of this study indicate that prior notification of product placement has no significant effect on brand attitude. Moreover, few respondents understood that the topic of this study was product placement. The inability to understand the purpose of the study can be attributed to two different explanations. First of all, it may indicate that persuasion knowledge in general is low among the respondents. We find this unlikely due to the fact that NHH students are exposed to a mandatory marketing class, and should, thus, be more aware of persuasion attempts than the general public. Consequently, we are left with the second explanation: That the prior notification mark was too weak as a stimulus. The overall results of our study imply that the value of product placement should be considered equal regardless of whether prior notification is involved in product placements or not. Therefore, there is no reason to believe that the price charged on product placements in Norwegian television series and films should be influenced by the Norwegian legislation demanding prior notification – at least not when the notifying conditions are met in the same manner as TV2 met them as of February 21, 2013<sup>8</sup>.

Moreover, the industry norm is that product placements are valued according to their relative prominence (Gupta & Gould, 1997). In fact, when it comes to paid product placement deals, usually the higher the prominence, the more expensive the product placements are (Chan, 2012). However, the results from the tests conducted in this study imply that the effectiveness of prominent and subtle product placements regarding brand attitude, given both prior notification and no prior notification, do not differ significantly. Based on our

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<sup>8</sup> We applied the same method in this experimental research

results, the value of the two strategies can thus be considered close to equal. There can of course be other elements that might explain the higher price of prominent product placements. For instance, a prominent product placement demands more attention to planning and executing than a subtle placement. Effects on recognition and recall are not included in this study, but could also interfere with price concerning product placement prominence level. Regardless, this study finds that managers who buy or sell product placements should note that prominence in itself does not seem to create a more beneficial effect on attitude regardless of whether prior notification is involved. Nevertheless, these managers should also hold the knowledge that several earlier studies find mixed results with regards to the effectiveness of different prominence strategies. We did find a weak, but significant interaction effect between brand and prominence. This indicates that decisions regarding product placement prominence should be somewhat dependent on the brands being placed.

Furthermore, even though the effect of program liking is considered to be non-significant, marketers must take into account which television series and films to place the brand in. First and foremost, this is important to reach the target group of the brand. In addition, the fact that we find a significant and somewhat strong interaction effect between brand and program liking, implies that the marketers must take into consideration both the brand, and the channel it is placed within, when making decisions regarding product placements.

Another interesting implication is that Brand is the only independent variable with a significant effect on brand attitude. This indicates that regardless of prior notification, product placement strategy, i.e. subtle or prominent placement, and program liking, the product placed brand has the strongest effect. Moreover, the trends in the data show different outcomes for the within-brand analysis of Oreo Cookies and Bing. At the very least, this indicates that marketers should adjust product placement strategies according to the position of the brand and the type of product being placed.

The results and implications presented above are based on the findings of this research study. Therefore, there is a risk that the results may be influenced by weaknesses in our research design. In the following chapter, we will consequently present strengths and restrictions of our work.

## 7.2 Strengths and Restrictions

Every research design has its strengths and weaknesses (Saunders, et al. 2009), and this study is no exception. We will therefore highlight some of the strengths and weaknesses of our work.

First of all, the lack of significant results can be considered a weakness of the study and might be a result of too few respondents in the different treatment groups. Moreover, the lack of significant results may also be caused by a too weak manipulation of the stimuli. However, since we used prior notification in the same way as TV2 notifies their viewers of product placement, this should not generate problems too large when it comes to managerial implications of the results. On the contrary, we would even state that that the use of the exact same prior notification mark as TV2 uses should help make the results of this study more applicable to real-life product placement management and help strengthen the external validity of the experiment.

In chapter 1.2 we argue that the effectiveness of product placements is expected to be influenced by different cultural communication styles (Terlutter, et al. 2008), and cultural background and ethical disposition (Fell, 2011). This implies that transferring results of studies from a nation like the US, where product placement is and has been extensively used for a long time (Dean, 2012), to a country such as Norway, where product placement is a new marketing phenomenon consequently will be problematic. Despite our own arguments, we have mostly used results from research conducted in the US as a basis for our hypotheses. Adding to this, the television series and film clips we used as stimuli in our research are also American. The lack of Norwegian research on product placement unfortunately made it impossible to focus the hypotheses on mainly Norwegian findings. Furthermore, due to the fact that product placement in Norwegian television series and films is so new, we did not manage to find subtle and prominent clips containing the same brands in Norwegian media vehicles. We therefore saw no other option than to use American stimuli.

### 7.2.1 External validity

External validity refers to whether the research is generalizable to all relevant contexts (Saunders, et al., 2009). External validity is considered to be relatively low in this study. The research is conducted within the NHH -“community”, which resulted in the respondents

being mainly young adults in their twenties. This implies that the results are not applicable to the population as a whole. Moreover, as marketing is a first year subject at NHH, one might also assume that the respondents in this study can have a higher degree of persuasion knowledge than the general population in Norway. Even so, as noted in chapter 3.4.1, this segment may be highly interesting for some marketers, which indicates that the study still provide interesting information. In addition, as prior notification is a new phenomenon, we believe that finding the effects of prior notification under different conditions should be emphasized over generalizations.

Furthermore, since the study is not conducted as a natural experiment, it lacks ecological validity, defined as “a type of external validity referring to the extent to which findings can be generalized from one group to another” (Saunders, et al., 2009, p. 590). In general, laboratory experiments are low on ecological validity since the study is conducted outside the natural context of the phenomenon (Saunders, et al., 2009). However, the use of real brands and actual product placements from real television series and films increased the ecological validity of our study to some extent. Moreover, the fact that the manipulated stimuli were clips, rather than images printed on paper, created a more realistic setting of the research. The attitudinal effects measured as a consequence of being exposed to product placement in a short television or film clip are however not 100 percent comparable to the effect on brand attitude from watching a feature-length television episode or film.

Furthermore, a large number of respondents dropped out of the study before finishing the questionnaire, cf. chapter 4.1. We cannot be certain that the answers of the respondents that dropped out, or did not respond to the questionnaire at all, are aligned with the respondents who completed it. This is referred to as experimental mortality (Saunders, et al., 2009), and must be considered a weakness of the research.

### **7.2.2 Internal validity**

Internal validity refers to the ability of research to measure what it is designed to measure. Internal validity can be divided into three categories: content, criterion-related, and construct validity. Content validity refers to whether the measurement device provides adequate coverage of the investigative question (Saunders, et al., 2009). The product placement clips and the brands used in this study are carefully selected to fit the purpose of the study. For instance, we tried to avoid brands that have very strong positions in the Norwegian market in order to increase the experiments internal validity. Despite this, we did fail to incorporate

that Bing has a very low – maybe even too low – market share. Moreover, when Bing is compared to Google, the negative brand attitude effect of the former brand might be magnified. This implies that the decision to use a product placement of Bing as a stimuli, as well as the decision to use Google as one of the competitors might be a weakness of the study. Moreover, the instruments created to measure the concepts outlined in the hypotheses and research questions are carefully designed based on measurements from previous research and suggestions from theoretical literature on the topic. Overall, we feel that the study has a high degree of content validity.

Secondly, criterion-related validity is “concerned with the ability of the measures to make accurate predictions” (Saunders, et al., 2009, p. 373). Since we conducted the research as an experiment and used quantitative data, we were able to conduct statistical tests to make predictions. However, most of the tests provided non-significant results, illustrating that the study might have a problem with criterion-related validity.

Finally, construct validity refers to the extent to which the measurement actually measures the presence of the constructs it is intended to measure (Saunders, et al., 2009). The causal relationships suggested and tested in this study are firmly rooted in theory, something that increases the probability that the relationships we are trying to measure exist. However, results of research within the area of product placements are both mixed and complex (Chan, 2012), making it challenging to measure the effects of product placement. For example it is difficult to know whether the independent variables, prior notification of product placement and the moderating variables, product placement prominence and program liking, are the only variables that affect the dependent variable brand attitude. Other factors such as the specific scenes in which the product placements are conducted, the characters, the plot and the environment might also influence the causal effects. We tried to eliminate potential disturbing factors as much as possible by including two brands with different positions in the Norwegian market and by making sure that as many factors as possible stayed the same under both of the conditions prior notification and no prior notification. This has likely increased construct validity. Furthermore, the fact that general adjective pairs were used as part of attitude measurements, rather than pairs designed specifically for the two brands can be considered a weakness. However, since we used two different brands, general adjective pairs were best suited as a measurement for analyzing the two brands combined. In addition, since the experiment was conducted within the questionnaire approach, one factor was impossible to eliminate: The time and place where the research was conducted. As such, this

might have influenced the results of the experiment, thereby decreasing the construct validity.

### **7.2.3 Reliability**

Reliability refers to “the extent to which the data collection techniques or analysis procedures of a study will yield consistent findings” (Saunders, et al., 2009, p. 600). According to Saunders, et al. (2009) four threats to reliability exist: participant error, participant bias, observer error and observer bias. We have reduced the effects of the latter two through use of structured questionnaires with rating statements. Unfortunately, participant bias may still have occurred in this study. Respondents often answer in accordance with what they think the researcher is looking for. To eliminate this factor we therefore made sure that respondents were anonymous and tried to hide the motive for conducting the questionnaire by adding questions measuring other elements, including other brands. We also stated that the subject of this study was television series and movies and included a question asking the respondents what they assumed the questionnaire was designed to measure. The respondents that understood that the questionnaire measured the effects of product placements, and finished replying to this question in less than 30 seconds were eliminated from the further analysis. Hiding the reason behind the questionnaire is, however, not possible when respondents were subjected to prior notification, meaning that respondents who managed to state the correct purpose of the study in research groups two, four, six and eight were not excluded from the analysis. Even so, the fact that no information regarding the hypotheses was communicated to the respondents made sure that those subjected to prior notification had no certain way of knowing exactly what we expected to find. Thus, they could not answer in accordance with our purposed predictions.

Subject and participant error might also decrease the reliability of the study. The respondents’ understanding of the statements in the questionnaire, as well as the when and where respondents are conducting the study may influence respondents’ answers. In order to eliminate the possibility that respondents misunderstood the questions, much attention was paid to the wording, format and content of the questionnaire. Because the respondents were Norwegian students, the questionnaire was also distributed in Norwegian.

Even though this research has several weaknesses, it can be considered a contribution to the conceptualization of the attitudinal effects of prior notification of product placements. It is,

as far as we know, the first study conducted on this topic. As such, the study is relevant, at the very least as a guideline for future research.

## 7.3 Suggestions for Future Research

In this chapter we suggest three areas within the area of product placement that we believe would be valuable for future research to look into.

### 7.3.1 Prior notification

According to Chan (2012), research in the area of prior notification is almost non-existent. As such, this study is a valuable contribution regarding prior notification, especially in the context of the new legislations concerning product placement introduced in Norway in 2013. Future studies should improve some of the weaknesses of our study in order to find significant effects of the dependent variable, brand attitude, under different treatment conditions. For instance, research on a representative sample of the Norwegian population could be valuable. Moreover, future research concerning prior notification in Norway should use Norwegian television series or films, thereby taking Norwegian culture into account. The product placement mark has existed since the spring of 2013. Consequently it should be possible to use Norwegian produced media content for future studies.

In addition, future research can eliminate some of our external sources of error by using a natural experiment rather than conducting the experiment through a questionnaire approach. A methodological approach that can be used as an example is the study conducted by Olsen and Samuelson (2012). Their research was conducted as a field study with a one-group pretest-posttest experimental design. The respondents filled out a questionnaire two days prior to attending the movie *Kong Curling* at the cinema. After the movie, the respondents filled out another questionnaire (Olsen & Samuelson, 2012). The use of a real-life setting and a feature-length movie such as in this case, could increase the ecological validity of the results of future research.

### 7.3.2 Context specific and cross national studies

Chan (2012) argues that more studies in context outside of the US need to be carried out. Research on product placement in Norway is fairly new. This indicates that more studies with regards to all areas of product placement within a Norwegian context will be valuable. Our study is, as far as we know, the first study conducted on the effects of prior notification

in Norway, whereas Olsen and Samuelson (2012) are the only researchers who have looked into knowledge and attitude effects of product placement in a Norway context prior to this.

Furthermore, Chan (2012) also emphasizes the need for comparative research on the effects of product placement across countries. Television series and movies are often subjected to an international audience, which implies that product placement strategies need to be adjusted to fit into multicultural contexts. In a Norwegian context, cross national studies are only valuable if Norwegian movies and television series are sold to foreign countries. Since many Norwegian media products are sold to Sweden, a cross national study between Sweden and Norway on product placement efficiency is a relevant example. Rules regarding prior notification are still nationally enforced. This implies that media content sold to foreign countries may be subjected to different laws regarding product placement. Thus, research regarding the implication of prior notification in an international or cross national context should also be welcomed.

### **7.3.3 Product placement processing, prominence and brand specific research**

Chan (2012) welcomes more research on how product placement is processed. This is backed up by Olsen and Samuelson's (2012) request for more studies on how product placement impacts audiences. We find that persuasion models such as ELM could offer important insights regarding attitudinal change as a result of product placements, therefore we agree upon the emphasized need for more research on product placement processing. Moreover, since Chan (2012) notes that knowledge on the behavioral consequence of product placement in general is inadequate, we also find that future research should look into the relationship between prior notification, persuasion knowledge and its effects on consumer behavior.

The inconsistent and mixed results from previous studies on different product placement prominence levels have been stated to create a lack of confidence towards research within the area of product placement prominence (Chan, 2012). Our unclear results concerning prior notification, product placement and product placement prominence level are unfortunately also vague. Consequently, we also emphasize the need for more research on the effects of different prominence levels. Chan (2012) further argues that researchers should adopt more consistent definitions of the terms of different product placement types when talking about different prominence levels. A universally agreed upon definition of product

placement prominence appears to be essential to ensure that findings in the area of product placement become more consistent in the future. Based on reasons given in chapter 2.3.1.1, we suggest that future researchers adopt Cowley and Barron's (2008) definitions of subtle and prominent product placements.

Finally, our results imply that the effectiveness of product placements under different conditions are brand specific. Because there might be a difference with regards to product placement effectiveness of established or popular brands compared to less established or popular brands, future studies that incorporate whether or not such a difference exists, should also be of interest.

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## **Appendix**

# 1 The Stimuli

## 1.1 Visual presentation of the clips

The visual presentation in this section shows the four clips that the research groups/questionnaire blocks 2, 4, 6 and 8 were exposed to, meaning the clips that included prior notification, i.e. the mark “P Inneholder Produktplassing” (“P Contains Product Placement”). The clips for research groups/questionnaire blocks 1, 3, 5 and 7 were the exact same except that they did not contain the prior notification mark.

### 1.1.1 Prominent product placement: Oreo Cookies



Ross: *Hey, sorry I'm late. Did I miss anything?*  
Phoebe: *Well, Joey is stuffing 15 Oreos in his mouth.*



Ross: *Fifteen?! You're personal best.*

[Joey smiles, nods and stops Ross from eating an Oreo Cookies Cookie]



[While Phoebe, Chandler and Ross discuss Ross' date, Joey continues to eat Oreo Cookies .]

Finally, Joey exclaims: *"Done! I did it! Who is stupid now, hey?"*

### 1.1.2 Subtle product placement: Oreo Cookies



[Doorbell rings and door shuts after Ethan Hunt enters a 7-Eleven shop.]



[Ethan walks towards a shelf with snacks, including Oreo Cookies, and discretely starts talking with his previous colleague IMF agent John Musgrave. John tries to convince Ethan to come back to work.]

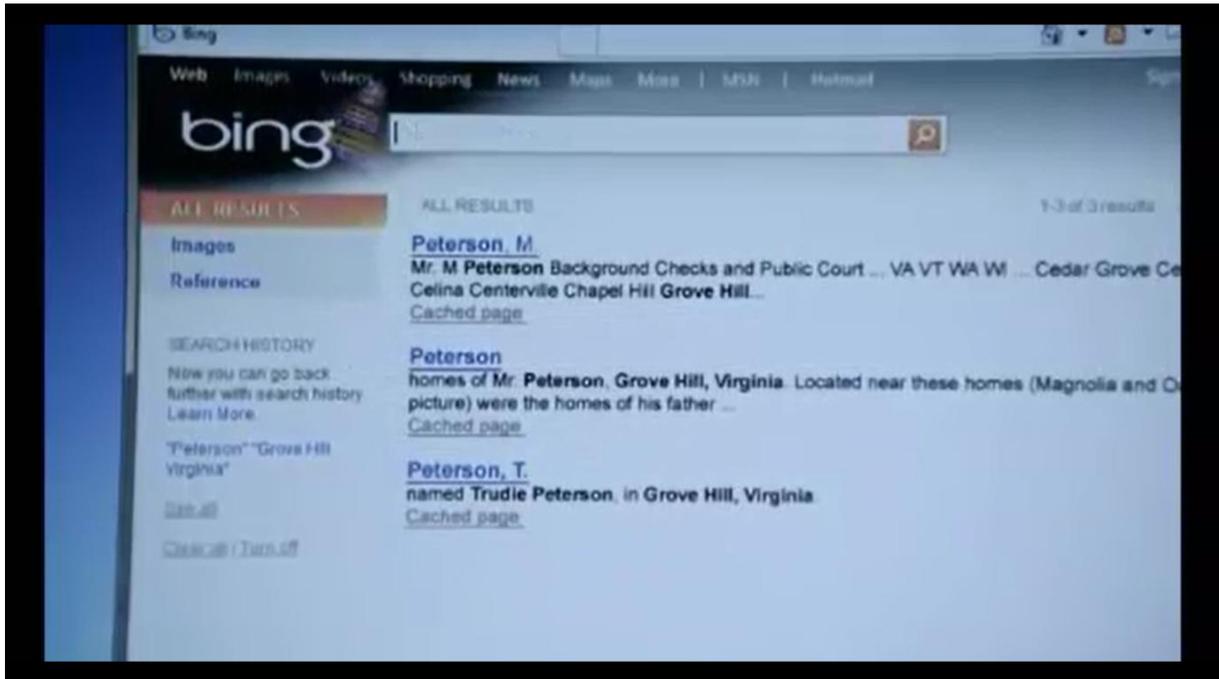
### 1.1.3 Prominent product placement: Bing



[Elena Gilbert is sitting on a terrace talking in the phone when a friend comes by.]

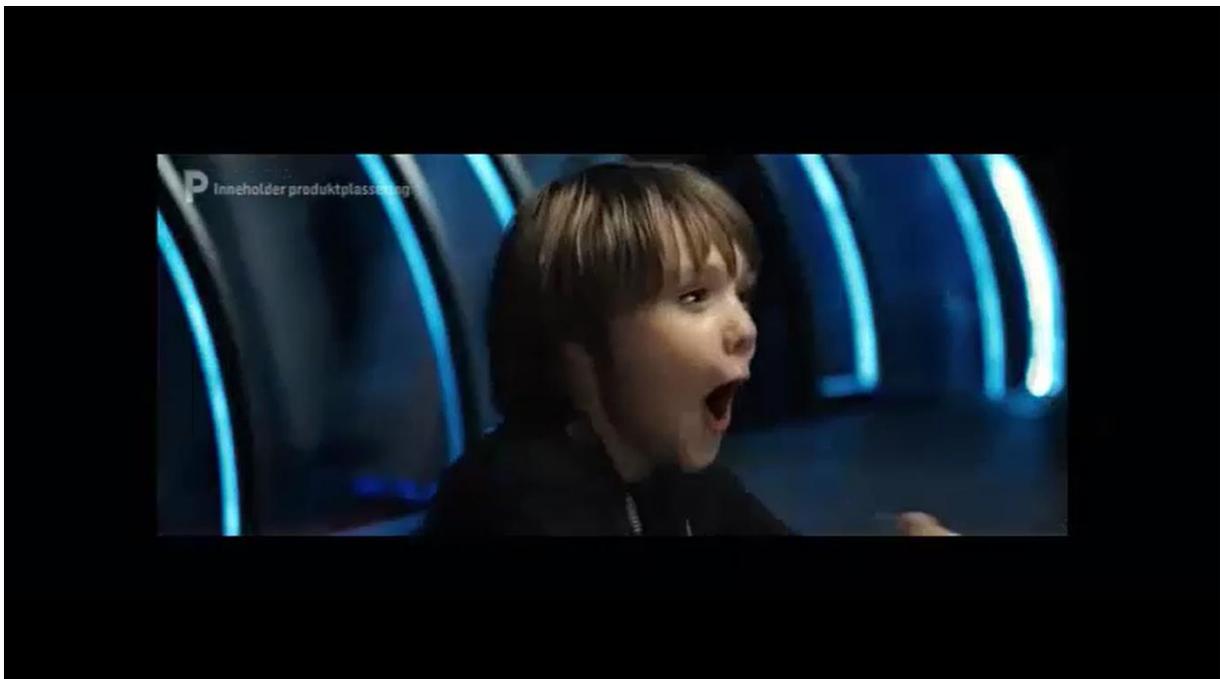


[After Elena asks her friend if she had done some digging on her adoption, her Friend visits the Bing website and responds: *“So I Bing’d it.”*]

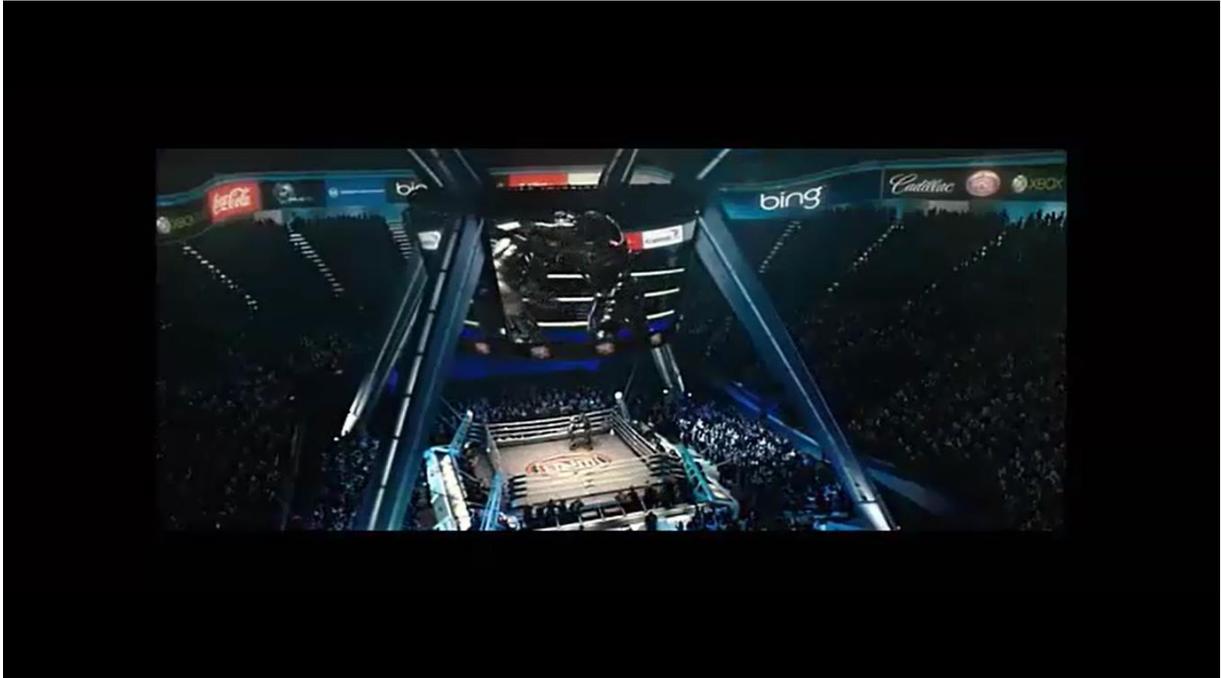


[The other main character uses Bing to show Elena the results of her digging work.]

#### 1.1.4 Subtle product placement: Bing



[The little boy is excitingly watching a robot fighting scene]. He yells: "Now!"



[The audience is cheering and yelling while an overview of the arena with billboards, including a board of Bing, is shown.]

## 2 The Questionnaire

The questionnaire used to conduct the experiment and gather data in this study is presented below. The questionnaire distributed to the sample had eight different blocks, four for each brand. The four blocks for each brand only differ with regards to which television series or movie the respondent is asked about, thus they are fairly similar. Based on this, we present the four brand-specific blocks together as one. Where the names on the television series or movies differ between the four brand-specific blocks, we use the slash sign to include all the different elements. In addition, since the questions and statements are similar for the three brands in each product category, i.e. Oreo Cookies , Dots Double Sjoko-Cookies and Ballerina Nougat, and Bing, Google and Kvasir, we have chosen to present these as one. Again, the slash sign is used to illustrate that the same questions or statements are repeated for several brands.

### 2.1 Introduction

**Hei!**

**Denne spørreundersøkelsen er laget i forbindelse med en masteroppgave ved NHH.**

**Det tar omkring ti minutter å delta i undersøkelsen. Dette inkluderer et to minutters klipp hentet fra en film eller serie. Husk derfor på å ha lyden på mens du gjennomfører spørreundersøkelsen. Har du problemer med å se klippet, anbefaler vi deg å ta undersøkelsen med Internett Explorer. Vennligst vær klar over at respondenter ser ulike klipp, og at klippet du får se er et resultat av en tilfeldig utelevisjonelgelse.**

**Undersøkelsen er anonym, og all innhentet data vil slettes ved prosjektets avslutning.**

**Tusen takk for at du deltar!**

### 2.2 Questionnaire blocks: Oreo Cookies

**Vennligst trykk på "play"-knappen på bildet nedenfor og se klippet fra TELEVISION-serien/filmen Friends/Mission Impossible 3. Klippet varer i cirka to minutter. Det er viktig at du har på lyden mens du ser klippet. Klikk deretter på "neste"-knappen.**

**Q1** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander:

	Sterkt uenig 1	2	3	4	5	6	Sterkt enig 7
Jeg ville sett denne serien/filmen om jeg hadde hatt mulighet til det	<input type="radio"/>						
Jeg likte å se dette klippet	<input type="radio"/>						
Jeg ville sett frem til å se denne serien/filmen dersom jeg visste at den kom til å bli vist på TV	<input type="radio"/>						
Jeg likte å se dette klippet fra Friends/Mission Impossible 3 mer enn jeg liker å se de fleste andre serier/filmer	<input type="radio"/>						
Det er noe ved dette klippet som appellerer til meg	<input type="radio"/>						

**Q2** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander:

Da jeg så på klippet fra Friends/Mission Impossible 3...

