

Brickau, Ralf A.; Cornelsen, Jasmin

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The impact of visual subliminal triggers at the point of sale on the consumers' willingness to purchase: A critical investigation into gender differences

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Ralf A. Brickau;
Jasmin Cornelsen

with a preface by Achim Fringes

The impact of visual
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ISM - International School of Management gGmbH

Otto-Hahn-Str. 19 · 44227 Dortmund

www.ism.de

Tel.: 0231.975139-0 · Fax: 0231.975139-39

ism.dortmund@ism.de

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Retail is rarely gender neutral

The fact that women and men differ profoundly in their consumer behavior increasingly forces retailers to approach both target groups with different strategies. Research in various areas show that differences are not solely acquired via upbringing but are naturally rooted in the human brain.

The differences between the female and male brain are not based on size but on how perception and behavior are processed in the brain.

Our brain consists of 100 billion neural cells. Communication between these neural cells operates on the one hand on electrical impulses and on the other hand via biochemical molecules. These messengers have the task to transmit information between neural cells. Also absorbed signals which are firstly transported via electrical impulses end up in a chemical process. The connection between neurons is processed through synapses, scissures, in which the transmittance of information is determined by neurotransmitters.

Hence Seeing, Smelling, Tasting, Hearing and Sensing are in the first place chemical processes.

Many of these neurotransmitters show different compositions and concentrations in men and women and subsequently lead to differences in perception and behavior.

Throughout life cognitive capacities in men and women are arranged according to different principles; this is triggered via hormonal fluctuations. The hormonally dependent differentiation in humans commences at an early embryonic stage in the pre-birth development. Moreover cognitive capacities have an evolutionary background as they proved to be beneficial during the long period of evolution.

The majority of human brains possess characteristics both from male and female categories. Brains with purely female or male features are rather seldom. Despite this fact specific, different ways of behavior are existent.

Women possess a faster speed of cognition. This enhances better optical perception and also more detailed perception and speed of decision making but also a more detailed memory power. Moreover women possess a better motorical function in their hands which has a profound impact at the PoS as we „come to grips” with things there and then in the truest meaning of the word. Men in contrast have a better faculty of abstraction and a better spatial orientation. Men are more target-oriented in their purchasing decisions and have clear perceptions of their intended course of action. Women take more alternatives into account when deciding upon a product. Women also perceive more details at the PoS which do not reach mens’ cognition at all.

Regardless how strongly one may assess biological and evolutionary differences in female and male brains, the fact is that between 70 and 80% of purchasing decisions of private consumption at the PoS are made by women. Research data that has been collected by nearly all retailers over the years is unambiguous. The majority of men go out and buy things, women go “shopping”. Most men find it incomprehensible that women go shopping through the stores without precise prior determination of what to buy. In this respect men are more purposeful and target-oriented. Only when it comes to technical devices men go astray from this behavior as we can observe in shops for technical appliances like Mediamarkt & Co.

Additionally to the differences in perception of men and women at the PoS it can be stated that Retailers and FMCG Producers are not only competing on the grounds of product performance anymore but rather have reached a competition in perception or as McCann Erickson once put it: USP means Unique Selling Perception.

Many generalisations of the past have been unmasked as prejudices but what remains are the distinct different strategies developed for the PoS. Many insights from Neuro Sciences and Evolution Biology are in accord with what retailers experience daily at the PoS. Before analyzing target groups in minute details it would be advisable to consider these preliminary findings even if one may find oneself between the “fronts” of the battle of sexes.

Hence the differing purchasing behaviors of men and women come into focus of Neuromarketing and Neuromerchandising and will get increasingly more influence on products and retail concepts. This paper is looking at gender specific differences in the perception of merchandising displays at the PoS and provides clear proof that retailers and producers alike should concentrate on these differences in more detail in order to create a PoS that influences the perceptual mode of their target groups more appropriately.