	Sterkt uenig 1	2	3	4	5	6	Sterkt enig 7
... konsentrerte jeg meg om handlingen	<input type="radio"/>						
... fulgte jeg plottet i handlingen	<input type="radio"/>						
... tenkte jeg på ting relatert til handlingen	<input type="radio"/>						
... identifiserte jeg meg med karakterene i handlingen	<input type="radio"/>						
... ble jeg rørt av handlingen	<input type="radio"/>						

**Q3** Har du sett en episode av Friends tidligere/Har du sett filmen Mission Impossible 3 tidligere?

- Ja
- Nei
- Jeg har aldri sett en hel episode av Friends, men jeg har sett deler av minst én episode tidligere/ Jeg har aldri sett hele Mission Impossible 3, men jeg har sett deler av den tidligere

**Q4** Vennligst ranger de følgende produktene "Dots Doble Sjoko-Cookies", "Oreo Cookies " og "Ballerina Nougat" ut i fra dine preferanser (sett den du tror du vil foretrekke mest øverst) ved å trykke på produktnavnene og flytte dem opp eller ned.

Dots Doble Sjoko-Cookies	1
Oreo Cookies	2
Ballerina Nougat	3

**Q5** Vennligst ranger i hvilken grad disse karakteristikkene er viktige når du velger kjeks (sett den viktigste øverst) ved å trykke på karakteristikkene og flytte dem opp eller ned.

God smak	1
Sunnhet	2
Kvalitet	3
Skaper hygge	4
Gir energi	5
Passer som servering til gjester	6
Spennende smak	7
Innovativt produkt	8

**Q6** Vennligst svar på påstandene og spørsmålene om produktet "Dots Double Sjoko-Cookies"/"Oreo Cookies"/"Ballerina Nougat". Hvis du ikke har prøvd produktet, vennligst baser dine svar på ditt inntrykk.





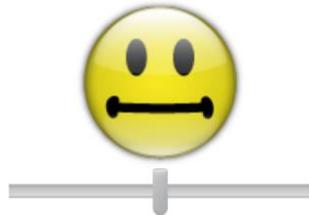
**Q9** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander:

	Sterkt uenig 1	2	3	4	5	6	Sterkt enig 7
Jeg kommer til å kjøpe "Dots Double Sjoko-Cookies"/"Oreo Cookies"/"Ballerina Nougat" i løpet av de neste fire ukene	<input type="radio"/>						
Neste gang jeg kjøper kjeks kommer jeg til å velge "Dots Double Sjoko-Cookies"/"Oreo Cookies"/"Ballerina Nougat"	<input type="radio"/>						

**Q10** Har du kjøpt "Dots Double Sjoko-Cookies"/ "Oreo Cookies "/"Ballerina Nougat" i løpet av de siste fire ukene?

- Ja  
 Nei  
 Husker ikke

**Q11** Vennligst gi en helhetsvurdering av din holdning til produktet "Dots Double Sjoko-Cookies"/ "Oreo Cookies "/"Ballerina Nougat" ved å ved å flytte på markøren under smileansiktet.



## 2.3 Questionnaire blocks: Bing

Vennligst trykk på "play"-knappen på bildet nedenfor og se klippet fra TELEVISION-serien/filmen The Vampire Diaries/Real Steel. Klippet varer i cirka to minutter. Det er viktig at du har på lyden mens du ser klippet. Klikk deretter på "neste"-knappen.

**Q1** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander:

	Sterkt uenig						Sterkt enig
	1	2	3	4	5	6	7
Jeg ville sett denne serien/filmen om jeg hadde hatt mulighet til det	<input type="radio"/>						
Jeg likte å se dette klippet	<input type="radio"/>						
Jeg ville sett frem til å se denne serien/filmen dersom jeg visste at den kom til å bli vist på TV	<input type="radio"/>						
Jeg likte å se dette klippet fra The Vampire Diaries/Real Steel mer enn jeg liker å se de fleste andre serier/filmer	<input type="radio"/>						
Det er noe ved dette klippet som appellerer til meg	<input type="radio"/>						

**Q2** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander:

Da jeg så på klippet fra The Vampire Diaries/Real Steel...

	Sterkt uenig						Sterkt enig
	1	2	3	4	5	6	7
... konsentrerte jeg meg om handlingen	<input type="radio"/>						
... fulgte jeg plottet i handlingen	<input type="radio"/>						
... tenkte jeg på ting relatert til handlingen	<input type="radio"/>						
... identifiserte jeg meg med karakterene i handlingen	<input type="radio"/>						
... ble jeg rørt av handlingen	<input type="radio"/>						

**Q3** Har du sett en episode av The Vampire Diaries tidligere/Har du sett filmen Real Steel tidligere?

- Ja
- Nei
- Jeg har aldri sett en hel episode av The Vampire Diaries, men jeg har sett deler av minst én episode tidligere/Jeg har aldri sett hele Real Steel, men jeg har sett deler av den tidligere

**Q4** Vennligst ranger de følgende merkene "Google", "Bing" og "Kvasir" ut i fra dine preferanser (sett den du tror du vil foretrekke mest øverst) ved å trykke på produktnavnene og flytte dem opp eller ned.

Google	1
Bing	2
Kvasir	3

**Q5** Vennligst ranger i hvilken grad disse karakteristikene er viktige når du velger søkemotor (sett den viktigste øverst) ved å trykke på karakteristikken og flytte dem opp eller ned.

Brukervennlig	1
Informativ	2
Nyttig	3
Effektiv	4
Praktisk	5
Gir gode resultater	6
Presis	7
Kvalitet	8

**Q6** Vennligst svar på påstandene og spørsmålene om tjenestene "Google"/"Bing"/"Kvasir". Hvis du ikke har prøvd tjenesten, vennligst baser dine svar på ditt inntrykk.





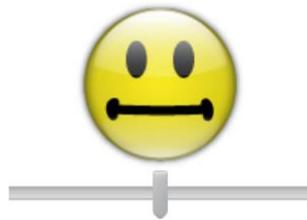
**Q9** Vennligst spesifiser på en skala fra 1 til 7, der 1 indikerer sterkt uenig og 7 indikerer sterkt enig, i hvilken grad du er enig i følgende påstander.

	Sterkt uenig 1	2	3	4	5	6	Sterkt enig 7
Jeg kommer til å bruke "Google"/"Bing"/"Kvasir" i løpet av de neste fire ukene	<input type="radio"/>						
Neste gang jeg søker på nettet kommer jeg til å bruke "Google"/"Bing"/"Kvasir"	<input type="radio"/>						

**Q10** Har du benyttet "Google"/ "Bing"/"Kvasir" i løpet av de siste fire ukene?

- Ja  
 Nei  
 Husker ikke

**Q11** Vennligst gi en helhetsvurdering av din holdning til produktet "Google"/ "Bing"/"Kvasir" ved å ved å flytte på markøren under smileansiktet.



## 2.4 Closure

**Q12** Vennligst spesifiser hva du tror denne undersøkelsen måler (on this question a timer records the time it takes for a respondent to answer)

**Q13** Vennligst kryss av for det riktige alternativet med hensyn til din alder.

- 17 eller yngre
- 18-20
- 21-23
- 24-26
- 27-29
- 30-39
- 40-49
- 50-59
- 60 eller eldre

**Q14** Vennligst kryss av for det riktige alternativet med hensyn til ditt kjønn.

- Mann
- Kvinne

For å fullføre undersøkelsen, vennligst trykk på "neste"-knappen. Ved å fullføre undersøkelsen samtykker du til at vi kan benytte dine svar i vår studie.

Tusen takk for at du tok deg tid til å svare på undersøkelsen!

### 3. Characteristics from the Pretest

In the following subsections overviews are given that present the results of the pretests where we mapped target group characteristics of “search engines” and “cookies” respectively. The characteristic closest to the two service/product categories, which also are linked to the words “search engines” and “cookies”, are the characteristics that were included in the questionnaire. The other layers of characteristics found around the questionnaire characteristic present all the characteristics given by respondents in the pre-test. Characteristics marked with similar colors are grouped together to one category based on their similarity. Numbers given in brackets show how many respondents that gave that exact characteristic. The characteristics marked with a grey color present the characteristic given in the pretest, which we did not end up using because too few people mentioned these, or because they seemed less important for measuring attitudinal effects.

#### 3.1 Characteristics “search engines”



Figure 3.1.1 Characteristics “search engine”

### 3.2 Characteristics “cookies”



Figure 3.2.1 Characteristics “cookies”

### 3.3 Average scores characteristics Cookies

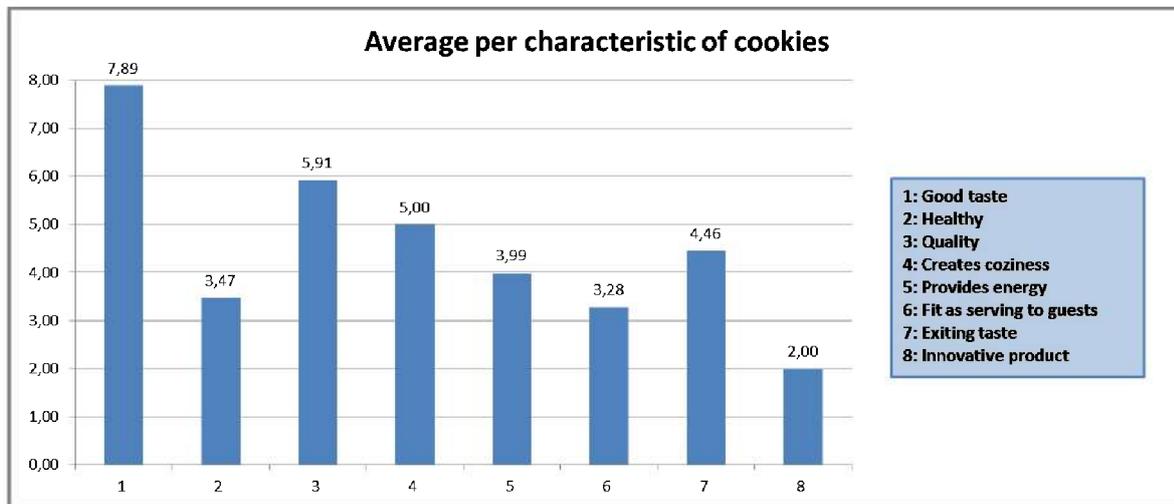


Figure 3.3.1 Average score per characteristic cookies

### 3.4 Average scores characteristic search engines

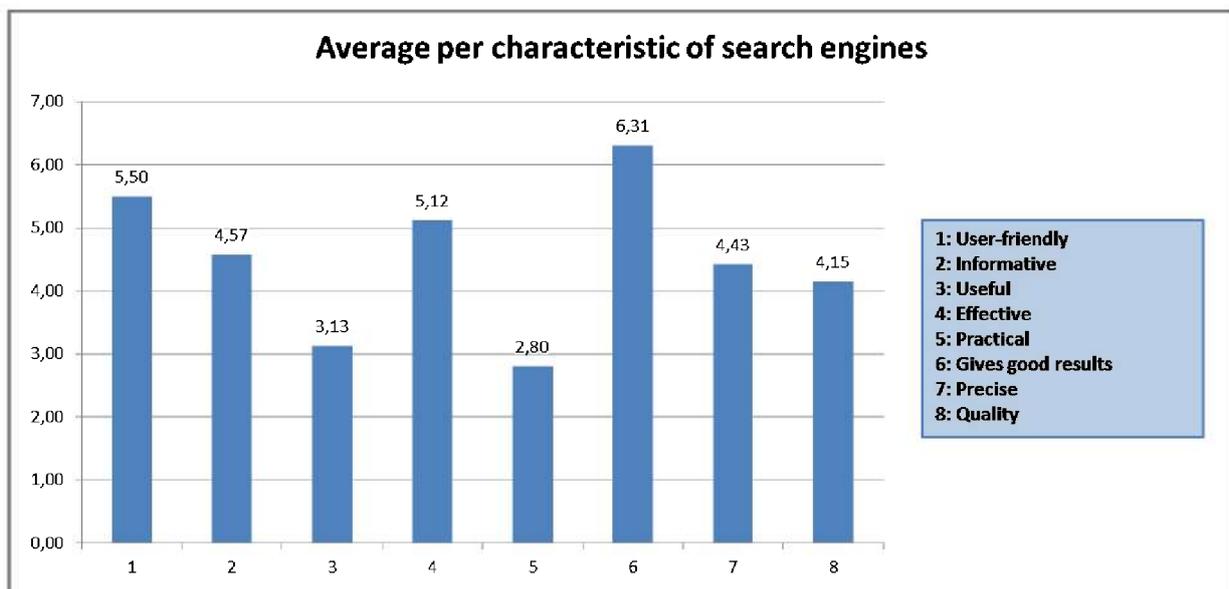


Figure 3.4.1: Average score per characteristic search engines

## 4. Descriptive Statistics

### 4.1 Distribution of responses

Clip				
Clip	Frequency	Per cent	Valid Per cent	Cumulative Per cent
1	23	12,3	12,3	12,3
2	24	12,8	12,8	25,1
3	22	11,8	11,8	36,9
4	24	12,8	12,8	49,7
Valid 5	24	12,8	12,8	62,6
6	26	13,9	13,9	76,5
7	21	11,2	11,2	87,7
8	23	12,3	12,3	100,0
Total	187	100,0	100,0	

*Table 4.1.1 Distribution of responses by clip*

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Man	95	50,8	50,8	50,8
Woman	92	49,2	49,2	100,0
Total	187	100,0	100,0	

*Table 4.1.2 Distribution of responses by gender*

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-20	20	10,7	10,7	10,7
21-23	74	39,6	39,6	50,3
24-26	80	42,8	42,8	93,0
27-29	13	7,0	7,0	100,0
Total	187	100,0	100,0	

*Table 4.1.3 Distribution of responses by age*

## 4.2 Knowledge of product placement

**Group\_knowledgeofproductplacement**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1,00	13	7,0	7,0	7,0
2,00	15	8,0	8,0	15,0
3,00	159	85,0	85,0	100,0
Total	187	100,0	100,0	

Table 4.2.1 Knowledge of product placement

**Clip \* Group\_knowledgeofproductplacement Crosstabulation**

Count

	Group_knowledgeofproductplacement			Total
	1,00	2,00	3,00	
Clip 1,00	4	1	18	23
2,00	3	4	17	24
3,00	0	2	20	22
4,00	1	1	22	24
5,00	3	1	20	24
6,00	1	5	20	26
7,00	1	0	20	21
8,00	0	1	22	23
Total	13	15	159	187

Table 4.2.2 Knowledge of product placement by clips

**Group\_PriorNotification \* Group\_knowledgeofproductplacement Crosstabulation**

Count

	Group_knowledgeofproductplacement			Total
	1,00	2,00	3,00	
Group_PriorNotification 1,00	8	4	78	90
2,00	5	11	81	97
Total	13	15	159	187

Table 4.2.3 Knowledge of product placement by condition

### 4.3 Distribution of responses after elimination

Clip				
Clip	Frequency	Percent	Valid Percent	Cumulative Percent
1	19	10,6	10,6	10,6
2	24	13,4	13,4	24,0
3	22	12,3	12,3	36,3
4	24	13,4	13,4	49,7
Valid 5	21	11,7	11,7	61,5
6	26	14,5	14,5	76,0
7	20	11,2	11,2	87,2
8	23	12,8	12,8	100,0
Total	179	100,0	100,0	

Table 4.3.1 Distribution of responses by clip

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Mann	90	50,3	50,3	50,3
Valid Kvinne	89	49,7	49,7	100,0
Total	179	100,0	100,0	

Table 4.3.2 Distribution of responses by gender

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
18-20	20	11,2	11,2	11,2
21-23	69	38,5	38,5	49,7
Valid 24-26	77	43,0	43,0	92,7
27-29	13	7,3	7,3	100,0
Total	179	100,0	100,0	

Table 4.3.3 Distribution of responses by age

## 4.4 Normality of original variables

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ProgramLiking1	179	1,00	7,00	4,1061	1,80664	-,004	,182	-,967	,361
ProgramLiking2	179	1,00	7,00	4,2179	1,55155	,105	,182	-,823	,361
ProgramLiking3	179	1,00	7,00	3,5754	1,72837	,360	,182	-,794	,361
ProgramLiking4	179	1,00	7,00	2,8045	1,54730	,589	,182	-,363	,361
ProgramLiking5	179	1,00	7,00	3,5140	1,66037	,255	,182	-,823	,361
Evaluation	179	1,00	5,00	3,2402	1,22399	-,284	,182	-,731	,361
Rank	179	1,00	3,00	2,0615	,78010	-,108	,182	-1,345	,361
IntentionUse1	179	1,00	7,00	1,9330	1,37227	1,533	,182	2,104	,361
IntentionUse2	179	1,00	7,00	1,9330	1,47868	1,666	,182	2,138	,361
Adjective1	179	1,00	7,00	4,5307	1,60508	-,423	,182	-,361	,361
Adjective2	179	1,00	7,00	5,1061	1,28733	-,743	,182	1,289	,361
Adjective3	179	1,00	7,00	4,5754	1,29765	-,355	,182	,363	,361
Adjective4	179	1,00	7,00	4,3352	1,43763	-,445	,182	-,154	,361
Adjective5	179	1,00	7,00	4,3017	1,48345	-,396	,182	-,288	,361
Adjective6	179	1,00	7,00	3,8547	1,32016	-,336	,182	,146	,361
Adjective7	179	1,00	7,00	4,0670	1,15922	-,373	,182	1,225	,361
Adjective8	179	1,00	7,00	3,8268	1,22160	-,430	,182	,506	,361
Adjective9	179	1,00	7,00	4,0112	1,53238	-,426	,182	-,512	,361
Adjective10	179	1,00	7,00	4,3296	1,23059	-,195	,182	,819	,361
Valid N (listwise)	179								

Table 4.4.1 Descriptive statistics Kurtosis and Skewness for the across-brand analysis

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ProgramLiking1_Oreo	89	1,00	7,00	4,9663	1,54073	-,457	,255	-,341	,506
ProgramLiking2_Oreo	89	2,00	7,00	4,6854	1,44282	-,102	,255	-,575	,506
ProgramLiking3_Oreo	89	1,00	7,00	4,1573	1,73794	,125	,255	-,959	,506
ProgramLiking4_Oreo	89	1,00	7,00	3,2022	1,58243	,415	,255	-,367	,506
ProgramLiking5_Oreo	89	1,00	7,00	4,1011	1,42259	,109	,255	-,642	,506
Evaluation_Oreo	89	1,00	5,00	4,0000	,95346	-,966	,255	,899	,506
Rank_Oreo	89	1,00	3,00	1,5506	,67439	,835	,255	-,430	,506
IntentionUse1_Oreo	89	1,00	7,00	2,4270	1,49915	,827	,255	-,202	,506
IntentionUse2_Oreo	89	1,00	7,00	2,5955	1,59345	,779	,255	-,186	,506
Characteristic1_Oreo	89	2,00	7,00	5,3483	1,21638	-,432	,255	-,137	,506
Characteristic2_Oreo	89	1,00	5,00	1,7978	,90679	1,070	,255	,883	,506
Characteristic3_Oreo	89	1,00	7,00	4,8539	1,36973	-,273	,255	-,152	,506
Characteristic4_Oreo	89	2,00	7,00	5,0787	1,19872	-,114	,255	-,586	,506
Characteristic5_Oreo	89	1,00	7,00	3,9438	1,47216	,012	,255	-,504	,506
Characteristic6_Oreo	89	1,00	7,00	4,6854	1,39476	-,341	,255	-,015	,506
Characteristic7_Oreo	89	1,00	7,00	4,3034	1,40942	-,085	,255	-,359	,506
Characteristic8_Oreo	89	1,00	7,00	3,8764	1,55081	,005	,255	-,349	,506
Valid N (listwise)	89								

*Table 4.4.2 Descriptive statistics Kurtosis and Skewness for the within-brand analysis of Oreo Cookies*

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ProgramLiking1_Bing	90	1,00	7,00	3,2556	1,64598	,553	,254	-,325	,503
ProgramLiking2_Bing	90	1,00	7,00	3,7556	1,52368	,406	,254	-,678	,503
ProgramLiking3_Bing	90	1,00	7,00	3,0000	1,52138	,529	,254	-,569	,503
ProgramLiking4_Bing	90	1,00	6,00	2,4111	1,41337	,771	,254	-,289	,503
ProgramLiking5_Bing	90	1,00	7,00	2,9333	1,68136	,731	,254	-,358	,503
Evaluation_Bing	90	1,00	5,00	2,4889	,97433	-,154	,254	-,650	,503
Rank_Bing	90	2,00	3,00	2,5667	,49831	-,274	,254	-1,969	,503
IntentionUse1_Bing	90	1,00	7,00	1,4444	1,02892	3,191	,254	11,686	,503
IntentionUse2_Bing	90	1,00	7,00	1,2778	,99468	4,737	,254	24,142	,503
Characteristic1_Bing	90	1,00	7,00	3,7667	1,42253	,208	,254	,332	,503
Characteristic2_Bing	90	1,00	7,00	3,8222	1,38676	-,165	,254	-,041	,503
Characteristic3_Bing	90	1,00	7,00	3,7889	1,53238	,096	,254	-,195	,503
Characteristic4_Bing	90	1,00	7,00	3,6778	1,41284	-,017	,254	,184	,503
Characteristic5_Bing	90	1,00	7,00	3,6778	1,39685	-,009	,254	,303	,503
Characteristic6_Bing	90	1,00	7,00	3,5556	1,29051	-,206	,254	,079	,503
Characteristic7_Bing	90	1,00	6,00	3,5333	1,29128	-,283	,254	-,343	,503
Characteristic8_Bing	90	1,00	6,00	3,5000	1,39219	-,166	,254	-,581	,503
Valid N (listwise)	90								

Table 4.4.3 Descriptive statistics Kurtosis and Skewness for the within-brand analysis Bing

IntentionUse1_Bing					
	Frequency	Percent	Valid Percent	Cumulative Percent	
	1,00	68	37,8	75,6	75,6
	2,00	14	7,8	15,6	91,1
	3,00	3	1,7	3,3	94,4
Valid	4,00	2	1,1	2,2	96,7
	5,00	2	1,1	2,2	98,9
	7,00	1	,6	1,1	100,0
	Total	90	50,0	100,0	
Missing	System	90	50,0		
Total		180	100,0		

Table 4.4.4 Descriptive statistics Intention to use 1 Bing

		<b>IntentionUse2_Bing</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	79	43,9	87,8	87,8
	2,00	6	3,3	6,7	94,4
	3,00	2	1,1	2,2	96,7
	4,00	1	,6	1,1	97,8
	7,00	2	1,1	2,2	100,0
	Total	90	50,0	100,0	
Missing	System	90	50,0		
Total		180	100,0		

*Table 4.4.5 Descriptive statistics Intention to use 2 Bing*

		<b>PreviousUse_Bing</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	8	4,4	8,9	8,9
	2,00	79	43,9	87,8	96,7
	3,00	3	1,7	3,3	100,0
	Total	90	50,0	100,0	
Missing	System	90	50,0		
Total		180	100,0		

*Table 4.4.6 Descriptive statistics Previous use Bing*

		<b>PreviousUse_Google</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	90	50,0	100,0	100,0
Missing	System	90	50,0		
Total		180	100,0		

*Table 4.4.7 Descriptive statistics Previous use Google*

		IntentionUse1			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	102	56,7	57,0	57,0
	2,00	33	18,3	18,4	75,4
	3,00	17	9,4	9,5	84,9
	4,00	13	7,2	7,3	92,2
	5,00	11	6,1	6,1	98,3
	6,00	1	,6	,6	98,9
	7,00	2	1,1	1,1	100,0
	Total	179	99,4	100,0	
Missing	System	1	,6		
Total		180	100,0		

*Table 4.4.8 Descriptive statistics Intention to use 2 for the across-brands analysis*

		IntentionUse2			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	110	61,1	61,5	61,5
	2,00	24	13,3	13,4	74,9
	3,00	16	8,9	8,9	83,8
	4,00	15	8,3	8,4	92,2
	5,00	8	4,4	4,5	96,6
	6,00	2	1,1	1,1	97,8
	7,00	4	2,2	2,2	100,0
	Total	179	99,4	100,0	
Missing	System	1	,6		
Total		180	100,0		

*Table 4.4.9 Descriptive statistics Intention to Use 2 Oreo Cookies and Bing combined*

		PreviousUse			
		Frequency	Percent	Valid Percent	Cumulative Percent
	1,00	16	8,9	8,9	8,9
Valid	2,00	157	87,2	87,7	96,6
	3,00	6	3,3	3,4	100,0
	Total	179	99,4	100,0	
Missing	System	1	,6		
Total		180	100,0		

*Table 4.4.10 Descriptive statistics Previous use for the across-brands analysis*

## 5. Factor Analysis

### 5.1 Across-brands analysis

Correlation Matrix

	ProgramLiking1	ProgramLiking2	ProgramLiking3	ProgramLiking4	ProgramLiking5	Adjective1	Adjective3	Adjective6	Adjective7	Adjective8	Adjective9	Adjective10
ProgramLiking1	1,000	,805	,799	,630	,667	,316	,257	,167	,099	,143	,320	,282
ProgramLiking2	,805	1,000	,732	,640	,757	,181	,147	,150	,089	,153	,252	,221
ProgramLiking3	,799	,732	1,000	,721	,656	,177	,170	,111	,048	,101	,218	,156
ProgramLiking4	,630	,640	,721	1,000	,715	,121	,098	,019	,064	,062	,198	,146
ProgramLiking5	,667	,757	,656	,715	1,000	,217	,162	,111	,116	,138	,302	,244
Adjective1	,316	,181	,177	,121	,217	1,000	,810	,668	,621	,612	,760	,741
Adjective3	,257	,147	,170	,098	,162	,810	1,000	,682	,635	,637	,709	,732
Adjective6	,167	,150	,111	,019	,111	,668	,682	1,000	,652	,765	,640	,659
Adjective7	,099	,089	,048	,064	,116	,621	,635	,652	1,000	,671	,563	,599
Adjective8	,143	,153	,101	,062	,138	,612	,637	,765	,671	1,000	,610	,644
Adjective9	,320	,252	,218	,198	,302	,760	,709	,640	,563	,610	1,000	,722
Adjective10	,282	,221	,156	,146	,244	,741	,732	,659	,599	,644	,722	1,000

Table 5.1.1 Correlation matrix across-brands analysis

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,891
Approx. Chi-Square	1718,776
Bartlett's Test of Sphericity df	66
Sig.	,000

Table 5.1.2 KMO and Bartlett's Test across-brands analysis

**Communalities**

	Initial	Extraction
ProgramLiking1	1,000	,802
ProgramLiking2	1,000	,802
ProgramLiking3	1,000	,794
ProgramLiking4	1,000	,714
ProgramLiking5	1,000	,747
Adjective1	1,000	,776
Adjective3	1,000	,772
Adjective6	1,000	,735
Adjective7	1,000	,641
Adjective8	1,000	,693
Adjective9	1,000	,723
Adjective10	1,000	,741

Extraction Method: Principal Component Analysis.

Table 5.1.3 Communalities across-brands analysis

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,609	46,740	46,740	5,609	46,740	46,740
2	3,332	27,763	74,503	3,332	27,763	74,503
3	,593	4,939	79,443			
4	,474	3,947	83,390			
5	,399	3,325	86,715			
6	,346	2,886	89,601			
7	,280	2,335	91,937			
8	,252	2,102	94,038			
9	,222	1,848	95,887			
10	,186	1,550	97,437			
11	,177	1,471	98,908			
12	,131	1,092	100,000			

Extraction Method: Principal Component Analysis.

Table 5.1.4 Total variance explained across-brands analysis

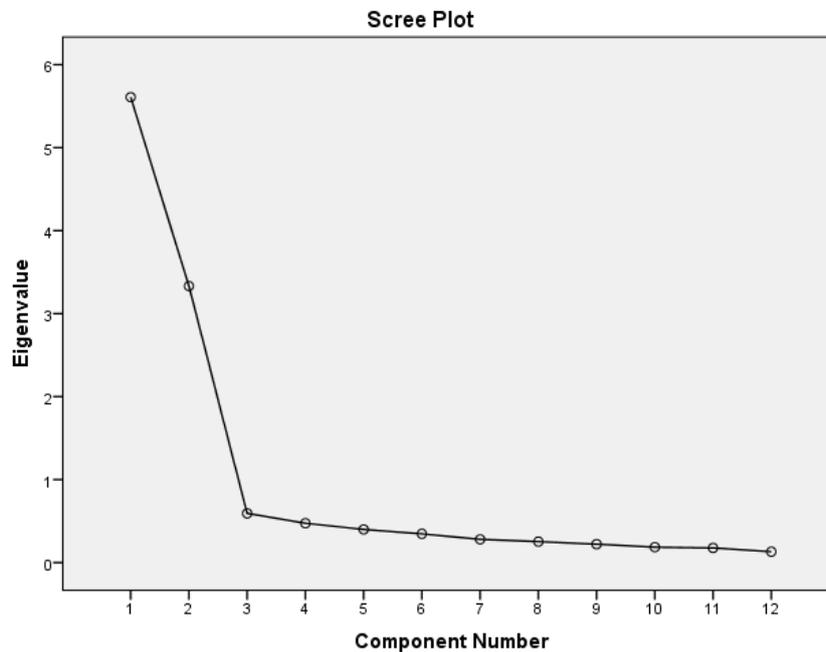


Figure 5.1.1 Scree plot across-brands analysis

Component Matrix<sup>a</sup>

	Component	
	1	2
ProgramLiking1	,591	,673
ProgramLiking2	,536	,718
ProgramLiking3	,501	,737
ProgramLiking4	,439	,722
ProgramLiking5	,534	,679
Adjective1	,825	-,311
Adjective3	,805	-,352
Adjective6	,754	-,408
Adjective7	,689	-,408
Adjective8	,737	-,387
Adjective9	,821	-,222
Adjective10	,810	-,290

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

*Table 5.1.5 Component matrix across-brand analysis*

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5,609	46,740	46,740	5,609	46,740	46,740	5,228
2	3,332	27,763	74,503	3,332	27,763	74,503	4,121
3	,593	4,939	79,443				
4	,474	3,947	83,390				
5	,399	3,325	86,715				
6	,346	2,886	89,601				
7	,280	2,335	91,937				
8	,252	2,102	94,038				
9	,222	1,848	95,887				
10	,186	1,550	97,437				
11	,177	1,471	98,908				
12	,131	1,092	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

*Table 5.1.6 Component matrix with rotated solution across-brands analysis*

**Pattern Matrix<sup>a</sup>**

	Component	
	1	2
ProgramLiking1		,875
ProgramLiking2		,893
ProgramLiking3		,897
ProgramLiking4		,857
ProgramLiking5		,857
Adjective1	,868	
Adjective3	,877	
Adjective6	,868	
Adjective7	,815	
Adjective8	,842	
Adjective9	,812	
Adjective10	,844	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 3 iterations.

*Table 5.1.7 Pattern matrix across-brands analysis*

**Structure Matrix**

	Component	
	1	2
ProgramLiking1		,892
ProgramLiking2		,895
ProgramLiking3		,891
ProgramLiking4		,842
ProgramLiking5		,864
Adjective1	,879	
Adjective3	,879	
Adjective6	,855	
Adjective7	,796	
Adjective8	,831	
Adjective9	,840	
Adjective10	,858	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

*Table 5.1.8 Structure matrix across-brands analysis*

**Component Correlation Matrix**

Component	1	2
1	1,000	,206
2	,206	1,000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

*Table 5.1.9 Structure matrix across-brands analysis*

## 5.2 Within-brand analysis Oreo Cookies

Correlation Matrix													
	ProgramLiking1_Oreo	ProgramLiking2_Oreo	ProgramLiking3_Oreo	ProgramLiking4_Oreo	ProgramLiking5_Oreo	IntentionUse1_Oreo	IntentionUse2_Oreo	Characteristic1_Oreo	Characteristic3_Oreo	Characteristic4_Oreo	Characteristic5_Oreo	Characteristic6_Oreo	Characteristic7_Oreo
ProgramLiking1_Oreo	1,000	,757	,736	,525	,494	-,028	-,084	-,018	-,013	,063	-,016	,016	-,006
ProgramLiking2_Oreo	,757	1,000	,668	,536	,669	-,105	-,100	-,073	-,041	,054	,056	-,044	-,008
ProgramLiking3_Oreo	,736	,668	1,000	,666	,550	,026	-,051	-,150	-,129	-,033	,017	-,012	,008
ProgramLiking4_Oreo	,525	,536	,666	1,000	,632	-,032	-,093	-,244	-,185	-,122	,029	-,084	-,063
ProgramLiking5_Oreo	,494	,669	,550	,632	1,000	-,090	-,167	-,093	-,021	,029	,117	,125	-,004
IntentionUse1_Oreo	-,028	-,105	,026	-,032	-,090	1,000	,668	,510	,385	,329	,047	,266	,363
IntentionUse2_Oreo	-,084	-,100	-,051	-,093	-,167	,668	1,000	,378	,295	,195	-,092	,182	,268
Characteristic1_Oreo	-,018	-,073	-,150	-,244	-,093	,510	,378	1,000	,740	,659	,297	,487	,514
Characteristic3_Oreo	-,013	-,041	-,129	-,185	-,021	,385	,295	,740	1,000	,713	,385	,511	,482
Characteristic4_Oreo	,063	,054	-,033	-,122	,029	,329	,195	,659	,713	1,000	,376	,545	,369
Characteristic5_Oreo	-,016	,056	,017	,029	,117	,047	-,092	,297	,385	,376	1,000	,357	,326
Characteristic6_Oreo	,016	-,044	-,012	-,084	,125	,266	,182	,487	,511	,545	,357	1,000	,569
Characteristic7_Oreo	-,006	-,008	,008	-,063	-,004	,363	,268	,514	,482	,369	,326	,569	1,000

Table 5.2.1 Correlation matrix Oreo Cookies

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,771
Approx. Chi-Square	605,624
Bartlett's Test of Sphericity df	78
Sig.	,000

Table 5.2.2 KMO and Bartlett's Test Oreo Cookies

### Communalities

	Initial	Extraction
ProgramLiking1_Oreo	1,000	,717
ProgramLiking2_Oreo	1,000	,758
ProgramLiking3_Oreo	1,000	,776
ProgramLiking4_Oreo	1,000	,657
ProgramLiking5_Oreo	1,000	,660
IntentionUse1_Oreo	1,000	,781
IntentionUse2_Oreo	1,000	,797
Characteristic1_Oreo	1,000	,744
Characteristic3_Oreo	1,000	,736
Characteristic4_Oreo	1,000	,670
Characteristic5_Oreo	1,000	,555
Characteristic6_Oreo	1,000	,585
Characteristic7_Oreo	1,000	,499

Extraction Method: Principal Component Analysis.

Table 5.2.3 Communalities Oreo Cookies

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,060	31,231	31,231	4,060	31,231	31,231
2	3,408	26,217	57,448	3,408	26,217	57,448
3	1,467	11,283	68,731	1,467	11,283	68,731
4	,812	6,244	74,975			
5	,657	5,057	80,032			
6	,571	4,393	84,424			
7	,443	3,411	87,835			
8	,407	3,127	90,962			
9	,321	2,468	93,430			
10	,271	2,085	95,515			
11	,231	1,777	97,292			
12	,210	1,616	98,908			
13	,142	1,092	100,000			

Extraction Method: Principal Component Analysis.

Table 5.2.4 Total variance explained Oreo Cookies

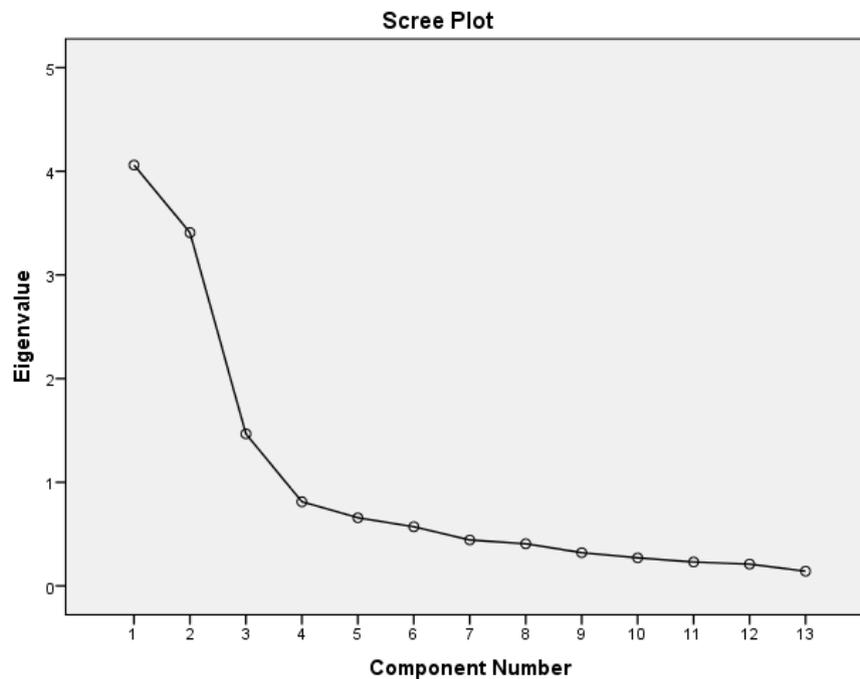


Figure 5.2.1 Scree plot Oreo Cookies

**Component Matrix<sup>a</sup>**

	Component		
	1	2	3
ProgramLiking1_Oreo	-,349	,764	,103
ProgramLiking2_Oreo	-,395	,776	,008
ProgramLiking3_Oreo	-,419	,755	,175
ProgramLiking4_Oreo	-,480	,643	,116
ProgramLiking5_Oreo	-,346	,725	-,124
IntentionUse1_Oreo	,579	,209	,635
IntentionUse2_Oreo	,491	,074	,742
Characteristic1_Oreo	,817	,274	,036
Characteristic3_Oreo	,784	,321	-,133
Characteristic4_Oreo	,691	,388	-,205
Characteristic5_Oreo	,371	,307	-,569
Characteristic6_Oreo	,628	,366	-,240
Characteristic7_Oreo	,623	,330	-,044

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

**Table 5.2.5 Component matrix Oreo Cookies****Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4,060	31,231	31,231	4,060	31,231	31,231	3,690
2	3,408	26,217	57,448	3,408	26,217	57,448	3,550
3	1,467	11,283	68,731	1,467	11,283	68,731	2,122
4	,812	6,244	74,975				
5	,657	5,057	80,032				
6	,571	4,393	84,424				
7	,443	3,411	87,835				
8	,407	3,127	90,962				
9	,321	2,468	93,430				
10	,271	2,085	95,515				
11	,231	1,777	97,292				
12	,210	1,616	98,908				
13	,142	1,092	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Table 5.2.6 Total variance explained with rotation Oreo Cookies**

**Pattern Matrix<sup>a</sup>**

	Component		
	1	2	3
ProgramLiking1_Oreo		,851	
ProgramLiking2_Oreo		,866	
ProgramLiking3_Oreo		,883	
ProgramLiking4_Oreo		,800	
ProgramLiking5_Oreo		,779	
IntentionUse1_Oreo			,813
IntentionUse2_Oreo			,878
Characteristic1_Oreo	,736		
Characteristic3_Oreo	,815		
Characteristic4_Oreo	,809		
Characteristic5_Oreo	,703		
Characteristic6_Oreo	,767		
Characteristic7_Oreo	,652		

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

a. Rotation converged in 6 iterations.

*Table 5.2.7 Pattern matrix  
Oreo Cookies*

**Structure Matrix**

	Component		
	1	2	3
ProgramLiking1_Oreo		,843	
ProgramLiking2_Oreo		,869	
ProgramLiking3_Oreo		,873	
ProgramLiking4_Oreo		,800	
ProgramLiking5_Oreo		,793	
IntentionUse1_Oreo			,854
IntentionUse2_Oreo			,891
Characteristic1_Oreo	,799		
Characteristic3_Oreo	,843		
Characteristic4_Oreo	,817		
Characteristic5_Oreo	,622		
Characteristic6_Oreo	,765		
Characteristic7_Oreo	,685		

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

*Table 5.2.8 Structure matrix  
Oreo Cookies*

**Component Correlation Matrix**

Component	1	2	3
1	1,000	-,025	,195
2	-,025	1,000	-,108
3	,195	-,108	1,000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

*Table 5.2.9 Component correlation matrix Oreo Cookies*

## 5.3 Within-brand analysis Bing

Correlation Matrix													
	ProgramLiking1_Bing	ProgramLiking2_Bing	ProgramLiking3_Bing	ProgramLiking4_Bing	ProgramLiking5_Bing	Characteristic1_Bing	Characteristic2_Bing	Characteristic3_Bing	Characteristic4_Bing	Characteristic5_Bing	Characteristic6_Bing	Characteristic7_Bing	Characteristic8_Bing
ProgramLiking1_Bing	1,000	,818	,817	,679	,696	,045	-,029	-,014	-,008	-,013	,043	-,012	-,017
ProgramLiking2_Bing	,818	1,000	,746	,694	,779	,098	,054	,050	,031	,015	,076	,004	,042
ProgramLiking3_Bing	,817	,746	1,000	,737	,681	-,083	-,085	-,101	-,089	-,116	-,011	-,029	-,021
ProgramLiking4_Bing	,679	,694	,737	1,000	,759	,020	-,031	,009	,000	-,046	,077	,045	,071
ProgramLiking5_Bing	,696	,779	,681	,759	1,000	,026	,024	,064	,010	-,028	,110	,063	,062
Characteristic1_Bing	,045	,098	-,083	,020	,026	1,000	,765	,761	,840	,883	,720	,692	,752
Characteristic2_Bing	-,029	,054	-,085	-,031	,024	,765	1,000	,786	,739	,811	,828	,806	,768
Characteristic3_Bing	-,014	,050	-,101	,009	,064	,761	,786	1,000	,819	,823	,747	,728	,793
Characteristic4_Bing	-,008	,031	-,089	,000	,010	,840	,739	,819	1,000	,920	,814	,816	,814
Characteristic5_Bing	-,013	,015	-,116	-,046	-,028	,883	,811	,823	,920	1,000	,799	,800	,794
Characteristic6_Bing	,043	,076	-,011	,077	,110	,720	,828	,747	,814	,799	1,000	,892	,819
Characteristic7_Bing	-,012	,004	-,029	,045	,063	,692	,806	,728	,816	,800	,892	1,000	,888
Characteristic8_Bing	-,017	,042	-,021	,071	,062	,752	,768	,793	,814	,794	,819	,888	1,000

Table 5.3.1 Correlation matrix Bing

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,871
Approx. Chi-Square	1328,990
Bartlett's Test of Sphericity df	78
Sig.	,000

Table 5.3.2 KMO and Bartlett's Test Bing

### Communalities

	Initial	Extraction
ProgramLiking1_Bing	1,000	,813
ProgramLiking2_Bing	1,000	,825
ProgramLiking3_Bing	1,000	,809
ProgramLiking4_Bing	1,000	,753
ProgramLiking5_Bing	1,000	,774
Characteristic1_Bing	1,000	,778
Characteristic2_Bing	1,000	,800
Characteristic3_Bing	1,000	,789
Characteristic4_Bing	1,000	,867
Characteristic5_Bing	1,000	,887
Characteristic6_Bing	1,000	,833
Characteristic7_Bing	1,000	,830
Characteristic8_Bing	1,000	,831

Extraction Method: Principal Component Analysis.

Table 5.3.3 Communalities Bing

## Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,619	50,915	50,915	6,619	50,915	50,915
2	3,971	30,543	81,458	3,971	30,543	81,458
3	,517	3,977	85,434			
4	,388	2,984	88,419			
5	,338	2,597	91,015			
6	,238	1,834	92,850			
7	,234	1,802	94,652			
8	,187	1,437	96,089			
9	,153	1,175	97,264			
10	,140	1,077	98,341			
11	,102	,788	99,129			
12	,058	,442	99,571			
13	,056	,429	100,000			

Extraction Method: Principal Component Analysis.

Table 5.3.4 Total variance explained Bing

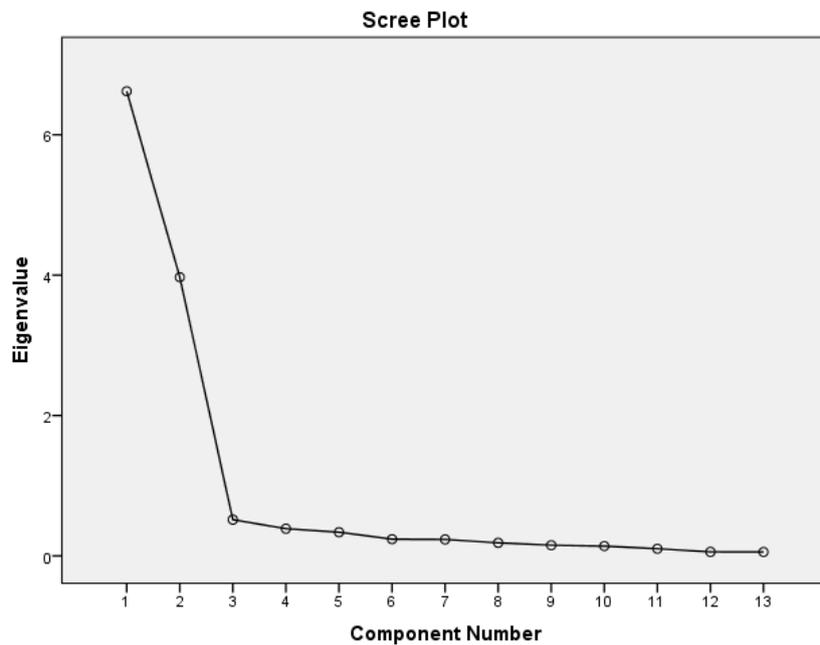


Figure 5.3.1 Scree plot Bing

**Component Matrix<sup>a</sup>**

	Component	
	1	2
ProgramLiking1_Bing	,010	,902
ProgramLiking2_Bing	,064	,906
ProgramLiking3_Bing	-,065	,897
ProgramLiking4_Bing	,032	,867
ProgramLiking5_Bing	,060	,878
Characteristic1_Bing	,882	,002
Characteristic2_Bing	,894	-,036
Characteristic3_Bing	,888	-,020
Characteristic4_Bing	,931	-,035
Characteristic5_Bing	,939	-,066
Characteristic6_Bing	,912	,049
Characteristic7_Bing	,911	-,003
Characteristic8_Bing	,912	,012

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**Table 5.3.5 Component matrix Bing****Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,619	50,915	50,915	6,619	50,915	50,915	6,618
2	3,971	30,543	81,458	3,971	30,543	81,458	3,972
3	,517	3,977	85,434				
4	,388	2,984	88,419				
5	,338	2,597	91,015				
6	,238	1,834	92,850				
7	,234	1,802	94,652				
8	,187	1,437	96,089				
9	,153	1,175	97,264				
10	,140	1,077	98,341				
11	,102	,788	99,129				
12	,058	,442	99,571				
13	,056	,429	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Table 5.3.6 Total variance explained rotated version Bing**

**Pattern Matrix<sup>a</sup>**

	Component	
	1	2
ProgramLiking1_Bing		,902
ProgramLiking2_Bing		,907
ProgramLiking3_Bing		,896
ProgramLiking4_Bing		,868
ProgramLiking5_Bing		,879
Characteristic1_Bing	,882	
Characteristic2_Bing	,894	
Characteristic3_Bing	,888	
Characteristic4_Bing	,931	
Characteristic5_Bing	,941	
Characteristic6_Bing	,910	
Characteristic7_Bing	,911	
Characteristic8_Bing	,911	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

a. Rotation converged in 2 iterations.

*Table 5.3.7 Pattern matrix Bing*

**Structure Matrix**

	Component	
	1	2
ProgramLiking1_Bing		,902
ProgramLiking2_Bing		,907
ProgramLiking3_Bing		,895
ProgramLiking4_Bing		,868
ProgramLiking5_Bing		,879
Characteristic1_Bing	,882	
Characteristic2_Bing	,894	
Characteristic3_Bing	,888	
Characteristic4_Bing	,931	
Characteristic5_Bing	,940	
Characteristic6_Bing	,911	
Characteristic7_Bing	,911	
Characteristic8_Bing	,911	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

*Table 5.3.8 Structure matrix Bing*

**Component Correlation Matrix**

Component	1	2
1	1,000	,010
2	,010	1,000

Extraction Method: Principal

Component Analysis.

Rotation Method: Oblimin with Kaiser

Normalization.