Achim Fringes

Abstract

Purpose – Over the last decades a plethora of advertising elements has been employed at the point of sale (POS) in supermarkets with the intention to increase demand among male and female consumers - with varying success. Companies still strive to understand the “black box” of consumer brains. Neuro-scientific research has brought new perspectives to consumer behaviour and shows positive results but still there are a lot of white spots on the map while trying to understand consumers’ behaviour. This exploratory research is aimed at identifying gender differences in the perception of visual subliminal marketing triggers at the POS. Concentrating on food

retailing, the impact of subliminal marketing triggers in the form of merchandising displays on the consumers' willingness to purchase is investigated, using the example of the confectionary product "Celebrations".

Design/Methodology/Approach - Data is collected using both a quantitative and a qualitative research approach. First, a subliminal test has been conducted on a sample of 305 participants, including 154 male consumers and 151 female consumers, in order to investigate the responses of participants subjected to different subliminal advertising triggers and moreover to uncover the impact of these triggers that potentially affect the consumers' willingness to purchase. Afterwards, two focus groups divided by gender are conducted to further explore the quantitative results. One focus group consists of five male participants, while the other group comprises six female participants. The results of both approaches are submitted to a multistage analysis process.

Findings - The results show that gender differences in the perception of subliminal marketing triggers exist and subsequently result in a differing general willingness to pay for the product. Regardless of the display shown, women were willing to pay more for a box of Celebrations than men. Six factors - trendy, vitality, stylish, fun/funny, dynamic and sexy – are perceived as the most important aspects of good advertising on POS-displays as they are identified positively by both genders. However, the analysis reveals that those factors are associated with different types of advertisements promoting different products. These findings indicate that men and women substantially differ in their buying behaviour as well as in their perception of advertising displays. Thus, preferences of male and female consumers in the design of advertisements are uncovered and characterized.

Research limitations/Implications - The major constraints of this research is the limited access to points of sale in supermarkets. Also only a small sample size in the qualitative approach can be utilised for analysis. Furthermore the research is limited to only one single FMCG product. Future studies should include other products and a larger sample size in the qualitative research. However, the research presents a good starting point for further debate on differences in the perception of subliminal marketing triggers between genders.

Practical implications - Research in this field mainly focuses on the perception of advertisements in relation to advertising cognition, brand cognition and purchase intention, conducted through traditional research methods only. Marketers could benefit from the current research as it provides explanations as well as practical implications that can be used to optimize their communication strategy and thus increase their sales output.

Originality/Value – It appears that this is the first study that combines the area of neuromarketing and gender marketing in order to investigate the influence of gender on the perception of subliminal marketing triggers, the interaction of these two variables and their impact on the consumer's willingness to purchase.

Keywords - Consumer buying behaviour; Strategic marketing management; Neuro-marketing; Neuromerchandising; Buying decision process; Subliminal marketing triggers; Unconscious perception; Gender marketing; Gender differences; Marketing research.

1 Introduction

Knowing how the consumer's willingness to purchase can be increased and how specific consumer groups can be addressed appropriately, is crucial for the success of a business. Since supermarkets are full of advertising elements trying to provoke male and female consumers to purchase (Inman et al., 2009), more and more companies attempt to reveal what is inside the so called "black box" i.e. the consumer brains to target consumers more effectively. Therefore, a greater interest to understand how to successfully and sustainably influence consumer buying behaviour evolves in order to gain competitive advantage in the market.

This exploratory research aims to develop an increased understanding of the subliminally influencing elements in merchandising displays. The overall aim of this research is to examine marketing communication strategies at the point of sale. In particular, gender differences in the perception of visual subliminal marketing triggers that influence consumers' willingness to purchase will be explored. This research is therefore aimed at understanding if - and how - gender-specific subliminal marketing triggers at the POS may lead to an increase of sales of impulse purchases of FMCG i.e. the confectionary Celebrations. Concentrating on food retailing, the central research objective is to investigate the influence of visual subliminal triggers at the POS on men's and women's willingness to purchase. In order to be able to reach this objective, literature on neuromerchandising, consumer buying behaviour, subliminal marketing triggers, gender differences, gender marketing as well as marketing communication strategies at the POS is evaluated. In order to build a future successful strategy, issues that are most relevant for the example of Celebrations will be identified. As a result clear research questions, in the form of theses, are provided focusing on gender differences and the key influencing factors that apply.