*Table 5.3.9 Component correlation matrix Bing*

## 6. Reliability Analysis

### 6.1 Across-brands analysis

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,891	,892	5

*Table 6.1.1 Cronbach's Alpha ProgramLiking*

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,933	,935	7

*Table 6.1.2 Cronbach's Alpha Attitude*

### 6.2 Oreo Cookies

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,891	,892	5

*Table 6.2.1 Cronbach's Alpha ProgramLiking\_Oreo*

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,800	,801	2

*Table 6.2.2 Cronbach's Alpha IntentionUse\_Oreo*

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,846	,852	6

*Table 6.2.3 Cronbach's Alpha Attitude\_Oreo*

## 6.3 Bing

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,934	,935	5

*Table 6.3.1 Cronbach's Alpha ProgramLiking\_Bing*

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,969	,970	8

*Table 6.3.2 Cronbach's Alpha Attitude\_Bing*

## 7. Normal Distribution

### 7.1 Across-brands analysis

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Attitude	179	1,00	7,00	4,1708	1,13794	-,502	,182	,464	,361
Evaluation	179	1,00	5,00	3,2402	1,22399	-,284	,182	-,731	,361
Rank	179	1,00	3,00	2,0615	,78010	-,108	,182	-1,345	,361
ProgramLiking	179	1,00	7,00	3,6436	1,45652	,232	,182	-,753	,361
Valid N (listwise)	179								

*Table 7.1.1 Kurtosis and Skewness across-brands analysis*

Tests of Normality							
	Research_Group	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Attitude	1,00	,098	19	,200 <sup>*</sup>	,981	19	,957
	2,00	,143	24	,200 <sup>*</sup>	,973	24	,740
	3,00	,151	22	,200 <sup>*</sup>	,956	22	,405
	4,00	,128	24	,200 <sup>*</sup>	,941	24	,167
	5,00	,217	21	,011	,847	21	,004
	6,00	,168	26	,056	,929	26	,073
	7,00	,146	20	,200 <sup>*</sup>	,915	20	,078
	8,00	,130	23	,200 <sup>*</sup>	,969	23	,657
Evaluation	1,00	,284	19	,000	,804	19	,001
	2,00	,246	24	,001	,809	24	,000
	3,00	,273	22	,000	,808	22	,001
	4,00	,313	24	,000	,830	24	,001
	5,00	,295	21	,000	,844	21	,003
	6,00	,212	26	,004	,861	26	,002
	7,00	,233	20	,006	,887	20	,024
	8,00	,366	23	,000	,764	23	,000
Rank	1,00	,383	19	,000	,690	19	,000
	2,00	,321	24	,000	,728	24	,000
	3,00	,335	22	,000	,742	22	,000
	4,00	,334	24	,000	,742	24	,000
	5,00	,348	21	,000	,640	21	,000
	6,00	,376	26	,000	,630	26	,000
	7,00	,361	20	,000	,637	20	,000
	8,00	,392	23	,000	,622	23	,000
ProgramLiking	1,00	,155	19	,200 <sup>*</sup>	,919	19	,107
	2,00	,158	24	,126	,940	24	,161
	3,00	,116	22	,200 <sup>*</sup>	,948	22	,293
	4,00	,134	24	,200 <sup>*</sup>	,954	24	,331
	5,00	,173	21	,102	,940	21	,218
	6,00	,226	26	,001	,896	26	,013
	7,00	,153	20	,200 <sup>*</sup>	,926	20	,127
	8,00	,119	23	,200 <sup>*</sup>	,944	23	,223

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 7.1.2 Kolmogorov-Smirnov and Shapiro-Wilk across-brands analysis

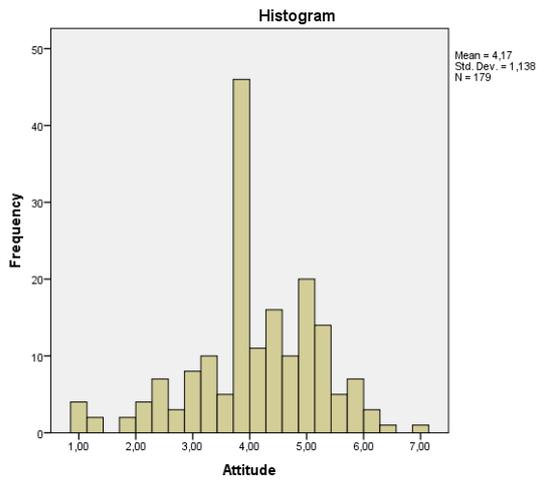


Figure 7.1.1 Histogram Attitude

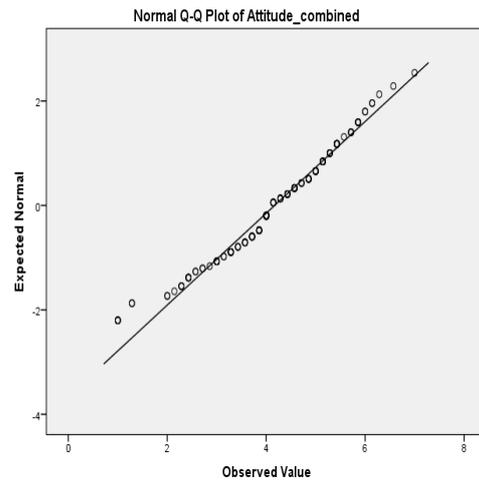


Figure 7.1.2 Normal Q-Q plot Attitude

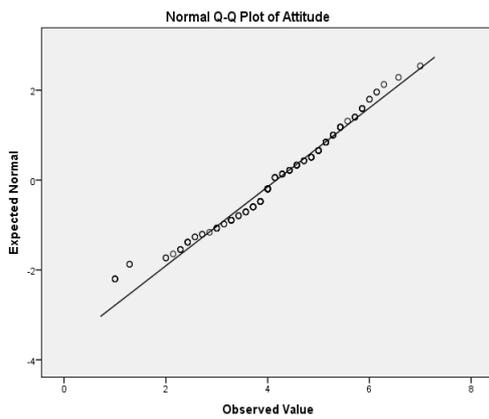


Figure 7.1.3 Detrended Q-Q plot Attitude

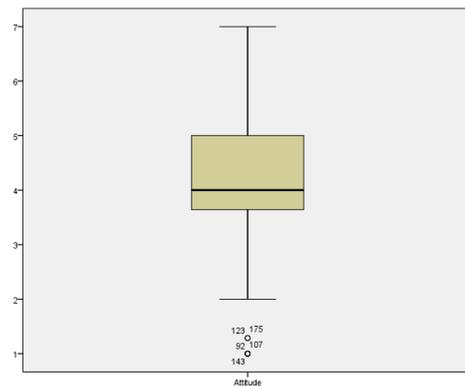


Figure 7.1.4 Box plot Attitude

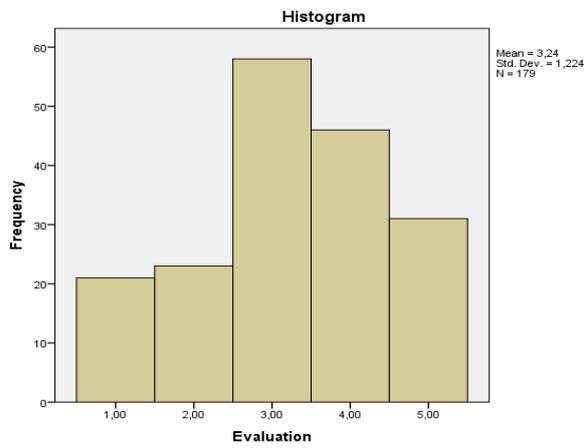


Figure 7.1.5 Histogram Evaluation

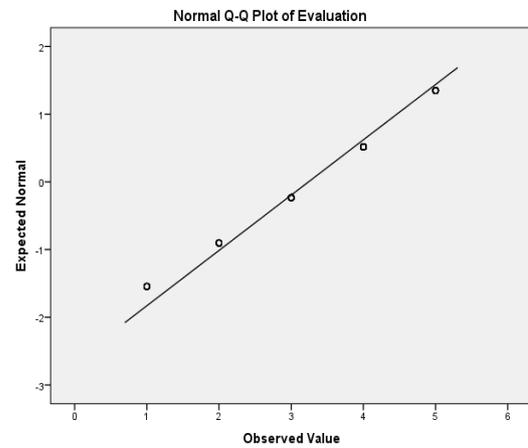


Figure 7.1.6 Normal Q-Q plot Evaluation

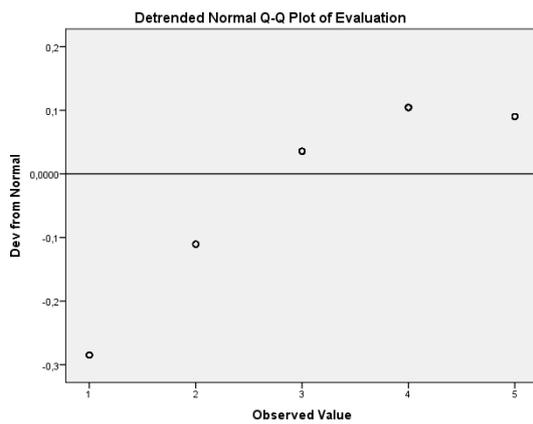


Figure 7.1.7 Detrended Q-Q plot Evaluation

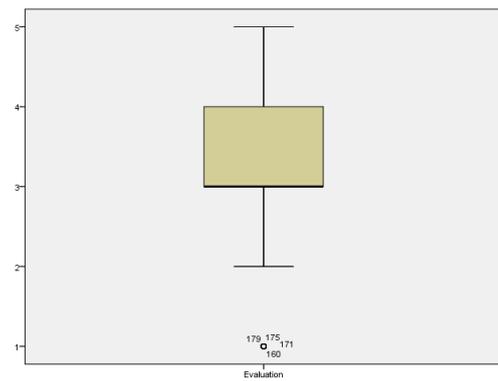


Figure 7.1.8 Box plot Evaluation

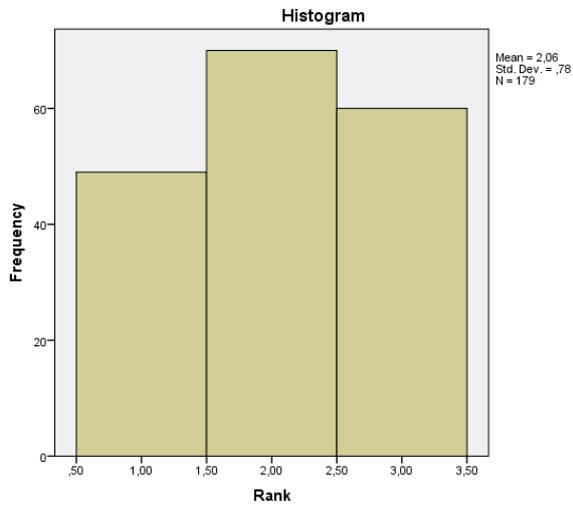


Figure 7.1.9 Histogram Rank

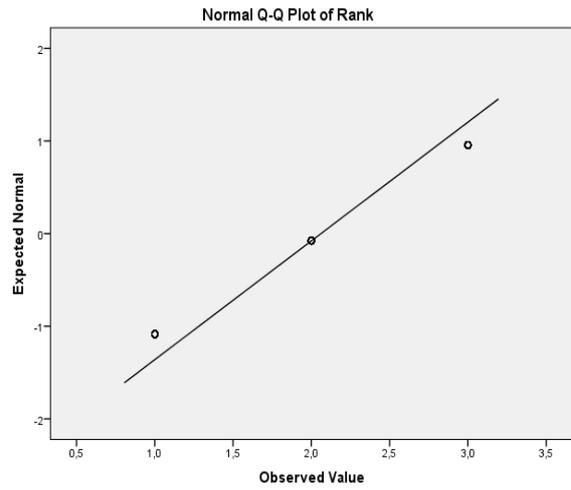


Figure 7.1.10 Normal Q-Q plot Rank

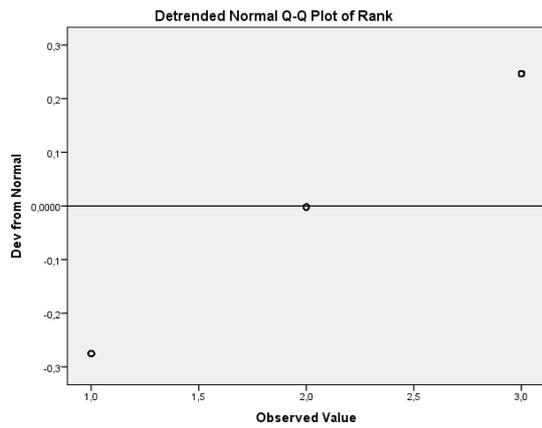


Figure 7.1.11 Detrended Q-Q plot Rank

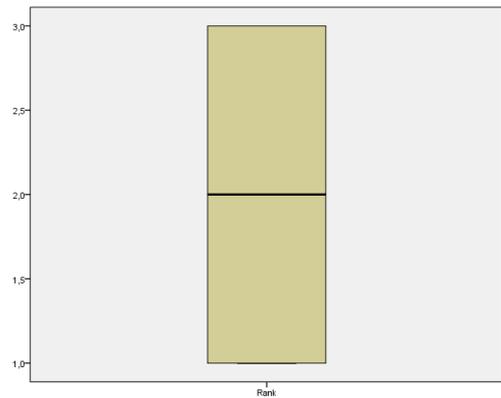


Figure 7.1.12 Boxplot Rank

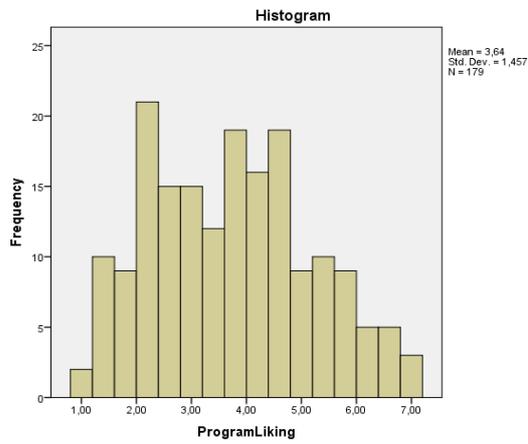


Figure 7.1.13 Histogram  
ProgramLiking

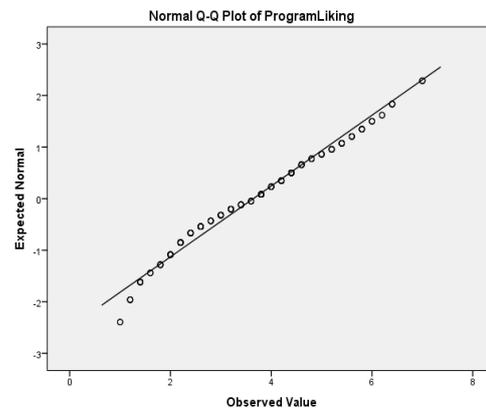


Figure 7.1.14 Normal Q-Q  
plot ProgramLiking

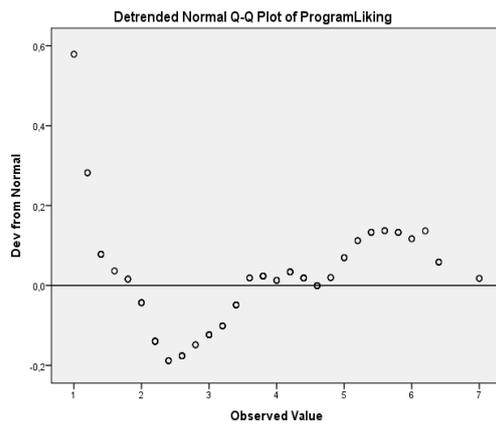


Figure 7.1.15 Detrended Q-Q  
plot ProgramLiking

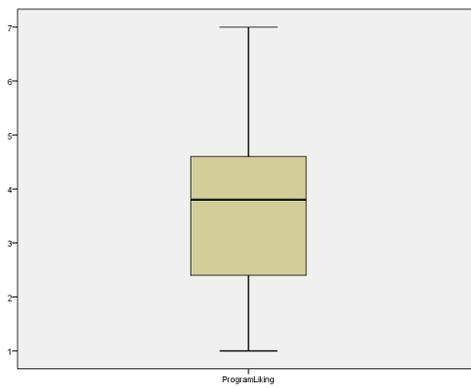


Figure 7.1.16 Boxplot  
ProgramLiking

## 7.2 Within-brand analysis Oreo Cookies

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Attitude Evaluation	89	2,43	7,00	4,7945	,85143	-1,60	,255	1,50	,506
Rank	89	1,00	3,00	1,5506	,67439	,835	,255	-,430	,506
Attitude_Oreo	89	2,33	7,00	4,7022	1,01269	-,100	,255	-,195	,506
IntentionUse_Oreo	89	1,00	7,00	2,5112	1,41216	,819	,255	,360	,506
ProgramLiking_Oreo	89	2,00	7,00	4,2225	1,29314	,202	,255	-,586	,506
Valid N (listwise)	89								

Table 7.2.1 Kurtosis and Skewness Oreo Cookies

Tests of Normality							
	Research_Group	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Attitude_Oreo	1,00	,169	19	,156	,955	19	,486
	2,00	,108	24	,200*	,979	24	,867
	3,00	,130	22	,200*	,969	22	,690
	4,00	,159	24	,119	,946	24	,223
IntentionUse_Oreo	1,00	,189	19	,072	,896	19	,041
	2,00	,194	24	,020	,892	24	,015
	3,00	,186	22	,047	,854	22	,004
	4,00	,214	24	,006	,850	24	,002

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 7.2.2 Kolmogorov-Smirnov and Shapiro-Wilk Oreo Cookies

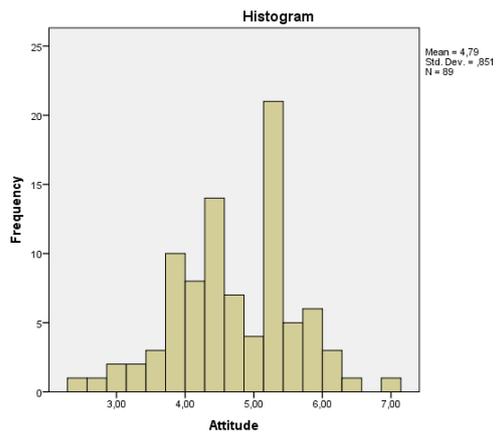


Figure 7.2.1 Histogram  
Attitude

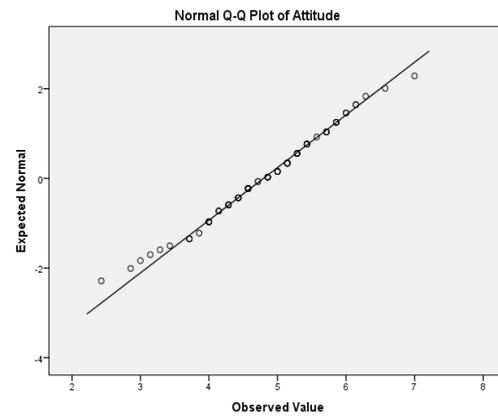


Figure 7.2.2 Normal Q-Q  
plot Attitude

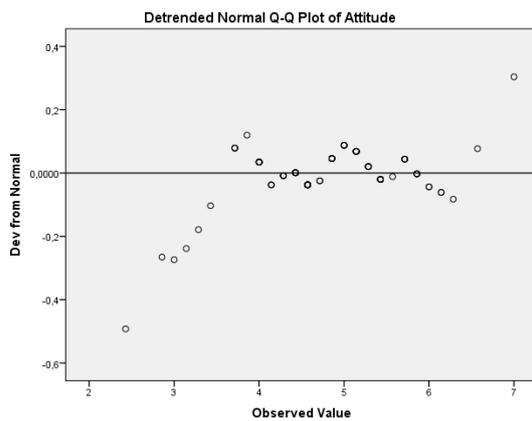


Figure 7.2.3 Detrended  
Q-Q plot Attitude

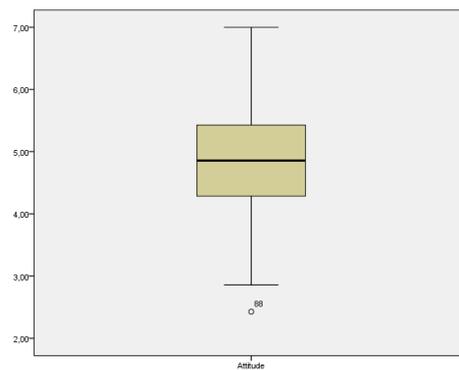


Figure 7.2.4 Boxplot  
Attitude

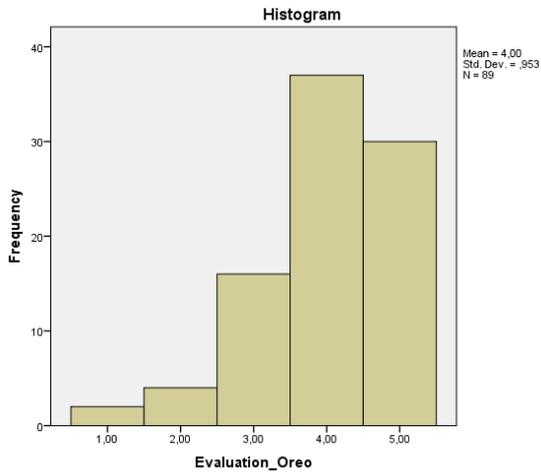


Figure 7.2.5: Histogram Evaluation Oreo Cookies

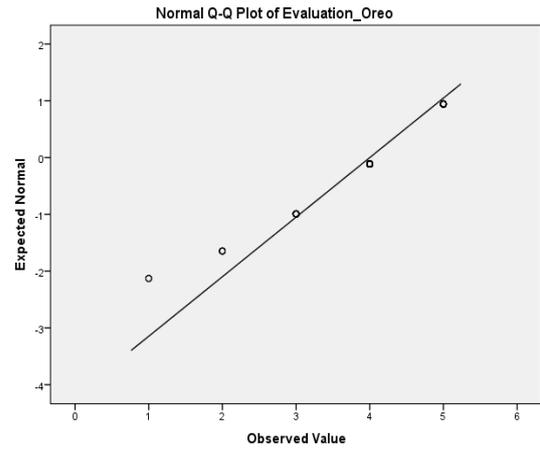


Figure 7.2.6: Normal Q-Q plot Evaluation Oreo Cookies

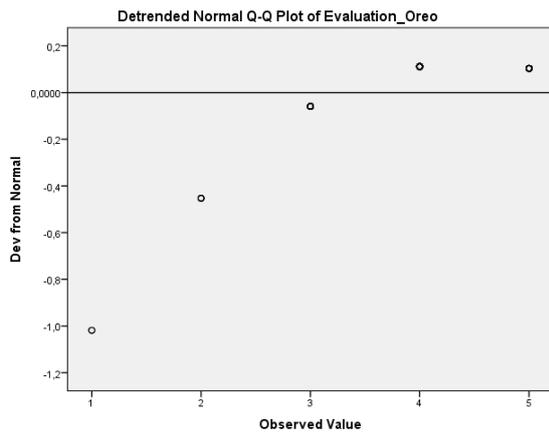


Figure 7.2.7 Detrended Q-Q plot Evaluation Oreo Cookies

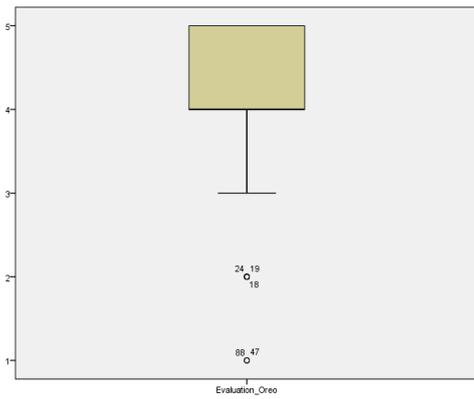


Figure 7.2.8 Box plot Evaluation Oreo Cookies

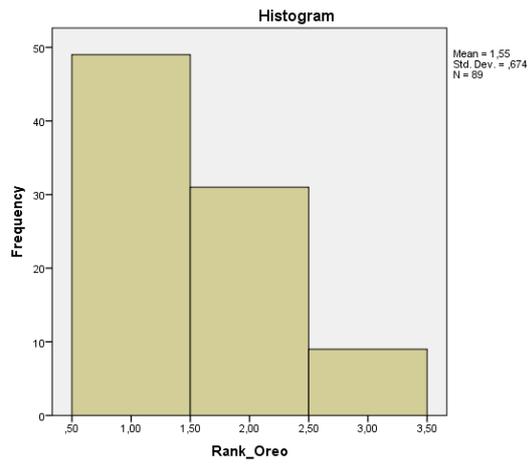


Figure 7.2.9: Histogram Rank Oreo Cookies

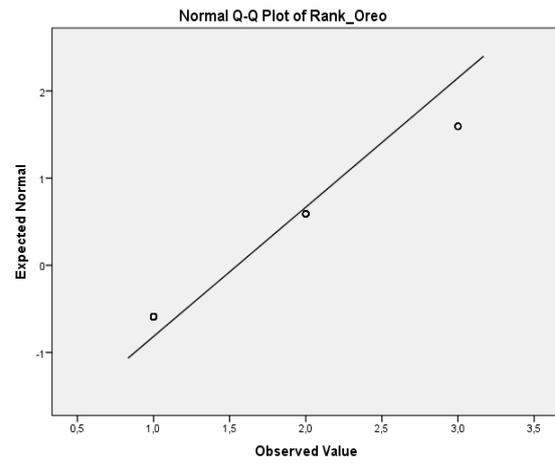


Figure 7.2.10: Normal Q-Q plot Rank Oreo Cookies

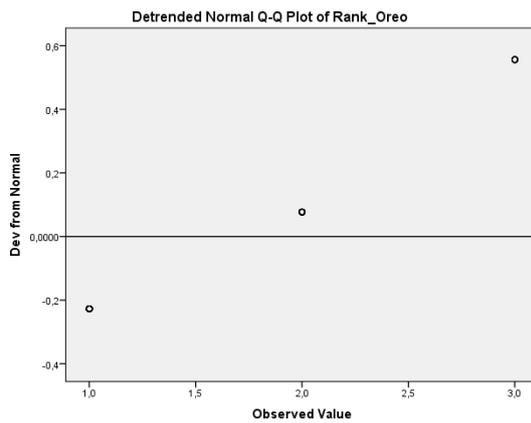


Figure 7.2.11: Detrended Q-Q plot Rank Oreo Cookies

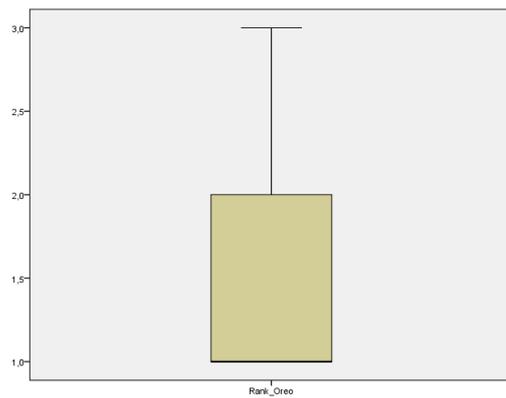


Figure 7.2.12: Boxplot Rank Oreo Cookies

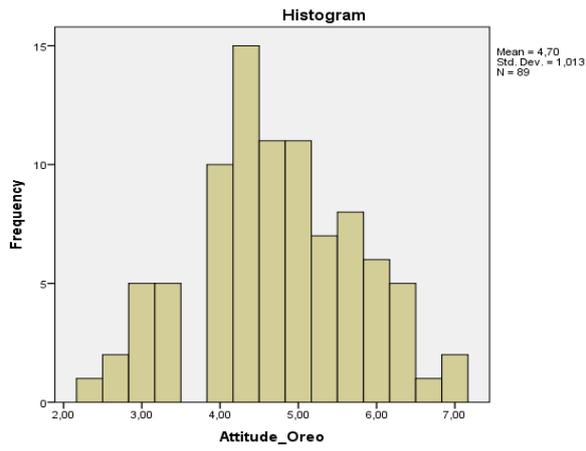


Figure 7.2.13 Histogram Attitude\_Oreo

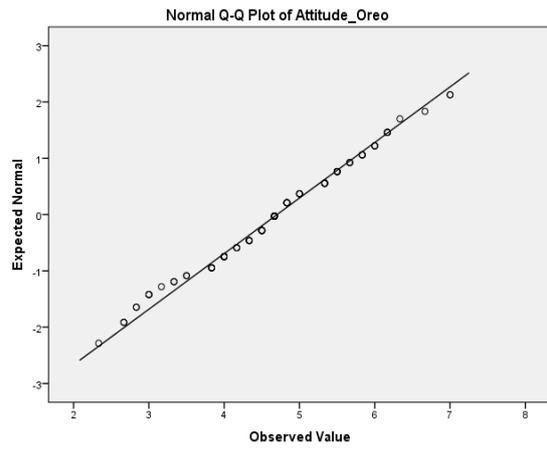


Figure 7.2.14 Normal Q-Q plot Attitude\_Oreo

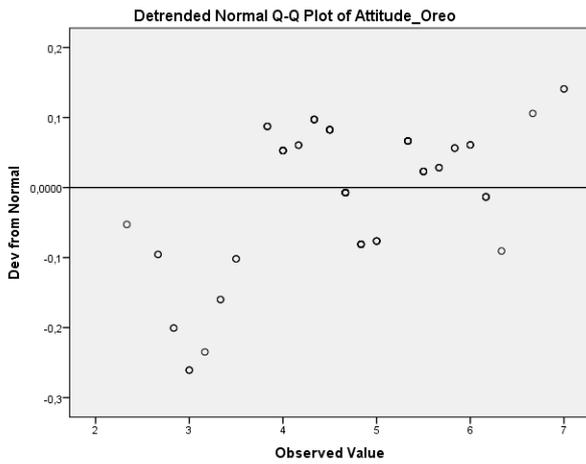


Figure 7.2.15 Detrended Q-Q plot Attitude\_Oreo

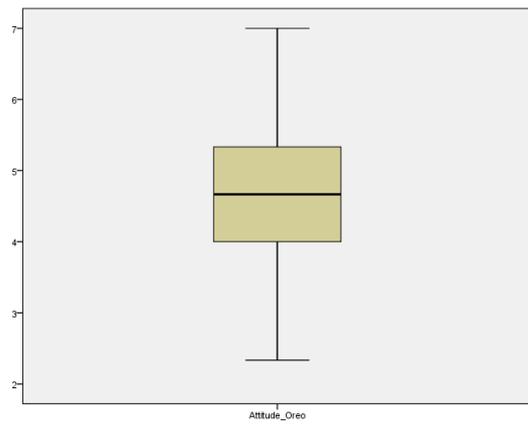


Figure 7.2.16 Boxplot Attitude\_Oreo

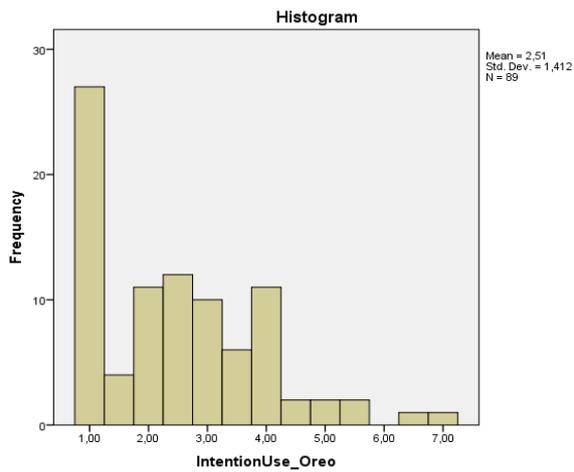


Figure 7.2.17 Histogram  
IntentionUse\_Oreo

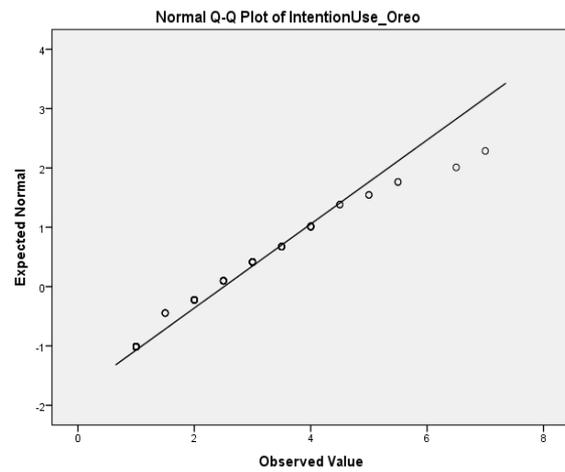


Figure 7.2.18 Normal  
Q-Q plot IntentionUse\_Oreo

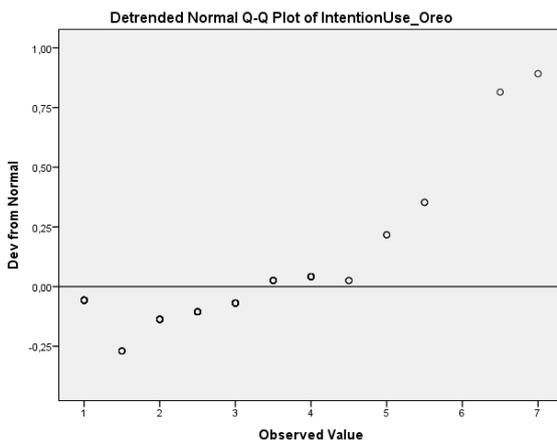


Figure 7.2.19 Detrended Q-  
Q plot IntentionUse\_Oreo

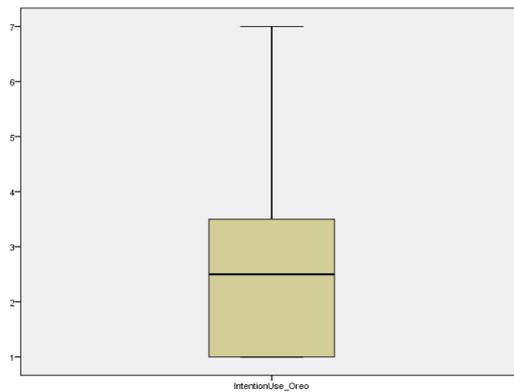


Figure 7.2.20 Boxplot  
IntentionUse\_Oreo

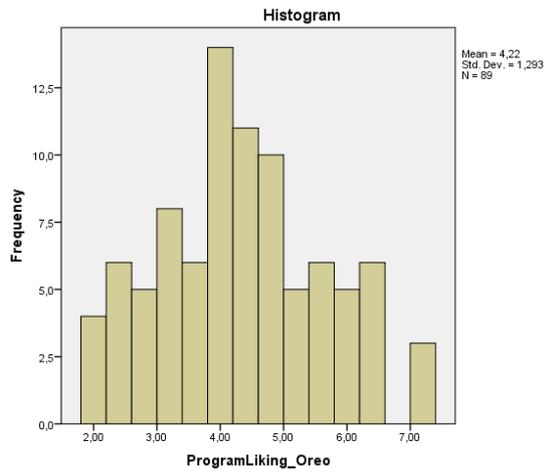


Figure 7.3.21 Histogram ProgramLiking\_Oreo

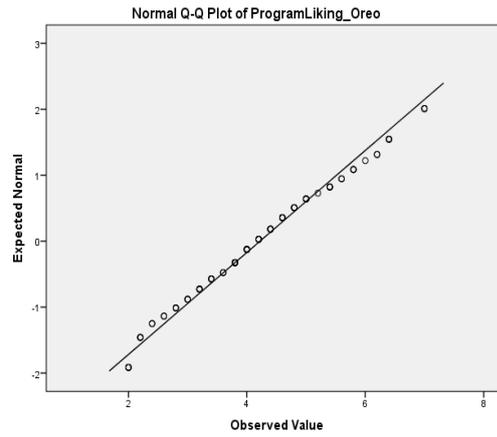


Figure 7.3.22 Normal Q-Q plot ProgramLiking\_Oreo

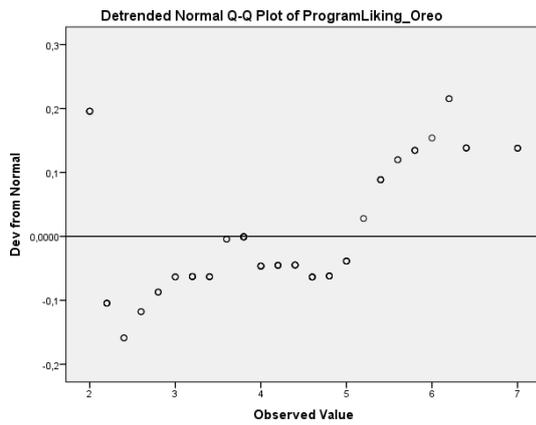


Figure 7.3.23 Detrended Q-Q plot ProgramLiking\_Oreo

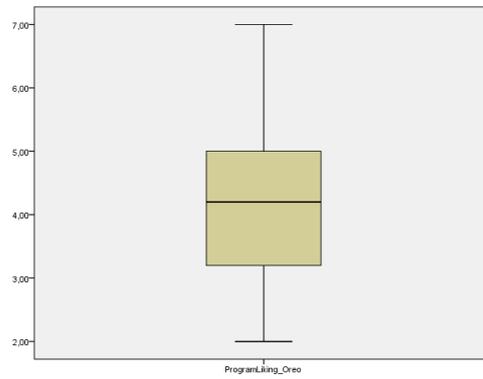


Figure 7.3.24 Box plot ProgramLiking\_Oreo

## 7.3 Within-analysis Bing

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Attitude	90	1,00	5,86	3,5540	1,04843	-,602	,254	,349	,503
Evaluation	90	1,00	5,00	2,4889	,97433	-,154	,254	-,650	,503
Rank	90	2,00	3,00	2,5667	,49831	-,274	,254	-1,969	,503
Attitude_Bing	90	1,00	6,75	3,6653	1,26325	-,153	,254	,049	,503
ProgramLiking_Bing	90	1,00	6,40	3,0711	1,38671	,545	,254	-,660	,503
Valid N (listwise)	90								

Table 7.3.1 Kurtosis and Skewness Bing

Tests of Normality							
	Research_Group1	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	5,00	,228	21	<b>,006</b>	,938	21	,200
Attitude_Bing	6,00	,156	26	,106	,943	26	,162
	7,00	,122	20	,200*	,951	20	,385
	8,00	,173	23	,074	,960	23	,468

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 7.3.2 Kolmogorov-Smirnov and Shapiro-Wilk Bing

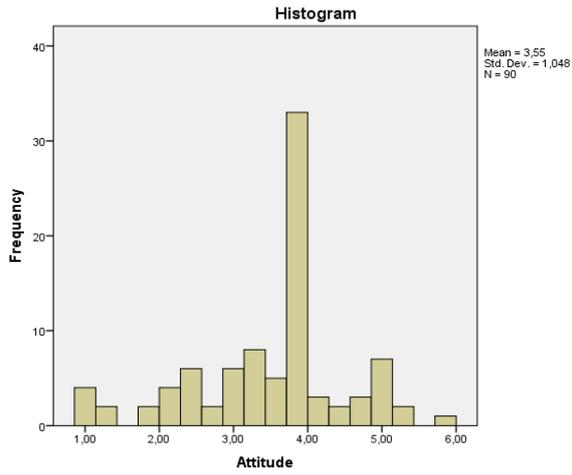


Figure 7.3.1 Histogram Attitude

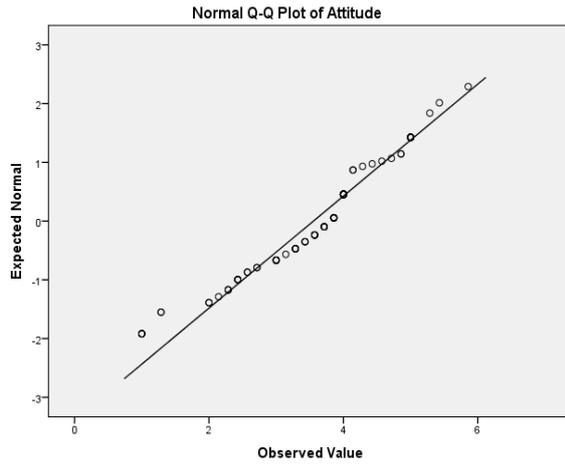


Figure 7.3.2 Normal Q-Q plot Attitude

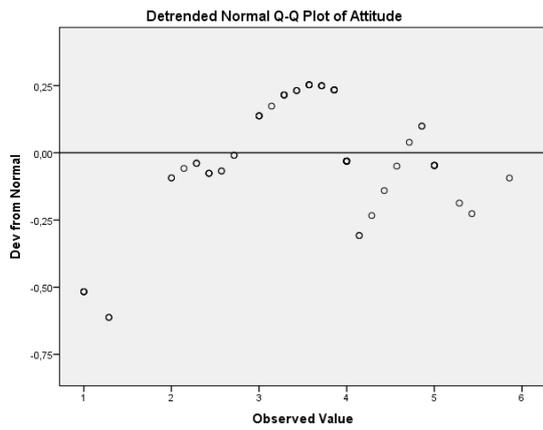


Figure 7.3.3 Detrended Q-Q plot Attitude

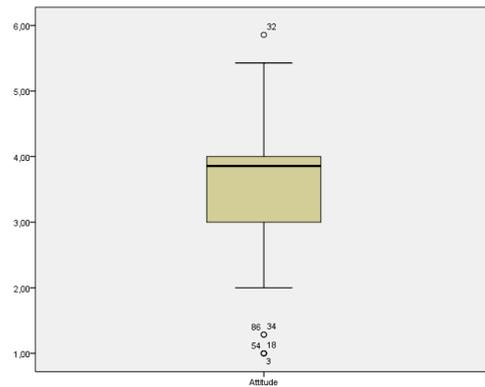


Figure 7.3.4 Box plot Attitude

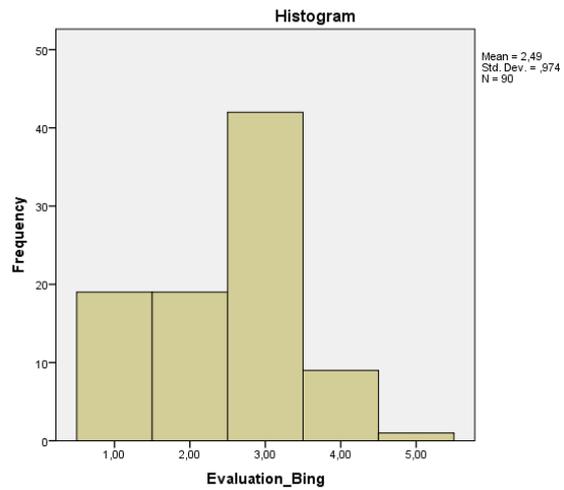


Figure 7.3.5 Histogram  
Evaluation

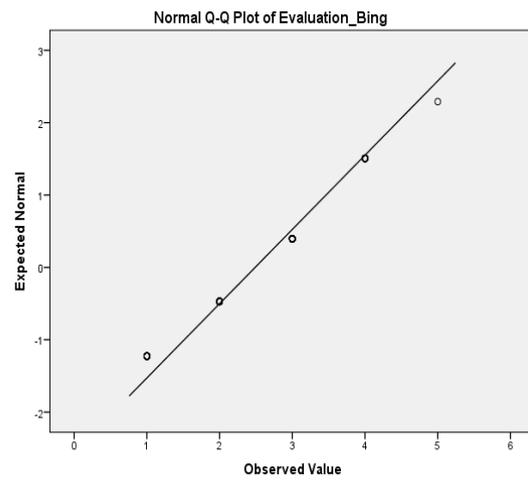


Figure 7.3.6 Normal Q-Q  
plot Evaluation

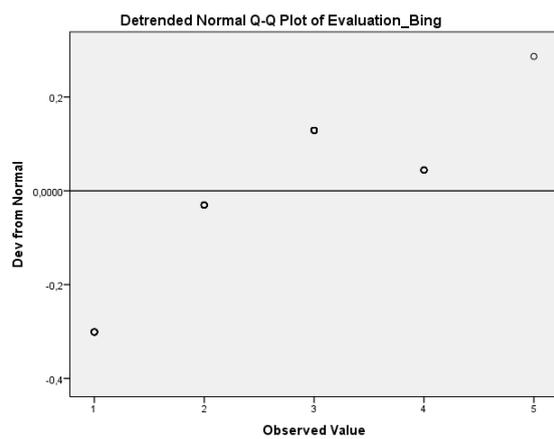


Figure 7.3.7 Detrended Q-Q  
plot Evaluation

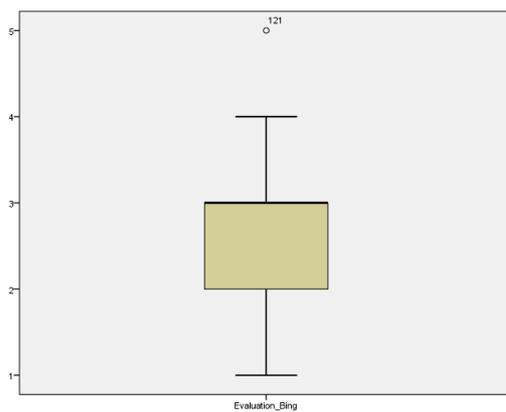


Figure 7.3.8 Box plot  
Evaluation

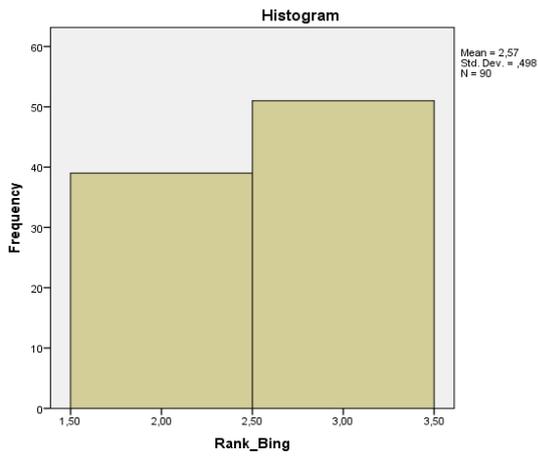


Figure 7.3.9 Histogram Rank

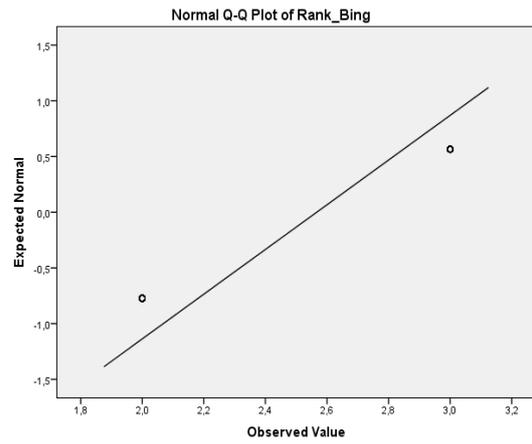


Figure 7.3.10 Normal Q-Q plot Rank

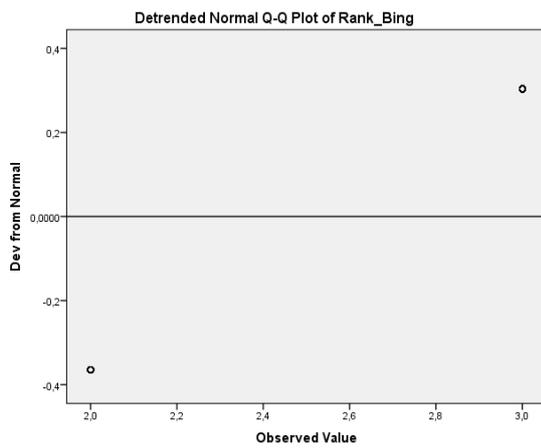


Figure 7.3.11 Detrended Q-Q plot Rank

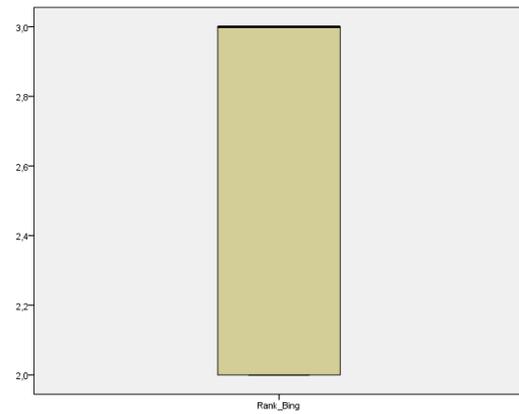


Figure 7.3.12 Box plot Rank

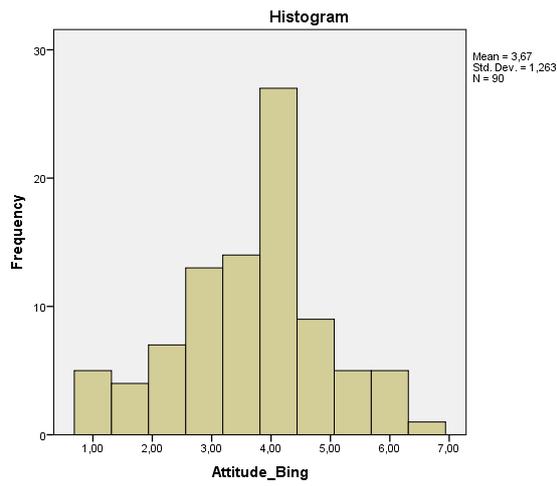


Figure 7.3.13 Histogram Attitude\_Bing

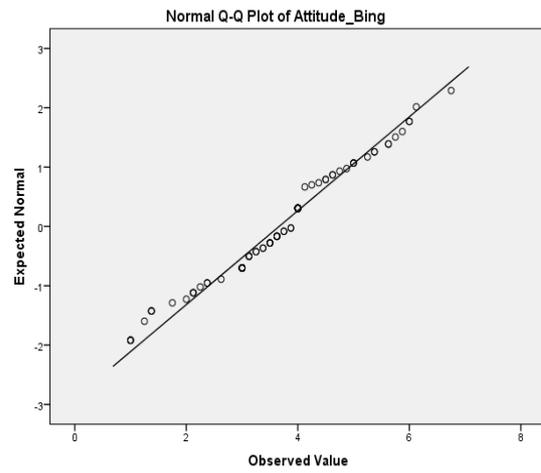


Figure 7.3.14 Normal Q-Q plot Attitude\_Bing

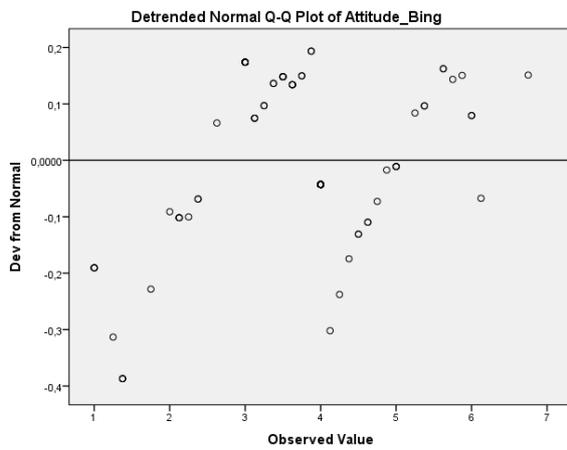


Figure 7.3.15 Detrended Q-Q plot Attitude\_Bing

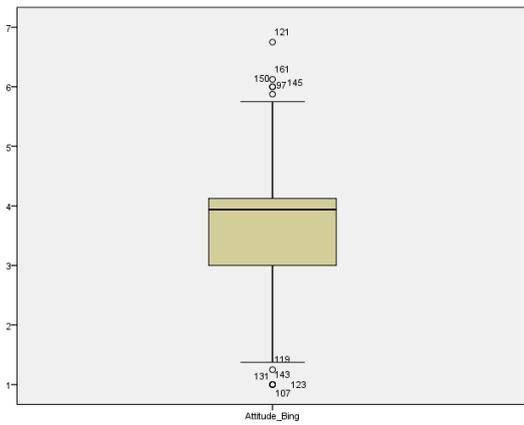


Figure 7.3.16 Box plot Attitude\_Bing

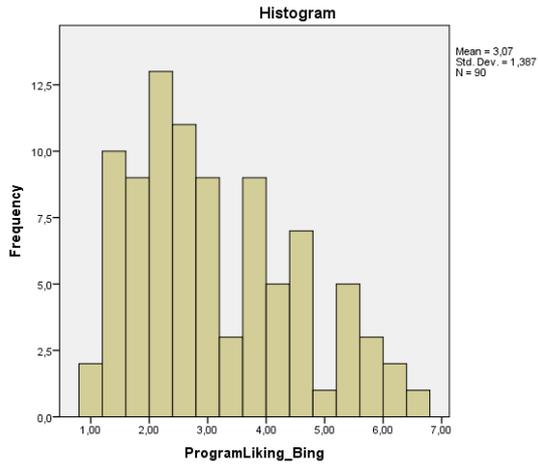


Figure 7.3.17 Histogram ProgramLiking\_Bing

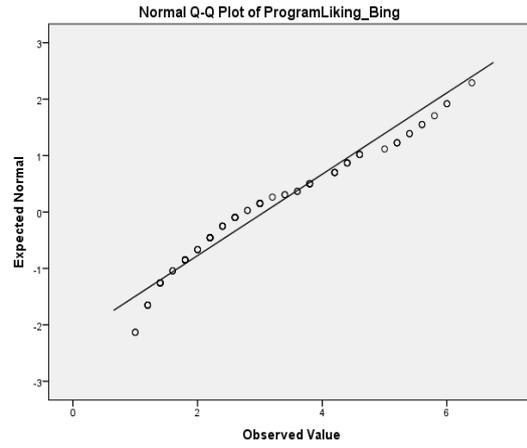


Figure 7.3.18 Normal Q-Q plot ProgramLiking\_Bing

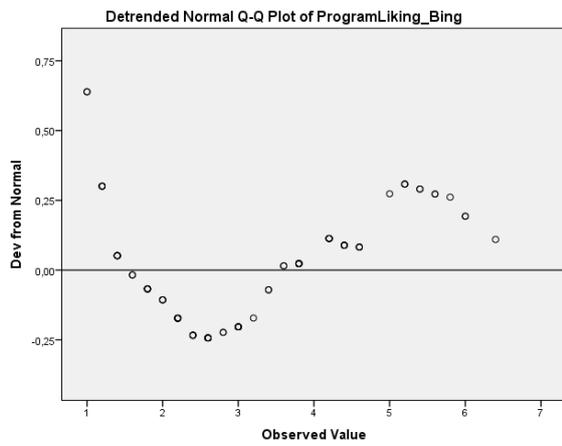


Figure 7.3.19 Detrended Q-Q plot ProgramLiking\_Bing

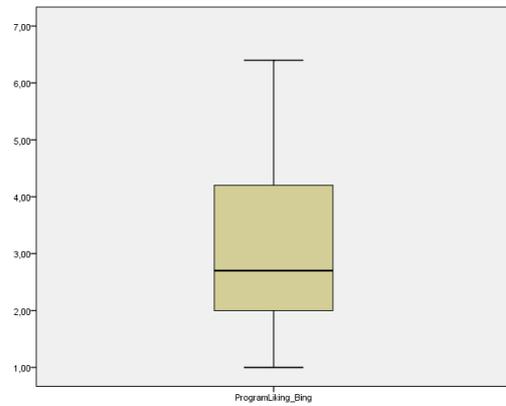


Figure 7.3.20 Box plot ProgramLiking\_Bing

## 8. Homogeneity of variance and covariance

### 8.1 Across-brands analysis

Levene's Test of Equality of Error

Variances<sup>a</sup>

	F	df1	df2	Sig.
Attitude	,484	7	171	,846
Evaluation	,838	7	171	,557
Rank	2,188	7	171	,038