2 Theoretical Foundation

2.1 Neuromarketing

An analysis of secondary sources is carried out to refine objectives and to explain why researchers and marketers alike are strongly interested in applying neuroscience and gender research to marketing.

Over the past years Neuromarketing was generally studied to objectively identify consumers' preferences and study the cognitive and emotional responses to marketing triggers. Most of the conducted research concerned the topic of marketing communications and brand recognition (Fisher et al., 2010). In this context, Hubert and Kenning (2008) conducted a study examining the effect of celebrities and physically

attractive people in advertisements. They found out that the presence of prominent or “good looking people” activates the area of the brain involved in the process of recognition and the creation of trust. Therefore, this type of testimonials positively influences consumers’ preferences and their buying decisions. Furthermore, the study revealed that images of attractive women stimulate the area of reward and well-being in the brains of heterosexual men (Hubert and Kenning, 2008). In line with this, Senior (2003) found that attractive human faces also enjoy privileged status and activate the brain reward areas more than unattractive faces. Also, Perrachione and Perrachione (2008) came to the conclusion that characters, with which consumers can identify themselves, trigger a positive reaction. Redundant messages, in contrast, negatively influence consumers’ responses to a product. This would enable companies to include suitable elements in their strategy, enabling their product advertising to be more stimulating and easier to remember (Eser et al., 2011).

The research of Fugate (2007) revealed that neuromarketing supports companies to identify elements that are neurologically activating in a TV commercial. Companies assess images, phrases, sound effects and music in order to develop advertising campaigns that are more appealing to consumers. Another study carried out by Fugate (2008) found that neuromarketing is already widely used in the development of products and services in line with consumers’ preferences.

One of the most frequently mentioned studies within the literature of neuromarketing is the experiment conducted by Daimler-Chrysler to evaluate car model preferences (Lee et al., 2007; Garcia and Saad, 2008). In this research, fMRI results showed the activation of certain areas of the brain, which are known to be linked to the reward system and well-being, when the participants were confronted with products that have earned reputation as a symbol of status, luxury and social dominance.

Other studies examined the effect of neuromarketing techniques for pricing, sales and promotion decisions. One of these studies conducted, focused on the differences in the prices of wine and revealed the critical role of price in the perception of product quality. Within this research, wine samples with different prices were presented, and participants were asked to assess these according to their preferences, while an fMRI device measured their brain activity. The brain areas linked to the reward system showed higher activity when participants believed to drink the most expensive wine (Garcia and Saad, 2008). Thus, this study revealed an interesting phenomenon with determination of prices, showing that consumers can perceive a price level in two different ways. A high price for a given category of products can either be perceived as a feeling of financial loss and therefore restrain consumers from purchasing them. Alternatively, a high price for a given product can be understood as an indicator of quality and improve the value of the product and therefore increase the likelihood of purchase (Javor et al., 2013).

Research on neuromarketing was also intensively used to determine branding strategies. For instance the study of Perrachione and Perrachione (2008) found that neuromarketing could help to understand mechanisms underlying consumers' loyalty. In this study, using brain signal tools (fMRI), consumers had to choose retail brands they would like to buy from. When consumers were purchasing a brand to which they were loyal, the ventromedial prefrontal cortex was activated. This area is known to be linked to the reward system. A similar study was conducted by Garcia and Saad (2008), examining the factors that trigger consumers to select a certain brand or product. The results indicated, that different brands and products accordingly activate different areas of the brain, so that the consumers' choices can be predicted by identifying their preferences and emotions (Lee et al., 2007).

Another application of neuromarketing explored by McClure et al (2004) revealed that certain brain areas mediate reward processing, when participants tasted their preferred cola drink. Montague (2004) took the classic Coca Cola and Pepsi Challenge one step further by using brain scans to see whether subjects preferred Coca Cola or Pepsi. The subjects were wired to a magnetic resonance imaging (MRI) machine that observed their neural activity. Though half of the participants, without knowing which sample was which brand, said that they preferred the one that was actually Pepsi. Once they were told, which samples were Coca Cola, 75% said they preferred the taste of Coca Cola. When looking at the MRI, it was observed that the brains of the participants were recalling images and other forms of emotional association from Coca Cola's marketing and advertising. This also outlines the difference between unconscious preferences and preferences communicated by participants, after thinking about their choice.

Finally, Cîrneai and colleagues (2014) conducted a study to investigate the correlation between declared consumption of a food product and the activation of specific brain regions. They came to the conclusion that changes in certain brain areas were positively correlated with whether or not participants consumed a certain brand implying that brands trigger personal relevance. There was also a significant association between brain activations and participants' responses on the consumption question, indicating the brand's capacity to generate emotions. Therefore, they assumed that neuromarketing could be used for evaluating the personal relevance of advertisements or other marketing-related triggers.

Although these previous studies provide some evidence of stronger activities in certain areas of the brain as a reaction to marketing triggers, no research was conducted examining the gender-specific differences in the perception of subliminal marketing triggers, neither their impact on the consumers' willingness to purchase, nor the underlying reasons for those differences in perception. Exclusively the research of Hu-

bert and Kenning (2008) investigated the impact of gender, mentioning the positive influence of attractive women on the reward system of heterosexual men.

2.2 Gender marketing

Investigating gender-specific differences in the perception of subliminal triggers also requires to examine the ideas of gender marketing. Earlier research examined gendered advertising and its relationship with different media including print, television, radio and the Internet (MacKay and Covell, 1997). Some studies investigated the effects of gendered products and brands on the purchase patterns of males and females as well as gender and its relation to advertising effects on consumer behaviour (Wolburg and Pokrywczynski, 2001). Though these focussed studies contributed to the understanding of gender marketing research, no comprehensive summary of gender in advertising and marketing was published. Hence, to fully understand gender and its impact on advertising, several approaches were analysed.

A study carried out by Kirchler (1989), examined the impact of gender on the purchasing decision, when it comes to specific products. According to this study, certain purchase decisions can clearly be assigned to men, while other decisions are rather made by women. Men are supposed to autonomously influence purchase decisions regarding insurances, credits, cars and technological devices, whereas women are supposed to influence decision-making when it comes to household goods, cosmetics and medicines. An investigation by Popcorn and Marigold (2000) revealed that women and men respond to entirely different stimuli when viewing and evaluating advertising imagery. While men respond positively to male imagery, women respond positively to female imagery. This is why advertisements for products directed at women rarely display typical male imagery. On the other hand advertisements for products directed to men do not show typical female imagery since these images are stereotypically associated with the opposite sex. Moreover, men and women react differently to stimuli such as speed of music and volume. Women tend to react more negatively to louder and faster music (Kellaris and Rice, 1993). However, women would use products and respond positively to imagery that they perceive as being masculine. In contrast, men did not respond positively to images or products that they associate with feminine connotations. These findings were supported by research conducted by Wolin (2003). While men rejected brands that are gendered towards women, women seemed to be more open-minded for a broader range of brands and products. This is explained by the fact that they tend to adapt more quickly to traditional male domains than men to traditional female ones. Thus, for a gendered product to be successful in targeting both genders at the same time, the image needs to be gender neutral or rather masculine. Sheehan (2014) also investigated gender differences in responding to advertisements. The research revealed that women and men respond differently to the same trigger, e.g. athletic imageries. While women

rarely portray themselves as athletes, unless they are performing a professional sport, men have images of themselves as athletes even if they do not involve in any sport activity. Therefore, an image of an athlete, regardless of the gender, is likely to generate different responses from men and women.

Research conducted by Alreck (1994) investigated the preferences of men and women when it comes to the design of advertisements. Advertisers often use colours, shapes, textures, packaging, logos, verbiage, graphics, sound, and names to define the gender of a brand. Alreck postulated that women prefer a softer perspective, warmer colours and pastels, blunt lines, soft surfaces, blended or natural patterns and rounded lines and structures. Men on the other hand favour a sharp perspective, vertical lines, deep dense colours, rough surfaces, solid or geometric patterns and straight shapes or angles. Another study revealed that males prefer more competitive advertisements, while females require more persuadable advertising in order to be convinced to purchase a product (Prakash, 1992). These findings clearly show the different perceptions and preferences men and women hold concerning advertising imagery. Hence, examining market potential for a gendered brand becomes a crucial early step when introducing a product.