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

*Table 8.1.1 Levene's test for across-brands analysis*

Box's Test of Equality of Covariance

Matrices<sup>a</sup>

Box's M	45,940
F	1,030
df1	42
df2	45202,298
Sig.	,418

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

*Table 8.1.2 Box's test for across-brand analysis*

### 8.2 Within-brand analysis Oreo Cookies

Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
Attitude_Oreo	,176	3	85	,913
IntentionUse_Oreo	,780	3	85	,508

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

*Table 8.2.1 Levene's test within-brand analysis Oreo Cookies*

Box's Test of Equality of Covariance

Matrices<sup>a</sup>

Box's M	5,201
F	,553
df1	9
df2	70817,213
Sig.	,836

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

*Table 8.2.2 Box's test within-brand analysis Oreo Cookies*

### 8.3 Within-brand analysis Bing

**Levene's Test of Equality of Error Variances<sup>a</sup>**

	F	df1	df2	Sig.
Attitude_B ing	1,249	3	86	,297

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

*Table 8.3.1 Levene's test within-brand analysis Bing*

## 9. Homogeneity of Regression Slopes

### 9.1 Across-brands analysis

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Attitude	59,727 <sup>a</sup>	7	8,532	8,544	,000
	Evaluation	82,023 <sup>b</sup>	7	11,718	10,852	,000
	Rank	38,728 <sup>c</sup>	7	5,533	13,594	,000
Intercept	Attitude	330,831	1	330,831	331,284	,000
	Evaluation	186,796	1	186,796	172,990	,000
	Rank	103,680	1	103,680	254,744	,000
Group_Brand * ProgramLiking	Attitude	45,364	1	45,364	45,426	,000
	Evaluation	63,672	1	63,672	58,966	,000
	Rank	31,826	1	31,826	78,197	,000
Group_PriorNotification * ProgramLiking	Attitude	,000	1	,000	,000	,983
	Evaluation	1,056	1	1,056	,978	,324
	Rank	,076	1	,076	,187	,666
Group_Prominence * ProgramLiking	Attitude	,554	1	,554	,555	,457
	Evaluation	,010	1	,010	,009	,922
	Rank	,284	1	,284	,699	,404
Group_Brand * Group_PriorNotification * ProgramLiking	Attitude	,359	1	,359	,359	,550
Group_PriorNotification * ProgramLiking	Evaluation	,074	1	,074	,069	,793
Group_PriorNotification * ProgramLiking	Rank	,067	1	,067	,164	,686
Group_Brand * Group_Prominence * ProgramLiking	Attitude	1,093	1	1,093	1,095	,297
Group_Prominence * ProgramLiking	Evaluation	4,991E-005	1	4,991E-005	,000	,995
Group_Prominence * ProgramLiking	Rank	,166	1	,166	,409	,523
Group_PriorNotification * Group_Prominence * ProgramLiking	Attitude	,182	1	,182	,183	,670
Group_Prominence * ProgramLiking	Evaluation	,185	1	,185	,171	,679
Group_Prominence * ProgramLiking	Rank	,008	1	,008	,020	,887
Error	Attitude	170,766	171	,999		
	Evaluation	184,647	171	1,080		
	Rank	69,596	171	,407		

Total	Attitude	3344,286	179			
	Evaluation	2146,000	179			
	Rank	869,000	179			
Corrected Total	Attitude	230,493	178			
	Evaluation	266,670	178			
	Rank	108,324	178			

a. R Squared = ,259 (Adjusted R Squared = ,229)

b. R Squared = ,308 (Adjusted R Squared = ,279)

c. R Squared = ,358 (Adjusted R Squared = ,331)

*Table 9.1.1 Test of between-subjects effects across-brand analysis*

## 9.2 Within-brand analysis Oreo Cookies

**Tests of Between-Subjects Effects**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Attitude_Oreo	3,395 <sup>a</sup>	4	,849	,821	,516
	IntentionUse_Oreo	12,095 <sup>b</sup>	4	3,024	1,554	,194
Intercept	Attitude_Oreo	162,814	1	162,814	157,464	,000
	IntentionUse_Oreo	73,315	1	73,315	37,691	,000
Group_PriorNotification *	Attitude_Oreo	,031	1	,031	,030	,863
ProgramLiking_Oreo	IntentionUse_Oreo	3,436	1	3,436	1,767	,187
Group_Prominence *	Attitude_Oreo	1,580	1	1,580	1,528	,220
ProgramLiking_Oreo	IntentionUse_Oreo	6,289	1	6,289	3,233	,076
Group_PriorNotification *	Attitude_Oreo	1,332	1	1,332	1,288	,260
Group_Prominence *	IntentionUse_Oreo	,038	1	,038	,020	,889
Error	Attitude_Oreo	86,854	84	1,034		
	IntentionUse_Oreo	163,394	84	1,945		
Total	Attitude_Oreo	2058,139	89			
	IntentionUse_Oreo	736,750	89			
Corrected Total	Attitude_Oreo	90,248	88			
	IntentionUse_Oreo	175,489	88			

a. R Squared = ,038 (Adjusted R Squared = -,008)

b. R Squared = ,069 (Adjusted R Squared = ,025)

*Table 9.1.2 Test of between-subjects effects within-brand analysis Oreo Cookies*

## 9.3 Within-brand analysis Bing

### Tests of Between-Subjects Effects

Dependent Variable: Attitude\_Bing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4,833 <sup>a</sup>	4	1,208	,749	,562
Intercept	204,003	1	204,003	126,393	,000
Group_PriorNotification * ProgramLiking_Bing	,635	1	,635	,393	,532
Group_Prominence * ProgramLiking_Bing	,313	1	,313	,194	,661
Group_PriorNotification * Group_Prominence * ProgramLiking_Bing	3,964	1	3,964	2,456	,121
Error	137,193	85	1,614		
Total	1351,109	90			
Corrected Total	142,026	89			

a. R Squared = ,034 (Adjusted R Squared = -,011)

*Table 9.1.3 Tests of between-subjects effects Bing*

## 10. Testing Hypotheses

### 10.1 Overall effect: MANCOVA/ANCOVA

#### 10.1.1 10.1.1 Across-brand analysis

Descriptive Statistics						
	Group_Brand	Group_PriorNotification	Group_Prominence	Mean	Std. Deviation	N
Attitude		1,00	1,00	4,5974	,83838	22
			2,00	4,7820	,80442	19
			Total	4,6829	,81786	41
	1,00	2,00	1,00	4,7143	,87456	24
			2,00	5,0655	,86022	24
			Total	4,8899	,87630	48
	Total	Total	1,00	4,6584	,84996	46
			2,00	4,9402	,83836	43
			Total	4,7945	,85143	89
		1,00	1,00	3,7357	1,08626	20
			2,00	3,5646	1,09122	21
			Total	3,6481	1,07859	41
	2,00	2,00	1,00	3,7329	,95958	23
			2,00	3,2473	1,04866	26
			Total	3,4752	1,02701	49
	Total	Total	1,00	3,7342	1,00802	43
			2,00	3,3891	1,06809	47
			Total	3,5540	1,04843	90
		1,00	1,00	4,1871	1,04716	42
			2,00	4,1429	1,13505	40
			Total	4,1655	1,08437	82
Total	2,00	1,00	4,2340	1,03378	47	
		2,00	4,1200	1,32303	50	
		Total	4,1753	1,18693	97	
Total	Total	1,00	4,2119	1,03445	89	
		2,00	4,1302	1,23628	90	
		Total	4,1708	1,13794	179	

		1,00	4,0000	,97590	22
	1,00	2,00	4,0526	1,07877	19
		Total	4,0244	1,01212	41
		1,00	3,7500	,94409	24
	2,00	2,00	4,2083	,83297	24
		Total	3,9792	,91068	48
1,00		1,00	3,8696	,95705	46
	Total	2,00	4,1395	,94065	43
		Total	4,0000	,95346	89
		1,00	2,5500	,94451	20
	1,00	2,00	2,6667	1,01653	21
		Total	2,6098	,97155	41
		1,00	2,5217	,84582	23
Evaluation	2,00	2,00	2,2692	1,07917	26
		Total	2,3878	,97503	49
		1,00	2,5349	,88234	43
	Total	2,00	2,4468	1,05930	47
		Total	2,4889	,97433	90
		1,00	3,3095	1,19935	42
	1,00	2,00	3,3250	1,24833	40
		Total	3,3171	1,21592	82
		1,00	3,1489	1,08305	47
Total	2,00	2,00	3,2000	1,37024	50
		Total	3,1753	1,23331	97
		1,00	3,2247	1,13571	89
	Total	2,00	3,2556	1,31167	90
		Total	3,2402	1,22399	179

			1,00	1,5909	,73414	22
		1,00	2,00	1,4737	,69669	19
			Total	1,5366	,71055	41
	1,00		1,00	1,5833	,71728	24
		2,00	2,00	1,5417	,58823	24
			Total	1,5625	,64926	48
			1,00	1,5870	,71728	46
		Total	2,00	1,5116	,63140	43
			Total	1,5506	,67439	89
			1,00	2,5500	,51042	20
		1,00	2,00	2,5238	,51177	21
			Total	2,5366	,50485	41
			1,00	2,6087	,49901	23
Rank	2,00	2,00	2,00	2,5769	,50383	26
			Total	2,5918	,49659	49
			1,00	2,5814	,49917	43
		Total	2,00	2,5532	,50254	47
			Total	2,5667	,49831	90
			1,00	2,0476	,79487	42
		1,00	2,00	2,0250	,80024	40
			Total	2,0366	,79264	82
			1,00	2,0851	,80298	47
	Total	2,00	2,00	2,0800	,75160	50
			Total	2,0825	,77285	97
			1,00	2,0674	,79484	89
		Total	2,00	2,0556	,76967	90
			Total	2,0615	,78010	179

Table 10.1.1.1 Overall effect descriptive statistics MANCOVA across-brand

Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,835	283,412 <sup>b</sup>	3,000	168,000	,000	,835
	Wilks' Lambda	,165	283,412 <sup>b</sup>	3,000	168,000	,000	,835
	Hotelling's Trace	5,061	283,412 <sup>b</sup>	3,000	168,000	,000	,835
	Roy's Largest Root	5,061	283,412 <sup>b</sup>	3,000	168,000	,000	,835
ProgramLiking	Pillai's Trace	,004	,248 <sup>b</sup>	3,000	168,000	,863	,004
	Wilks' Lambda	,996	,248 <sup>b</sup>	3,000	168,000	,863	,004
	Hotelling's Trace	,004	,248 <sup>b</sup>	3,000	168,000	,863	,004
	Roy's Largest Root	,004	,248 <sup>b</sup>	3,000	168,000	,863	,004
Group_Brand	Pillai's Trace	,469	49,517 <sup>b</sup>	3,000	168,000	,000	,469
	Wilks' Lambda	,531	49,517 <sup>b</sup>	3,000	168,000	,000	,469
	Hotelling's Trace	,884	49,517 <sup>b</sup>	3,000	168,000	,000	,469
	Roy's Largest Root	,884	49,517 <sup>b</sup>	3,000	168,000	,000	,469
Group_PriorNotification	Pillai's Trace	,012	,704 <sup>b</sup>	3,000	168,000	,551	,012
	Wilks' Lambda	,988	,704 <sup>b</sup>	3,000	168,000	,551	,012
	Hotelling's Trace	,013	,704 <sup>b</sup>	3,000	168,000	,551	,012
	Roy's Largest Root	,013	,704 <sup>b</sup>	3,000	168,000	,551	,012
Group_Prominence	Pillai's Trace	,010	,576 <sup>b</sup>	3,000	168,000	,632	,010
	Wilks' Lambda	,990	,576 <sup>b</sup>	3,000	168,000	,632	,010
	Hotelling's Trace	,010	,576 <sup>b</sup>	3,000	168,000	,632	,010
	Roy's Largest Root	,010	,576 <sup>b</sup>	3,000	168,000	,632	,010
Group_Brand * Group_PriorNotification	Pillai's Trace	,011	,621 <sup>b</sup>	3,000	168,000	,603	,011
	Wilks' Lambda	,989	,621 <sup>b</sup>	3,000	168,000	,603	,011
	Hotelling's Trace	,011	,621 <sup>b</sup>	3,000	168,000	,603	,011
	Roy's Largest Root	,011	,621 <sup>b</sup>	3,000	168,000	,603	,011
Group_Brand * Group_Prominence	Pillai's Trace	,027	1,573 <sup>b</sup>	3,000	168,000	,198	,027
	Wilks' Lambda	,973	1,573 <sup>b</sup>	3,000	168,000	,198	,027
	Hotelling's Trace	,028	1,573 <sup>b</sup>	3,000	168,000	,198	,027
	Roy's Largest Root	,028	1,573 <sup>b</sup>	3,000	168,000	,198	,027

Group_PriorNotification * Group_Prominence	Pillai's Trace	,002	,090 <sup>b</sup>	3,000	168,000	,966	,002
	Wilks' Lambda	,998	,090 <sup>b</sup>	3,000	168,000	,966	,002
	Hotelling's Trace	,002	,090 <sup>b</sup>	3,000	168,000	,966	,002
	Roy's Largest	,002	,090 <sup>b</sup>	3,000	168,000	,966	,002
	Root	,002	,090 <sup>b</sup>	3,000	168,000	,966	,002
Group_Brand * Group_PriorNotification * Group_Prominence	Pillai's Trace	,015	,879 <sup>b</sup>	3,000	168,000	,453	,015
	Wilks' Lambda	,985	,879 <sup>b</sup>	3,000	168,000	,453	,015
	Hotelling's Trace	,016	,879 <sup>b</sup>	3,000	168,000	,453	,015
	Roy's Largest	,016	,879 <sup>b</sup>	3,000	168,000	,453	,015
	Root	,016	,879 <sup>b</sup>	3,000	168,000	,453	,015

a. Design: Intercept + ProgramLiking + Group\_Brand + Group\_PriorNotification + Group\_Prominence + Group\_Brand \* Group\_PriorNotification + Group\_Brand \* Group\_Prominence + Group\_PriorNotification \* Group\_Prominence + Group\_Brand \* Group\_PriorNotification \* Group\_Prominence

b. Exact statistic

Table 10.1.1.2 Overall effect multivariate tests across-brands

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude	75,686 <sup>a</sup>	8	9,461	10,389	,000	,328
	Evaluation	107,316 <sup>b</sup>	8	13,414	14,311	,000	,402
	Rank	46,637 <sup>c</sup>	8	5,830	16,066	,000	,431
Intercept	Attitude	351,828	1	351,828	386,358	,000	,694
	Evaluation	223,513	1	223,513	238,444	,000	,584
	Rank	74,451	1	74,451	205,177	,000	,547
ProgramLiking	Attitude	,197	1	,197	,217	,642	,001
	Evaluation	,522	1	,522	,557	,456	,003
	Rank	,172	1	,172	,474	,492	,003
Group_Brand	Attitude	57,716	1	57,716	63,380	,000	,272
	Evaluation	88,740	1	88,740	94,668	,000	,358
	Rank	40,395	1	40,395	111,322	,000	,396
Group_PriorNotification	Attitude	,021	1	,021	,023	,879	,000
	Evaluation	,716	1	,716	,764	,383	,004
	Rank	,076	1	,076	,209	,648	,001
Group_Prominence	Attitude	,018	1	,018	,019	,890	,000
	Evaluation	,527	1	,527	,562	,454	,003
	Rank	,176	1	,176	,484	,487	,003

Group_Brand *	Attitude	1,510	1	1,510	1,658	,200	,010
Group_PriorNotification	Evaluation	,364	1	,364	,389	,534	,002
	Rank	,013	1	,013	,037	,848	,000
Group_Brand *	Attitude	4,134	1	4,134	4,540	,035	,026
Group_Prominence	Evaluation	1,432	1	1,432	1,527	,218	,009
	Rank	,060	1	,060	,166	,684	,001
Group_PriorNotification	Attitude	,070	1	,070	,077	,782	,000
* Group_Prominence	Evaluation	,001	1	,001	,001	,974	,000
	Rank	,018	1	,018	,049	,825	,000
Group_Brand *	Attitude	,745	1	,745	,818	,367	,005
Group_PriorNotification	Evaluation	1,936	1	1,936	2,065	,153	,012
* Group_Prominence	Rank	,004	1	,004	,012	,915	,000
Error	Attitude	154,807	170	,911			
	Evaluation	159,355	170	,937			
	Rank	61,687	170	,363			
Total	Attitude	3344,286	179				
	Evaluation	2146,000	179				
	Rank	869,000	179				
Corrected Total	Attitude	230,493	178				
	Evaluation	266,670	178				
	Rank	108,324	178				

a. R Squared = ,328 (Adjusted R Squared = ,297)

b. R Squared = ,402 (Adjusted R Squared = ,374)

c. R Squared = ,431 (Adjusted R Squared = ,404)

*Table 10.1.1.3 Overall effect tests of between-subject effects across-brands analysis*

Parameter Estimates<sup>9</sup>

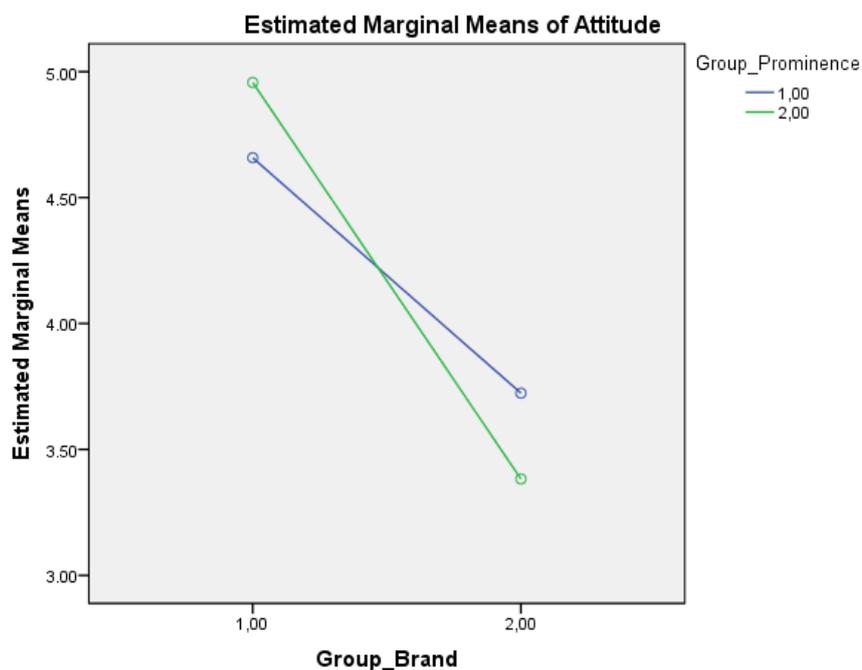
Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
						Interval		
						Lower Bound	Upper Bound	
Attitude	Intercept	3,318	,241	13,770	,000	2,842	3,794	,527
	ProgramLiking	-,026	,056	-,466	,642	-,137	,085	,001
	[Group_Brand=1,00]	1,877	,298	6,290	,000	1,288	2,467	,189
	[Group_PriorNotification=1,00]	,334	,282	1,184	,238	-,223	,892	,008
	[Group_Prominence=1,00]	,503	,276	1,824	,070	-,041	1,047	,019
	[Group_Brand=1,00] *	-,633	,411	-1,540	,125	-1,445	,179	,014
	[Group_PriorNotification=1,00]							
	[Group_Brand=1,00] *	-,886	,402	-2,204	,029	-1,679	-,092	,028
	[Group_PriorNotification=1,00]							
	* [Group_Prominence=1,00]	-,342	,409	-,838	,403	-1,149	,465	,004
	[Group_Brand=1,00] *							
	[Group_PriorNotification=1,00]	,526	,581	,905	,367	-,622	1,673	,005
* [Group_Prominence=1,00]								
Evaluation	Intercept	2,384	,244	9,752	,000	1,902	2,867	,359
	ProgramLiking	-,043	,057	-,746	,456	-,155	,070	,003
	[Group_Brand=1,00]	2,035	,303	6,721	,000	1,437	2,633	,210
	[Group_PriorNotification=1,00]	,425	,286	1,484	,140	-,140	,991	,013
	[Group_Prominence=1,00]	,280	,280	1,002	,318	-,272	,832	,006
	[Group_Brand=1,00] *	-,606	,417	-1,452	,148	-1,429	,218	,012
	[Group_PriorNotification=1,00]							
	[Group_Brand=1,00] *	-,790	,408	-1,938	,054	-1,595	,015	,022
	[Group_PriorNotification=1,00]							
	* [Group_Prominence=1,00]	-,414	,415	-,999	,319	-1,233	,404	,006
	[Group_Brand=1,00] *							
	[Group_PriorNotification=1,00]	,848	,590	1,437	,153	-,317	2,012	,012
* [Group_Prominence=1,00]								

<sup>9</sup> Redundant effects are removed from the table.

	Intercept	2,511	,152	16,508	,000	2,211	2,811	,616
	ProgramLiking	,024	,035	,689	,492	-,046	,094	,003
	[Group_Brand=1,00]	-	,188	-5,788	,000	-1,462	-,719	,165
	[Group_PriorNotification=1,00]	1,090	,178	-,387	,699	-,421	,283	,001
	[Group_Prominence=1,00]	-,069	,174	,092	,927	-,327	,359	,000
Rank	[Group_Brand=1,00] *	,015	,260	,059	,953	-,497	,528	,000
	[Group_PriorNotification=1,00]	,015	,260	,059	,953	-,497	,528	,000
	[Group_Brand=1,00] *	,055	,254	,219	,827	-,445	,556	,000
	[Group_Prominence=1,00]	,055	,254	,219	,827	-,445	,556	,000
	[Group_PriorNotification=1,00]	,020	,258	,079	,937	-,489	,530	,000
	* [Group_Prominence=1,00]	,020	,258	,079	,937	-,489	,530	,000
	[Group_Brand=1,00] *	,039	,367	,107	,915	-,685	,764	,000
	[Group_PriorNotification=1,00]	,039	,367	,107	,915	-,685	,764	,000
	* [Group_Prominence=1,00]	,039	,367	,107	,915	-,685	,764	,000
	* [Group_Prominence=1,00]	,039	,367	,107	,915	-,685	,764	,000

a. This parameter is set to zero because it is redundant.

Table 10.1.1.4 Overall effect parameter estimates across-brands analysis



Covariates appearing in the model are evaluated at the following values: Group\_ProgramLiking = 1,4134

Figure 10.1.1.1 Overall effect scatter plot across-brands analysis

<b>Contrast Results (K Matrix)</b>				
Group_Brand Simple Contrast <sup>a</sup>		Dependent Variable		
		Attitude	Evaluation	Rank
	Contrast Estimate	-1,249	-1,549	1,045
	Hypothesized Value	0	0	0
	Difference (Estimate - Hypothesized)	-1,249	-1,549	1,045
Level 2 vs. Level 1	Std. Error	,157	,159	,099
	Sig.	,000	,000	,000
	95% Confidence Interval for Lower Bound	-1,559	-1,864	,850
	Difference Upper Bound	-,940	-1,235	1,241

a. Reference category = 1

*Table 10.1.1.5 Overall effect contrast results across-brands analysis  
Group\_Brand*

<b>Contrast Results (K Matrix)</b>				
Group_PriorNotification Simple Contrast <sup>a</sup>		Dependent Variable		
		Attitude	Evaluation	Rank
	Contrast Estimate	,022	-,127	,041
	Hypothesized Value	0	0	0
	Difference (Estimate - Hypothesized)	,022	-,127	,041
Level 2 vs. Level 1	Std. Error	,143	,145	,091
	Sig.	,879	,383	,648
	95% Confidence Interval for Lower Bound	-,261	-,414	-,137
	Difference Upper Bound	,305	,160	,220

a. Reference category = 1

*Tabell 10.1.1.6 Overall effect contrast results across-brands analysis  
Group\_PriorNotification*

<b>Contrast Results (K Matrix)</b>				
Group_Prominence Simple Contrast <sup>a</sup>		Dependent Variable		
		Attitude	Evaluation	Rank
	Contrast Estimate	-,020	,110	-,064
	Hypothesized Value	0	0	0
	Difference (Estimate - Hypothesized)	-,020	,110	-,064
Level 2 vs. Level 1	Std. Error	,145	,147	,092
	Sig.	,890	,454	,487
	95% Confidence Interval for Lower Bound	-,306	-,180	-,244
	Difference			
	Upper Bound	,266	,401	,117

a. Reference category = 1

*Table 10.1.1.7 Overall effect contrast results across-brands analysis  
Group\_Prominence*

<b>Grand Mean</b>				
Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Attitude	4,180 <sup>a</sup>	,072	4,039	4,322
Evaluation	3,253 <sup>a</sup>	,073	3,109	3,396
Rank	2,056 <sup>a</sup>	,045	1,967	2,145

a. Covariates appearing in the model are evaluated at the following values:

ProgramLiking = 3,6436.

*Table 10.1.1.8 Overall effect grand mean across-brands analysis*

### 10.1.2 Within-brand analysis Oreo Cookies

Descriptive Statistics

	Group_Brand	Group_PriorNotification	Group_Prominence	Mean	Std. Deviation	N
Attitude_Oreo			1,00	4,6515	,97034	22
		1,00	2,00	4,6579	1,02961	19
			Total	4,6545	,98558	41
			1,00	4,5208	1,09601	24
	1,00	2,00	2,00	4,9653	,96055	24
			Total	4,7431	1,04393	48
			1,00	4,5833	1,02845	46
		Total	2,00	4,8295	,99169	43
			Total	4,7022	1,01269	89
			1,00	4,6515	,97034	22
		1,00	2,00	4,6579	1,02961	19
			Total	4,6545	,98558	41
IntentionUse_Oreo			1,00	2,0909	1,18157	22
		1,00	2,00	2,5000	1,31233	19
			Total	2,2805	1,24523	41
			1,00	2,4792	1,49258	24
	1,00	2,00	2,00	2,9375	1,55558	24
			Total	2,7083	1,52578	48
			1,00	2,2935	1,35227	46
		Total	2,00	2,7442	1,45313	43
			Total	2,5112	1,41216	89

		1,00	2,0909	1,18157	22
	1,00	2,00	2,5000	1,31233	19
		Total	2,2805	1,24523	41
		1,00	2,4792	1,49258	24
Total	2,00	2,00	2,9375	1,55558	24
		Total	2,7083	1,52578	48
		1,00	2,2935	1,35227	46
	Total	2,00	2,7442	1,45313	43
		Total	2,5112	1,41216	89

Table 10.1.2.1 Overall effect descriptive statistics within-brand analysis Oreo Cookies

Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,667	83,094 <sup>b</sup>	2,000	83,000	,000	,667
	Wilks' Lambda	,333	83,094 <sup>b</sup>	2,000	83,000	,000	,667
	Hotelling's Trace	2,002	83,094 <sup>b</sup>	2,000	83,000	,000	,667
	Roy's Largest Root	2,002	83,094 <sup>b</sup>	2,000	83,000	,000	,667
ProgramLiking_Oreo	Pillai's Trace	,037	1,589 <sup>b</sup>	2,000	83,000	,210	,037
	Wilks' Lambda	,963	1,589 <sup>b</sup>	2,000	83,000	,210	,037
	Hotelling's Trace	,038	1,589 <sup>b</sup>	2,000	83,000	,210	,037
	Roy's Largest Root	,038	1,589 <sup>b</sup>	2,000	83,000	,210	,037
Group_Brand	Pillai's Trace	,000	. <sup>b</sup>	,000	,000	.	.
	Wilks' Lambda	1,000	. <sup>b</sup>	,000	83,500	.	.
	Hotelling's Trace	,000	. <sup>b</sup>	,000	2,000	.	.
	Roy's Largest Root	,000	,000 <sup>b</sup>	2,000	82,000	1,000	,000
Group_PriorNotification	Pillai's Trace	,029	1,223 <sup>b</sup>	2,000	83,000	,300	,029
	Wilks' Lambda	,971	1,223 <sup>b</sup>	2,000	83,000	,300	,029
	Hotelling's Trace	,029	1,223 <sup>b</sup>	2,000	83,000	,300	,029
	Roy's Largest Root	,029	1,223 <sup>b</sup>	2,000	83,000	,300	,029

Group_Prominence	Pillai's Trace	,050	2,194 <sup>b</sup>	2,000	83,000	,118	,050
	Wilks' Lambda	,950	2,194 <sup>b</sup>	2,000	83,000	,118	,050
	Hotelling's Trace	,053	2,194 <sup>b</sup>	2,000	83,000	,118	,050
	Roy's Largest						
	Root	,053	2,194 <sup>b</sup>	2,000	83,000	,118	,050
Group_Brand * Group_PriorNotification	Pillai's Trace	,000	. <sup>b</sup>	,000	,000	.	.
	Wilks' Lambda	1,000	. <sup>b</sup>	,000	83,500	.	.
	Hotelling's Trace	,000	. <sup>b</sup>	,000	2,000	.	.
	Roy's Largest						
	Root	,000	,000 <sup>b</sup>	2,000	82,000	1,000	,000
Group_Brand * Group_Prominence	Pillai's Trace	,000	. <sup>b</sup>	,000	,000	.	.
	Wilks' Lambda	1,000	. <sup>b</sup>	,000	83,500	.	.
	Hotelling's Trace	,000	. <sup>b</sup>	,000	2,000	.	.
	Roy's Largest						
	Root	,000	,000 <sup>b</sup>	2,000	82,000	1,000	,000
Group_PriorNotification * Group_Prominence	Pillai's Trace	,016	,656 <sup>b</sup>	2,000	83,000	,521	,016
	Wilks' Lambda	,984	,656 <sup>b</sup>	2,000	83,000	,521	,016
	Hotelling's Trace	,016	,656 <sup>b</sup>	2,000	83,000	,521	,016
	Roy's Largest						
	Root	,016	,656 <sup>b</sup>	2,000	83,000	,521	,016
Group_Brand * Group_PriorNotification * Group_Prominence	Pillai's Trace	,000	. <sup>b</sup>	,000	,000	.	.
	Wilks' Lambda	1,000	. <sup>b</sup>	,000	83,500	.	.
	Hotelling's Trace	,000	. <sup>b</sup>	,000	2,000	.	.
	Roy's Largest						
	Root	,000	,000 <sup>b</sup>	2,000	82,000	1,000	,000

a. Design: Intercept + ProgramLiking\_Oreo + Group\_Brand + Group\_PriorNotification + Group\_Prominence + Group\_Brand \* Group\_PriorNotification + Group\_Brand \* Group\_Prominence + Group\_PriorNotification \* Group\_Prominence + Group\_Brand \* Group\_PriorNotification \* Group\_Prominence

b. Exact statistic

*Table 10.1.2.2 Overall effect multivariate tests within-brand analysis Oreo Cookies*

## Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude_Oreo	3,742 <sup>a</sup>	4	,936	,908	,463	,041
	IntentionUse_Oreo	13,925 <sup>b</sup>	4	3,481	1,810	,135	,079
Intercept	Attitude_Oreo	169,062	1	169,062	164,164	,000	,662
	IntentionUse_Oreo	74,827	1	74,827	38,904	,000	,317
ProgramLiking_Oreo	Attitude_Oreo	1,198	1	1,198	1,163	,284	,014
	IntentionUse_Oreo	5,650	1	5,650	2,937	,090	,034
Group_Brand	Attitude_Oreo	,000	0	.	.	.	,000
	IntentionUse_Oreo	,000	0	.	.	.	,000
Group_PriorNotification	Attitude_Oreo	,281	1	,281	,272	,603	,003
	IntentionUse_Oreo	4,762	1	4,762	2,476	,119	,029
Group_Prominence	Attitude_Oreo	1,893	1	1,893	1,838	,179	,021
	IntentionUse_Oreo	7,523	1	7,523	3,912	,051	,044
Group_Brand *	Attitude_Oreo	,000	0	.	.	.	,000
Group_PriorNotification	IntentionUse_Oreo	,000	0	.	.	.	,000
Group_Brand *	Attitude_Oreo	,000	0	.	.	.	,000
Group_Prominence	IntentionUse_Oreo	,000	0	.	.	.	,000
Group_PriorNotification	Attitude_Oreo	1,361	1	1,361	1,322	,254	,015
* Group_Prominence	IntentionUse_Oreo	,189	1	,189	,098	,754	,001
Group_Brand *	Attitude_Oreo	,000	0	.	.	.	,000
Group_PriorNotification	IntentionUse_Oreo	,000	0	.	.	.	,000
* Group_Prominence							
Error	Attitude_Oreo	86,506	84	1,030			
	IntentionUse_Oreo	161,564	84	1,923			
Total	Attitude_Oreo	2058,139	89				
	IntentionUse_Oreo	736,750	89				
Corrected Total	Attitude_Oreo	90,248	88				
	IntentionUse_Oreo	175,489	88				

a. R Squared = ,041 (Adjusted R Squared = -,004)

b. R Squared = ,079 (Adjusted R Squared = ,036)

*Table 10.1.2.3 Overall effect tests of between-subject effects within-brand analysis Oreo Cookies*

Parameter Estimates<sup>10</sup>

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
						Lower Bound	Upper Bound	
						Attitude_Oreo	Intercept	
	ProgramLiking_Oreo	-,098	,091	-1,078	,284	-,279	,083	,014
	[Group_PriorNotification=1,00]	-,364	,316	-1,152	,252	-,993	,264	,016
	[Group_Prominence=1,00]	-,564	,313	-1,800	,075	-1,187	,059	,037
	[Group_PriorNotification=1,00]	,502	,436	1,150	,254	-,366	1,369	,015
	* [Group_Prominence=1,00]							
IntentionUse_Oreo	Intercept	3,994	,678	5,887	,000	2,645	5,343	,292
	ProgramLiking_Oreo	-,213	,124	-1,714	,090	-,460	,034	,034
	[Group_PriorNotification=1,00]	-,561	,432	-1,299	,198	-1,420	,298	,020
	[Group_PriorNotification=2,00]	0 <sup>a</sup>	.	.	.	.	.	.
	[Group_Prominence=1,00]	-,718	,428	-1,677	,097	-1,569	,133	,032
	[Group_PriorNotification=1,00]	,187	,596	,314	,754	-,998	1,373	,001
	* [Group_Prominence=1,00]							

a. This parameter is set to zero because it is redundant.

Table 10.1.2.4 Overall effect parameter estimates within-brand analysis Oreo Cookies

Contrast Results (K Matrix)

Group_PriorNotification Simple Contrast <sup>a</sup>		Dependent Variable	
		Attitude_Oreo	IntentionUse_Oreo
	Contrast Estimate	,113	,467
	Hypothesized Value	0	0
	Difference (Estimate - Hypothesized)	,113	,467
Level 2 vs. Level 1	Std. Error	,217	,297
	Sig.	,603	,119
	95% Confidence Interval for Lower Bound	-,319	-,123
	Difference Upper Bound	,546	1,058

a. Reference category = 1

Table 10.1.2.5 Overall effect contrast results within-brand analysis Oreo Cookies Group\_PriorNotification

<sup>10</sup> Redundant effects are removed from the table.

**Contrast Results (K Matrix)**

Group_Prominence Simple Contrast <sup>a</sup>		Dependent Variable	
		Attitude Oreo	IntentionUse Oreo
	Contrast Estimate	,313	,624
	Hypothesized Value	0	0
	Difference (Estimate - Hypothesized)	,313	,624
Level 2 vs. Level 1	Std. Error	,231	,316
	Sig.	,179	,051
	95% Confidence Interval for Lower Bound	-,146	-,003
	Difference Upper Bound	,772	1,252

a. Reference category = 1

*Table 10.1.2.6 Overall effect contrast results within-brand analysis Oreo Cookies Group\_Prominence*

**Grand Mean**

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Attitude_Oreo	4,699 <sup>a</sup>	,108	4,484	4,914
IntentionUse_Oreo	2,502 <sup>a</sup>	,148	2,208	2,795

a. Covariates appearing in the model are evaluated at the following values:

ProgramLiking\_Oreo = 4,2225.

*Table 10.1.2.7 Overall effect grand mean within-brand analysis Oreo Cookies*

### 10.1.3 Within-brand analysis Bing

#### Descriptive Statistics

Dependent Variable: Attitude\_Bing

Group_Brand	Group_PriorNotification	Group_Prominence	Mean	Std. Deviation	N	
2,00	1,00	1,00	3,7875	1,45384	20	
		2,00	3,8333	1,07698	21	
		Total	3,8110	1,25876	41	
	2,00	2,00	1,00	3,8315	1,00610	23
			2,00	3,2885	1,43081	26
			Total	3,5434	1,26696	49
	Total	Total	1,00	3,8110	1,21938	43
			2,00	3,5319	1,30073	47
			Total	3,6653	1,26325	90
Total	1,00	1,00	3,7875	1,45384	20	
		2,00	3,8333	1,07698	21	
		Total	3,8110	1,25876	41	
	2,00	2,00	1,00	3,8315	1,00610	23
			2,00	3,2885	1,43081	26
			Total	3,5434	1,26696	49
	Total	Total	1,00	3,8110	1,21938	43
			2,00	3,5319	1,30073	47
			Total	3,6653	1,26325	90

Table 10.1.3.1 Overall effect descriptive statistics within-brand analysis  
Bing

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**Tests of Between-Subjects Effects**

Dependent Variable: Attitude\_Bing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5,313 <sup>a</sup>	4	1,328	,826	,512	,037
Intercept	203,827	1	203,827	126,728	,000	,599
ProgramLiking_Bing	,094	1	,094	,058	,810	,001
Group_Brand	,000	0	.	.	.	,000
Group_PriorNotification	1,427	1	1,427	,887	,349	,010
Group_Prominence	1,406	1	1,406	,874	,353	,010
Group_Brand *	,000	0	.	.	.	,000
Group_PriorNotification	,000	0	.	.	.	,000
Group_Brand *	,000	0	.	.	.	,000
Group_Prominence	,000	0	.	.	.	,000
Group_PriorNotification *	2,024	1	2,024	1,259	,265	,015
Group_Prominence						
Group_Brand *						
Group_PriorNotification *	,000	0	.	.	.	,000
Group_Prominence						
Error	136,713	85	1,608			
Total	1351,109	90				
Corrected Total	142,026	89				

a. R Squared = ,037 (Adjusted R Squared = -,008)

*Table 10.1.3.2 Overall effect test of between-subjects effects within-brand analysis Bing*

**Parameter Estimates<sup>11</sup>**

Dependent Variable: Attitude\_Bing

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Intercept	3,353	,365	9,179	,000	2,627	4,079	,498
ProgramLiking_Bing	-,024	,099	-,242	,810	-,221	,173	,001
[Group_PriorNotification=1,00]	,560	,378	1,484	,141	-,190	1,311	,025
[Group_Prominence=1,00]	,559	,369	1,515	,133	-,174	1,292	,026
[Group_PriorNotification=1,00] * [Group_Prominence=1,00]	-,614	,548	-1,122	,265	-1,703	,474	,015

a. This parameter is set to zero because it is redundant.

*Table 10.1.3.3 Overall effect parameter estimates within-brand analysis  
Bing*

**Contrast Results (K Matrix)**

Group_PriorNotification Simple Contrast <sup>a</sup>		Dependent Variable
		Attitude_Bing
	Contrast Estimate	-,253
	Hypothesized Value	0
	Difference (Estimate - Hypothesized)	-,253
Level 2 vs. Level 1	Std. Error	,269
	Sig.	,349
	95% Confidence Interval for	
	Difference	Lower Bound Upper Bound
		-,788 ,281

a. Reference category = 1

*Table 10.1.3.4 Overall effect contrast results within-brand analysis Bing  
Group\_PriorNotification*

<sup>11</sup> Redundant results are removed from the table.

**Contrast Results (K Matrix)**

Group_Prominence Simple Contrast <sup>a</sup>		Dependent Variable
		Attitude_Bing
	Contrast Estimate	-,251
	Hypothesized Value	0
	Difference (Estimate - Hypothesized)	-,251
Level 2 vs. Level 1	Std. Error	,269
	Sig.	,353
	95% Confidence Interval for Lower Bound	-,786
	Difference	
	Upper Bound	,283

a. Reference category = 1

*Table 10.1.3.5 Overall effect contrast results within-brand analysis Bing  
Group\_Prominence*

**Grand Mean**

Dependent Variable: Attitude\_Bing

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
3,686 <sup>a</sup>	,134	3,418	3,953

a. Covariates appearing in the model are evaluated at the following values: ProgramLiking\_Bing = 3,0711.

*Table 10.1.3.6 Overall effect grand mean within-brand analysis Bing*

## 10.2 Hypothesis H1

### 10.2.1 Across-brands analysis

Descriptives									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1.00	82	4.1655	1.08437	.11975	3.9272	4.4038	1.00	6.57
	2.00	97	4.1753	1.18693	.12051	3.9360	4.4145	1.00	7.00
	Total	179	4.1708	1.13794	.08505	4.0029	4.3386	1.00	7.00
Evaluation	1.00	82	3.3171	1.21592	.13428	3.0499	3.5842	1.00	5.00
	2.00	97	3.1753	1.23331	.12522	2.9267	3.4238	1.00	5.00
	Total	179	3.2402	1.22399	.09149	3.0597	3.4208	1.00	5.00
Rank	1.00	82	2.0366	.79264	.08753	1.8624	2.2107	1.00	3.00
	2.00	97	2.0825	.77285	.07847	1.9267	2.2382	1.00	3.00
	Total	179	2.0615	.78010	.05831	1.9464	2.1765	1.00	3.00

Table 10.2.1.1 H1 Descriptives across-brands analysis

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	.004	1	.004	.003	.955
	Within Groups	230.489	177	1.302		
	Total	230.493	178			
Evaluation	Between Groups	.894	1	.894	.595	.441
	Within Groups	265.777	177	1.502		
	Total	266.670	178			
Rank	Between Groups	.094	1	.094	.153	.696
	Within Groups	108.230	177	.611		
	Total	108.324	178			

Table 10.2.1.2 H1 ANOVA across-brands analysis

## 10.2.2 Within-brand analysis Oreo Cookies

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Attitude	1,00	41	4,6829	,81786	,12773	4,4248	4,9411	2,86	6,57
	2,00	48	4,8899	,87630	,12648	4,6354	5,1443	2,43	7,00
	Total	89	4,7945	,85143	,09025	4,6152	4,9739	2,43	7,00
Attitude_Oreo	1,00	41	4,6545	,98558	,15392	4,3434	4,9656	2,67	7,00
	2,00	48	4,7431	1,04393	,15068	4,4399	5,0462	2,33	7,00
	Total	89	4,7022	1,01269	,10735	4,4889	4,9156	2,33	7,00
Evaluation	1,00	41	4,0244	1,01212	,15807	3,7049	4,3439	1,00	5,00
	2,00	48	3,9792	,91068	,13145	3,7147	4,2436	1,00	5,00
	Total	89	4,0000	,95346	,10107	3,7992	4,2008	1,00	5,00
Rank	1,00	41	1,5366	,71055	,11097	1,3123	1,7609	1,00	3,00
	2,00	48	1,5625	,64926	,09371	1,3740	1,7510	1,00	3,00
	Total	89	1,5506	,67439	,07149	1,4085	1,6926	1,00	3,00
IntentionUse_Oreo	1,00	41	2,2805	1,24523	,19447	1,8874	2,6735	1,00	5,50
	2,00	48	2,7083	1,52578	,22023	2,2653	3,1514	1,00	7,00
	Total	89	2,5112	1,41216	,14969	2,2138	2,8087	1,00	7,00

Table 10.2.2.1 H1 Descriptives within-brand analysis Oreo Cookies

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	,947	1	,947	1,311	,255
	Within Groups	62,847	87	,722		
	Total	63,794	88			
Attitude_Oreo	Between Groups	,174	1	,174	,168	,683
	Within Groups	90,075	87	1,035		
	Total	90,248	88			
Evaluation	Between Groups	,045	1	,045	,049	,825
	Within Groups	79,955	87	,919		
	Total	80,000	88			
Rank	Between Groups	,015	1	,015	,032	,858
	Within Groups	40,008	87	,460		
	Total	40,022	88			
IntentionUse_Oreo	Between Groups	4,048	1	4,048	2,054	,155
	Within Groups	171,441	87	1,971		
	Total	175,489	88			

Table 10.2.2.2 H1 ANOVA within-brand analysis Oreo Cookies

### 10.2.3 Within-brand analysis Bing

		Descriptives							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Attitude	1.00	41	3.6481	1.07859	.16845	3.3076	3.9885	1.00	5.00
	2.00	49	3.4752	1.02701	.14672	3.1802	3.7702	1.00	5.86
	Total	90	3.5540	1.04843	.11051	3.3344	3.7736	1.00	5.86
Attitude_Bing	1.00	41	3.8110	1.25876	.19658	3.4137	4.2083	1.00	6.00
	2.00	49	3.5434	1.26696	.18099	3.1795	3.9073	1.00	6.75
	Total	90	3.6653	1.26325	.13316	3.4007	3.9299	1.00	6.75
Evaluation	1.00	41	2.6098	.97155	.15173	2.3031	2.9164	1.00	4.00
	2.00	49	2.3878	.97503	.13929	2.1077	2.6678	1.00	5.00
	Total	90	2.4889	.97433	.10270	2.2848	2.6930	1.00	5.00
Rank	1.00	41	2.5366	.50485	.07885	2.3772	2.6959	2.00	3.00
	2.00	49	2.5918	.49659	.07094	2.4492	2.7345	2.00	3.00
	Total	90	2.5667	.49831	.05253	2.4623	2.6710	2.00	3.00

Table 10.2.3.1 H1 descriptives within-brand analysis Oreo Cookies

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	.667	1	.667	.604	.439
	Within Groups	97.163	88	1.104		
	Total	97.830	89			
Attitude_Bing	Between Groups	1.599	1	1.599	1.002	.320
	Within Groups	140.427	88	1.596		
	Total	142.026	89			
Evaluation	Between Groups	1.100	1	1.100	1.161	.284
	Within Groups	83.389	88	.948		
	Total	84.489	89			
Rank	Between Groups	.068	1	.068	.272	.603
	Within Groups	22.032	88	.250		
	Total	22.100	89			

Table 10.2.3.2 H1 ANOVA within-brand analysis Oreo Cookies

## 10.3 Hypothesis H2-H5: ANOVA

### 10.3.1 Across-brands analysis

		Descriptives							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1.00	42	4.1871	1.04716	.16158	3.8608	4.5134	1.00	6.57
	2.00	47	4.2340	1.03378	.15079	3.9305	4.5376	1.29	5.86
	3.00	40	4.1429	1.13505	.17947	3.7799	4.5059	1.00	6.29
	4.00	50	4.1200	1.32303	.18710	3.7440	4.4960	1.00	7.00
	Total	179	4.1708	1.13794	.08505	4.0029	4.3386	1.00	7.00
Evaluation	1.00	42	3.3095	1.19935	.18506	2.9358	3.6833	1.00	5.00
	2.00	47	3.1489	1.08305	.15798	2.8309	3.4669	1.00	5.00
	3.00	40	3.3250	1.24833	.19738	2.9258	3.7242	1.00	5.00
	4.00	50	3.2000	1.37024	.19378	2.8106	3.5894	1.00	5.00
	Total	179	3.2402	1.22399	.09149	3.0597	3.4208	1.00	5.00
Rank	1.00	42	2.0476	.79487	.12265	1.7999	2.2953	1.00	3.00
	2.00	47	2.0851	.80298	.11713	1.8493	2.3209	1.00	3.00
	3.00	40	2.0250	.80024	.12653	1.7691	2.2809	1.00	3.00
	4.00	50	2.0800	.75160	.10629	1.8664	2.2936	1.00	3.00
	Total	179	2.0615	.78010	.05831	1.9464	2.1765	1.00	3.00

Table 10.3.1.1 H2-H5 descriptives across-brands analysis

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	.359	3	.120	.091	.965
	Within Groups	230.134	175	1.315		
	Total	230.493	178			
Evaluation	Between Groups	.962	3	.321	.211	.889
	Within Groups	265.709	175	1.518		
	Total	266.670	178			
Rank	Between Groups	.105	3	.035	.056	.982
	Within Groups	108.219	175	.618		
	Total	108.324	178			

Table 10.3.1.2 H2-H5 ANOVA across-brands analysis

### 10.3.2 Within-brand analysis Oreo Cookies

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Attitude	1,00	22	4,5974	,83838	,17874	4,2257	4,9691	2,86	6,57
	2,00	24	4,7143	,87456	,17852	4,3450	5,0836	2,43	5,86
	3,00	19	4,7820	,80442	,18455	4,3942	5,1697	3,00	6,29
	4,00	24	5,0655	,86022	,17559	4,7022	5,4287	3,43	7,00
	Total	89	4,7945	,85143	,09025	4,6152	4,9739	2,43	7,00
Attitude_Oreo	1,00	22	4,6515	,97034	,20688	4,2213	5,0817	2,67	7,00
	2,00	24	4,5208	1,09601	,22372	4,0580	4,9836	2,33	6,17
	3,00	19	4,6579	1,02961	,23621	4,1616	5,1542	3,00	6,67
	4,00	24	4,9653	,96055	,19607	4,5597	5,3709	2,83	7,00
	Total	89	4,7022	1,01269	,10735	4,4889	4,9156	2,33	7,00
Evaluation	1,00	22	4,0000	,97590	,20806	3,5673	4,4327	1,00	5,00
	2,00	24	3,7500	,94409	,19271	3,3513	4,1487	1,00	5,00
	3,00	19	4,0526	1,07877	,24749	3,5327	4,5726	2,00	5,00
	4,00	24	4,2083	,83297	,17003	3,8566	4,5601	2,00	5,00
	Total	89	4,0000	,95346	,10107	3,7992	4,2008	1,00	5,00
Rank	1,00	22	1,5909	,73414	,15652	1,2654	1,9164	1,00	3,00
	2,00	24	1,5833	,71728	,14641	1,2805	1,8862	1,00	3,00
	3,00	19	1,4737	,69669	,15983	1,1379	1,8095	1,00	3,00
	4,00	24	1,5417	,58823	,12007	1,2933	1,7901	1,00	3,00
	Total	89	1,5506	,67439	,07149	1,4085	1,6926	1,00	3,00
IntentionUse_Oreo	1,00	22	2,0909	1,18157	,25191	1,5670	2,6148	1,00	5,00
	2,00	24	2,4792	1,49258	,30467	1,8489	3,1094	1,00	5,50
	3,00	19	2,5000	1,31233	,30107	1,8675	3,1325	1,00	5,50
	4,00	24	2,9375	1,55558	,31753	2,2806	3,5944	1,00	7,00
	Total	89	2,5112	1,41216	,14969	2,2138	2,8087	1,00	7,00

Table 10.3.2.1 H2-H5 descriptives within-brand analysis Oreo Cookies

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	2,774	3	,925	1,288	,284
	Within Groups	61,020	85	,718		
	Total	63,794	88			
Attitude_Oreo	Between Groups	2,544	3	,848	,822	,485
	Within Groups	87,704	85	1,032		
	Total	90,248	88			
Evaluation	Between Groups	2,594	3	,865	,950	,420
	Within Groups	77,406	85	,911		
	Total	80,000	88			
Rank	Between Groups	,176	3	,059	,125	,945
	Within Groups	39,847	85	,469		
	Total	40,022	88			
IntentionUse_Oreo	Between Groups	8,275	3	2,758	1,402	,248
	Within Groups	167,214	85	1,967		
	Total	175,489	88			

Table 10.3.2.2 H2-H5 ANOVA within-brand analysis Oreo Cookies

### 10.3.3 Within-brand analysis Bing

Descriptives									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1.00	20	3.7357	1.08626	.24290	3.2273	4.2441	1.00	5.00
	2.00	23	3.7329	.95958	.20009	3.3180	4.1479	1.29	5.43
	3.00	21	3.5646	1.09122	.23812	3.0679	4.0613	1.00	5.00
	4.00	26	3.2473	1.04866	.20566	2.8237	3.6708	1.00	5.86
	Total	90	3.5540	1.04843	.11051	3.3344	3.7736	1.00	5.86
Attitude_Bing	1.00	20	3.7875	1.45384	.32509	3.1071	4.4679	1.00	6.00
	2.00	23	3.8315	1.00610	.20979	3.3965	4.2666	2.13	6.13
	3.00	21	3.8333	1.07698	.23502	3.3431	4.3236	1.00	5.88
	4.00	26	3.2885	1.43081	.28060	2.7105	3.8664	1.00	6.75
	Total	90	3.6653	1.26325	.13316	3.4007	3.9299	1.00	6.75
Evaluation	1.00	20	2.5500	.94451	.21120	2.1080	2.9920	1.00	4.00
	2.00	23	2.5217	.84582	.17637	2.1560	2.8875	1.00	4.00
	3.00	21	2.6667	1.01653	.22183	2.2039	3.1294	1.00	4.00
	4.00	26	2.2692	1.07917	.21164	1.8333	2.7051	1.00	5.00
	Total	90	2.4889	.97433	.10270	2.2848	2.6930	1.00	5.00
Rank	1.00	20	2.5500	.51042	.11413	2.3111	2.7889	2.00	3.00
	2.00	23	2.6087	.49901	.10405	2.3929	2.8245	2.00	3.00
	3.00	21	2.5238	.51177	.11168	2.2909	2.7568	2.00	3.00
	4.00	26	2.5769	.50383	.09881	2.3734	2.7804	2.00	3.00
	Total	90	2.5667	.49831	.05253	2.4623	2.6710	2.00	3.00

Table 10.3.3.1 H2-H5 descriptives within-brand analysis Bing

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	3.845	3	1.282	1.173	.325
	Within Groups	93.984	86	1.093		
	Total	97.830	89			
Attitude_Bing	Between Groups	5.219	3	1.740	1.094	.356
	Within Groups	136.807	86	1.591		
	Total	142.026	89			
Evaluation	Between Groups	2.018	3	.673	.701	.554
	Within Groups	82.471	86	.959		
	Total	84.489	89			
Rank	Between Groups	.087	3	.029	.114	.952
	Within Groups	22.013	86	.256		
	Total	22.100	89			

*Table 10.3.3.2 H2-H5 ANOVA within-brand analysis Bing*

## 10.4 Hypothesis H6-H9: ANOVA

### 10.4.1 Across-brands analysis

Descriptives									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1.00	49	4.0933	1.05284	.15041	3.7909	4.3957	1.00	6.29
	2.00	33	4.2727	1.13747	.19801	3.8694	4.6761	1.00	6.57
	3.00	55	3.9506	1.29719	.17491	3.6000	4.3013	1.00	6.00
	4.00	42	4.4694	.96235	.14849	4.1695	4.7693	2.43	7.00
	Total	179	4.1708	1.13794	.08505	4.0029	4.3386	1.00	7.00
Evaluation	1.00	49	3.1837	1.16679	.16668	2.8485	3.5188	1.00	5.00
	2.00	33	3.5152	1.27772	.22242	3.0621	3.9682	1.00	5.00
	3.00	55	2.9273	1.27446	.17185	2.5827	3.2718	1.00	5.00
	4.00	42	3.5000	1.10982	.17125	3.1542	3.8458	1.00	5.00
	Total	179	3.2402	1.22399	.09149	3.0597	3.4208	1.00	5.00
Rank	1.00	49	2.1020	.79700	.11386	1.8731	2.3310	1.00	3.00
	2.00	33	1.9394	.78817	.13720	1.6599	2.2189	1.00	3.00
	3.00	55	2.2182	.76233	.10279	2.0121	2.4243	1.00	3.00
	4.00	42	1.9048	.75900	.11712	1.6682	2.1413	1.00	3.00
	Total	179	2.0615	.78010	.05831	1.9464	2.1765	1.00	3.00

Table 10.4.1.1 H6-H9 descriptives across-brands analysis

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	7.047	3	2.349	1.840	.142
	Within Groups	223.446	175	1.277		
	Total	230.493	178			
Evaluation	Between Groups	10.872	3	3.624	2.479	.063
	Within Groups	255.798	175	1.462		
	Total	266.670	178			
Rank	Between Groups	2.955	3	.985	1.636	.183
	Within Groups	105.369	175	.602		
	Total	108.324	178			

Table 10.4.1.2 H6-H9 ANOVA across-brands analysis

## 10.4.2 Within-brand analysis Oreo Cookies

Descriptives									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1,00	20	4,5714	,93276	,20857	4,1349	5,0080	2,86	6,29
	2,00	21	4,7891	,69784	,15228	4,4715	5,1068	3,86	6,57
	3,00	18	5,1587	,66446	,15662	4,8283	5,4892	4,14	6,00
	4,00	30	4,7286	,95600	,17454	4,3716	5,0855	2,43	7,00
	Total	89	4,7945	,85143	,09025	4,6152	4,9739	2,43	7,00
Attitude_Oreo	1,00	20	4,6083	1,04192	,23298	4,1207	5,0960	2,67	6,67
	2,00	21	4,6984	,95251	,20785	4,2648	5,1320	3,33	7,00
	3,00	18	5,0185	,83017	,19567	4,6057	5,4314	2,83	6,17
	4,00	30	4,5778	1,13439	,20711	4,1542	5,0014	2,33	7,00
	Total	89	4,7022	1,01269	,10735	4,4889	4,9156	2,33	7,00
Evaluation	1,00	20	3,9500	1,14593	,25624	3,4137	4,4863	1,00	5,00
	2,00	21	4,0952	,88909	,19401	3,6905	4,4999	2,00	5,00
	3,00	18	4,2222	,64676	,15244	3,9006	4,5438	3,00	5,00
	4,00	30	3,8333	1,01992	,18621	3,4525	4,2142	1,00	5,00
	Total	89	4,0000	,95346	,10107	3,7992	4,2008	1,00	5,00
Rank	1,00	20	1,5000	,76089	,17014	1,1439	1,8561	1,00	3,00
	2,00	21	1,5714	,67612	,14754	1,2637	1,8792	1,00	3,00
	3,00	18	1,4444	,61570	,14512	1,1383	1,7506	1,00	3,00
	4,00	30	1,6333	,66868	,12208	1,3836	1,8830	1,00	3,00
	Total	89	1,5506	,67439	,07149	1,4085	1,6926	1,00	3,00
IntentionUse_Oreo	1,00	20	2,1500	1,26803	,28354	1,5565	2,7435	1,00	5,00
	2,00	21	2,4048	1,24116	,27084	1,8398	2,9697	1,00	5,50
	3,00	18	3,0556	1,60778	,37896	2,2560	3,8551	1,00	6,50
	4,00	30	2,5000	1,46217	,26695	1,9540	3,0460	1,00	7,00
	Total	89	2,5112	1,41216	,14969	2,2138	2,8087	1,00	7,00

Table 10.4.2.1 H6-H9 descriptives within-brand analysis Oreo Cookies

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	3,514	3	1,171	1,652	,184
	Within Groups	60,280	85	,709		
	Total	63,794	88			
Attitude_Oreo	Between Groups	2,442	3	,814	,788	,504
	Within Groups	87,806	85	1,033		
	Total	90,248	88			
Evaluation	Between Groups	1,963	3	,654	,713	,547
	Within Groups	78,037	85	,918		
	Total	80,000	88			
Rank	Between Groups	,469	3	,156	,336	,800
	Within Groups	39,554	85	,465		
	Total	40,022	88			
IntentionUse_Oreo	Between Groups	8,185	3	2,728	1,386	,253
	Within Groups	167,304	85	1,968		
	Total	175,489	88			

*Table 10.4.2.2 H6-H9 ANOVA within-brand analysis Oreo Cookies*

### 10.4.3 Within-brand analysis Bing

Descriptives									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Attitude	1.00	29	3.7635	1.01682	.18882	3.3768	4.1503	1.00	5.00
	2.00	12	3.3690	1.21594	.35101	2.5965	4.1416	1.00	5.00
	3.00	37	3.3629	1.10943	.18239	2.9930	3.7328	1.00	5.86
	4.00	12	3.8214	.63341	.18285	3.4190	4.2239	3.00	5.43
	Total	90	3.5540	1.04843	.11051	3.3344	3.7736	1.00	5.86
Attitude_Bing	1.00	29	3.9526	1.12620	.20913	3.5242	4.3810	1.00	6.00
	2.00	12	3.4688	1.53383	.44278	2.4942	4.4433	1.00	5.88
	3.00	37	3.4797	1.37894	.22670	3.0200	3.9395	1.00	6.75
	4.00	12	3.7396	.85190	.24592	3.1983	4.2809	2.63	5.38
	Total	90	3.6653	1.26325	.13316	3.4007	3.9299	1.00	6.75
Evaluation	1.00	29	2.6552	.85673	.15909	2.3293	2.9811	1.00	4.00
	2.00	12	2.5000	1.24316	.35887	1.7101	3.2899	1.00	4.00
	3.00	37	2.2973	.99624	.16378	1.9651	2.6295	1.00	5.00
	4.00	12	2.6667	.88763	.25624	2.1027	3.2306	1.00	4.00
	Total	90	2.4889	.97433	.10270	2.2848	2.6930	1.00	5.00
Rank	1.00	29	2.5172	.50855	.09443	2.3238	2.7107	2.00	3.00
	2.00	12	2.5833	.51493	.14865	2.2562	2.9105	2.00	3.00
	3.00	37	2.5946	.49774	.08183	2.4286	2.7606	2.00	3.00
	4.00	12	2.5833	.51493	.14865	2.2562	2.9105	2.00	3.00
	Total	90	2.5667	.49831	.05253	2.4623	2.6710	2.00	3.00

Table 10.4.3.1 H6-H9 descriptives within-brand analysis Bing

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	3.893	3	1.298	1.188	.319
	Within Groups	93.937	86	1.092		
	Total	97.830	89			
Attitude_Bing	Between Groups	4.197	3	1.399	.873	.458
	Within Groups	137.828	86	1.603		
	Total	142.026	89			
Evaluation	Between Groups	2.541	3	.847	.889	.450
	Within Groups	81.948	86	.953		
	Total	84.489	89			
Rank	Between Groups	.106	3	.035	.139	.937
	Within Groups	21.994	86	.256		
	Total	22.100	89			

*Table 10.4.3.2 H6-H9 ANOVA within-brand analysis Bing*

## 10.5 Non-parametric tests

### 10.5.1 Overall effect: Kruskal-Wallis

#### 10.5.1.1 Across-brands analysis

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,000	Reject the null hypothesis.
2	The distribution of Rank is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 10.5.1.1.1 Overall effect Kruskal-Wallis across-brands analysis

Dependent Variable	(I) Research_Group	(J) Research_Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Evaluation	1,00	2,00	-,15570	,30027	,999	-1,1260	,8146
		3,00	,05263	,32333	1,000	-,9858	1,0911
		4,00	,30263	,31367	,977	-,7058	1,3111
		5,00	1,38596 <sup>*</sup>	,33235	,004	,3191	2,4529
		6,00	1,78340 <sup>*</sup>	,32564	,000	,7410	2,8258
		7,00	1,50263 <sup>*</sup>	,32535	,001	,4561	2,5492
	2,00	8,00	1,53089 <sup>*</sup>	,30390	,000	,5499	2,5118
		1,00	,15570	,30027	,999	-,8146	1,1260
		3,00	,20833	,26870	,994	-,6489	1,0656
		4,00	,45833	,25700	,634	-,3581	1,2747
		5,00	1,54167 <sup>*</sup>	,27949	,000	,6468	2,4366
		6,00	1,93910 <sup>*</sup>	,27148	,000	1,0778	2,8004
	3,00	7,00	1,65833 <sup>*</sup>	,27114	,000	,7896	2,5271
		8,00	1,68659 <sup>*</sup>	,24498	,000	,9080	2,4652
		1,00	-,05263	,32333	1,000	-1,0911	,9858
		2,00	-,20833	,26870	,994	-1,0656	,6489
		4,00	,25000	,28360	,986	-,6528	1,1528
		5,00	1,33333 <sup>*</sup>	,30413	,002	,3620	2,3046
	4,00	6,00	1,73077 <sup>*</sup>	,29679	,000	,7884	2,6731
		7,00	1,45000 <sup>*</sup>	,29647	,000	,5021	2,3979
		8,00	1,47826 <sup>*</sup>	,27275	,000	,6081	2,3484
		1,00	-,30263	,31367	,977	-1,3111	,7058
		2,00	-,45833	,25700	,634	-1,2747	,3581
		3,00	-,25000	,28360	,986	-1,1528	,6528
	5,00	6,00	1,08333 <sup>*</sup>	,29384	,014	,1455	2,0212
		7,00	1,48077 <sup>*</sup>	,28624	,000	,5738	2,3878
		8,00	1,20000 <sup>*</sup>	,28591	,003	,2868	2,1132
		1,00	1,22826 <sup>*</sup>	,26123	,001	,3980	2,0585
		2,00					

		1,00	-1,38596 <sup>+</sup>	,33235	,004	-2,4529	-,3191
		2,00	-1,54167 <sup>+</sup>	,27949	,000	-2,4366	-,6468
		3,00	-1,33333 <sup>+</sup>	,30413	,002	-2,3046	-,3620
	5,00	4,00	-1,08333 <sup>+</sup>	,29384	,014	-2,0212	-,1455
		6,00	,39744	,30659	,895	-,5780	1,3729
		7,00	,11667	,30629	1,000	-,8637	1,0971
		8,00	,14493	,28339	1,000	-,7621	1,0519
		1,00	-1,78340 <sup>+</sup>	,32564	,000	-2,8258	-,7410
		2,00	-1,93910 <sup>+</sup>	,27148	,000	-2,8004	-1,0778
		3,00	-1,73077 <sup>+</sup>	,29679	,000	-2,6731	-,7884
	6,00	4,00	-1,48077 <sup>+</sup>	,28624	,000	-2,3878	-,5738
		5,00	-,39744	,30659	,895	-1,3729	,5780
		7,00	-,28077	,29900	,980	-1,2327	,6712
		8,00	-,25251	,27550	,983	-1,1267	,6217
		1,00	-1,50263 <sup>+</sup>	,32535	,001	-2,5492	-,4561
		2,00	-1,65833 <sup>+</sup>	,27114	,000	-2,5271	-,7896
		3,00	-1,45000 <sup>+</sup>	,29647	,000	-2,3979	-,5021
	7,00	4,00	-1,20000 <sup>+</sup>	,28591	,003	-2,1132	-,2868
		5,00	-,11667	,30629	1,000	-1,0971	,8637
		6,00	,28077	,29900	,980	-,6712	1,2327
		8,00	,02826	,27515	1,000	-,8530	,9096
		1,00	-1,53089 <sup>+</sup>	,30390	,000	-2,5118	-,5499
		2,00	-1,68659 <sup>+</sup>	,24498	,000	-2,4652	-,9080
		3,00	-1,47826 <sup>+</sup>	,27275	,000	-2,3484	-,6081
	8,00	4,00	-1,22826 <sup>+</sup>	,26123	,001	-2,0585	-,3980
		5,00	-,14493	,28339	1,000	-1,0519	,7621
		6,00	,25251	,27550	,983	-,6217	1,1267
		7,00	-,02826	,27515	1,000	-,9096	,8530
		2,00	-,06798	,19991	1,000	-,7116	,5756
		3,00	-,11722	,22371	,999	-,8337	,5992
		4,00	-,10965	,21676	1,000	-,8032	,5839
	1,00	5,00	-1,05013 <sup>+</sup>	,19498	,000	-1,6807	-,4196
		6,00	-1,10324 <sup>+</sup>	,18791	,000	-1,7131	-,4934
		7,00	-1,07632 <sup>+</sup>	,19640	,000	-1,7113	-,4413
		8,00	-1,13501 <sup>+</sup>	,19072	,000	-1,7530	-,5170
		1,00	,06798	,19991	1,000	-,5756	,7116
		3,00	-,04924	,19727	1,000	-,6796	,5811
		4,00	-,04167	,18935	1,000	-,6438	,5605
	2,00	5,00	-,98214 <sup>+</sup>	,16398	,000	-1,5044	-,4599
		6,00	-1,03526 <sup>+</sup>	,15550	,000	-1,5291	-,5414
		7,00	-1,00833 <sup>+</sup>	,16566	,000	-1,5366	-,4801
		8,00	-1,06703 <sup>+</sup>	,15888	,000	-1,5723	-,5618
		1,00	,11722	,22371	,999	-,5992	,8337
		2,00	,04924	,19727	1,000	-,5811	,6796
		4,00	,00758	,21433	1,000	-,6746	,6898
	3,00	5,00	-,93290 <sup>+</sup>	,19228	,001	-1,5496	-,3162
		6,00	-,98601 <sup>+</sup>	,18510	,000	-1,5810	-,3911
		7,00	-,95909 <sup>+</sup>	,19371	,000	-1,5805	-,3377
		8,00	-1,01779 <sup>+</sup>	,18795	,000	-1,6213	-,4142

4,00	1,00	,10965	,21676	1,000	-,5839	,8032
	2,00	,04167	,18935	1,000	-,5605	,6438
	3,00	-,00758	,21433	1,000	-,6898	,6746
	5,00	-,94048*	,18414	,000	-1,5280	-,3529
	6,00	-,99359*	,17664	,000	-1,5575	-,4296
	7,00	-,96667*	,18564	,000	-1,5592	-,3741
	8,00	-1,02536*	,17962	,000	-1,5987	-,4520
	5,00	1,00	1,05013*	,19498	,000	,4196
2,00		,98214*	,16398	,000	,4599	1,5044
3,00		,93290*	,19228	,001	,3162	1,5496
4,00		,94048*	,18414	,000	,3529	1,5280
6,00		-,05311	,14911	1,000	-,5282	,4220
7,00		-,02619	,15968	1,000	-,5374	,4850
8,00		-,08489	,15264	,999	-,5719	,4021
6,00		1,00	1,10324*	,18791	,000	,4934
	2,00	1,03526*	,15550	,000	,5414	1,5291
	3,00	,98601*	,18510	,000	,3911	1,5810
	4,00	,99359*	,17664	,000	,4296	1,5575
	5,00	,05311	,14911	1,000	-,4220	,5282
	7,00	,02692	,15096	1,000	-,4552	,5090
	8,00	-,03177	,14349	1,000	-,4871	,4236
	7,00	1,00	1,07632*	,19640	,000	,4413
2,00		1,00833*	,16566	,000	,4801	1,5366
3,00		,95909*	,19371	,000	,3377	1,5805
4,00		,96667*	,18564	,000	,3741	1,5592
5,00		,02619	,15968	1,000	-,4850	,5374
6,00		-,02692	,15096	1,000	-,5090	,4552
8,00		-,05870	,15444	1,000	-,5524	,4350
8,00		1,00	1,13501*	,19072	,000	,5170
	2,00	1,06703*	,15888	,000	,5618	1,5723
	3,00	1,01779*	,18795	,000	,4142	1,6213
	4,00	1,02536*	,17962	,000	,4520	1,5987
	5,00	,08489	,15264	,999	-,4021	,5719
	6,00	,03177	,14349	1,000	-,4236	,4871
	7,00	,05870	,15444	1,000	-,4350	,5524

\*. The mean difference is significant at the 0.05 level.

*Table 10.5.1.1.2 Overall effect multiple comparisons across-brand analysis*

### 10.5.1.2 Within-brand analysis Oreo Cookies

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,346	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,928	Retain the null hypothesis.
3	The distribution of IntentionUse_Oreo is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,307	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.1.2.1 Overall effect Kruskal-Wallis within-brand analysis Oreo Cookies

### 10.5.1.3 Within-brand analysis Bing

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,452	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Research_Group.	Independent-Samples Kruskal-Wallis Test	,950	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.1.3.1 Overall effect Kruskal-Wallis within-brand analysis Bing

## 10.5.2 Hypothesis H1: Mann-Whitney

### 10.5.2.1 Across-brands analysis

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,471	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,702	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 10.5.2.1.1 H1 Kruskal-Wallis across-brands analysis

### 10.5.2.2 Within-brands analysis Oreo Cookies

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,678	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,711	Retain the null hypothesis.
3	The distribution of IntentionUse_Oreo is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,212	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 10.5.2.2.1 H1 Kruskal-Wallis within-brand analysis Oreo Cookies

### 10.5.2.3 Within-brand analysis Bing

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,256	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PriorNotification.	Independent-Samples Mann-Whitney U Test	,600	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 10.5.2.3.1 H1 Kruskal-Wallis within-brand analysis Bing

## 10.5. 3 Hypotheses H2- H5: Kruskal-Wallis

### 10.5.3.1 Across-brands analysis

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.889	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.983	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.3.1.1 H2-H5 Kruskal-Wallis across-brands analysis

### 10.5.3.2 Within-brands analysis Oreo Cookies

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.346	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.928	Retain the null hypothesis.
3	The distribution of IntentionUse_Oreo is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.307	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.3.2.1 H2-H5 Kruskal-Wallis within-brand analysis Oreo Cookies

### 10.5.3.3 Within-brands analysis Bing

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.452	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_Prominence.	Independent-Samples Kruskal-Wallis Test	.950	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.3.3.1 H2-H5 Kruskal-Wallis across-brands analysis

## 10.5.4 Hypotheses H6- H9: Kruskal-Wallis

### 10.5.4.1 Across-brands analysis

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.052	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.180	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.4.1.1 H6-H9 Kruskal-Wallis across-brands analysis

### 10.5.4.2 Within-brands analysis Oreo Cookies

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.671	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.708	Retain the null hypothesis.
3	The distribution of IntentionUse_Oreo is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.307	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.4.2.1 H6-H9 Kruskal-Wallis within-brand analysis Oreo Cookies

### 10.5.4.3 Within-brand analysis Bing

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Evaluation is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.377	Retain the null hypothesis.
2	The distribution of Rank is the same across categories of Group_PN_ProgramLiking.	Independent-Samples Kruskal-Wallis Test	.934	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Table 10.5.4.3.1 H6-H9 Kruskal-Wallis within-brand analysis Bing