Finally, a few new studies that involve neuroscientific techniques were conducted to identify the underlying reasons for those gender differences. These revealed that women and men use different parts of their brains when processing information. Women's processing is focused to the frontal lobes, where the brain also processes multitasking. Men's processing however is merely distributed throughout the brain (Hotchkiss, 2008).

2.3 Conclusion of the Literature Study

A wide range of studies were conducted, focusing on advertising and advertising strategies. Especially, the perception of advertisements was widely studied in psychology and marketing studies. However, the research to date was mainly about the perception of advertisements in relation to advertising cognition, brand cognition and purchase intention and moreover only conducted via traditional market research methods. Gender differences in advertising were mostly addressed in studies about gender-role portrayal, combining feminist theories with marketing and gender related content analyses (MacKenzie and Lutz, 1989). No research was conducted examining the gender-specific differences in processing subliminal marketing triggers, their impact on the consumers' willingness to purchase and the underlying reasons for the different responses, using neurological research methods. Thus, this study attempts to bridge the gap in existing literature by examining the interaction effect of these variables (gender differences, perception and consumer willingness to pay). From an academic viewpoint, this research extends the literature on neuromarketing and

gender marketing on subliminal marketing triggers. Hence, this research investigates the relation between gender differences and the perception of subliminal marketing triggers of advertisements.

3 Theses

Having determined the central aims and objectives of this research and having reviewed the existing literature, the following theses can be generated:

- T₁: Visual subliminal marketing triggers influence the consumer buying behaviour.
- T₂: Gender influences the consumer buying behaviour.
- T₃: Gender-specific differences in the perception of visual subliminal marketing triggers exist.
- T₄: Men are attracted to merchandising displays showing attractive women.
 - T_{4.1}: Women with sensuous, full lips and wide eyes are attractive to men.
 - T_{4.2}: Women with a slim, but feminine figure are attractive to men.
 - T_{4.3}: Women with long silky hair are attractive to men.
- T₅: Women are attracted to merchandising displays showing attractive men.
 - T_{5.1}: Men with thick hair are attractive to women.
 - T_{5.2}: Tall men are attractive to women.
 - T_{5.3}: Confident, independent and very manly men appear attractive to women.
- T₆: Men and women are equally attracted to a neutral merchandising display, showing solely the product.
- T₇: Visual subliminal marketing triggers perceived as attractive increase the consumer's willingness to purchase.

4 Research Design

4.1 Subliminal Test

The first part of the research uses a quantitative method in the form of a subliminal survey to identify gender-specific differences regarding the perception of visual subliminal marketing triggers and its influence on the consumers' willingness to purchase. For this purpose a computer-based neurological subliminal test is employed, using the software "Xcode" to measure the responses of participants, subjected to visual subliminal marketing triggers, quantitatively (Lechnar, n.d.). Using the effects of subliminal priming (Berlin, 2011), the test yields at uncovering the processes below the threshold of consciousness that affect the consumers' willingness to purchase. This software-tool was previously tested successfully in various similar settings.

This test consists of several parts. Except for questions aimed at assessing the demographic profile of the participants, which were nominal, the remaining data was evaluated using a scale system. The first part entailed demographic questions to the participants including their age and gender. The second part of the test contains a memory game, requesting the participants to find matching images out of several images available. The research was introduced as a study about responsiveness. Thus participants are unaware of the actual purpose as the time during the memory game is taken. This test is aimed at neutralising any prior priming of the respondent that may interfere with the following test. The third part consists of the actual neurological subliminal test, using priming technique. According to the results of former studies, three different merchandising displays of Celebrations, with different subliminal triggers, were created and verified by the expert in that field, Achim Fringes: (1) One that is hypothesized to be attractive to men, (2) one that is hypothesized to be attractive to women and (3) one that is hypothesized to be attractive to both sexes. Hence the merchandising displays used for the tests fulfil these criteria and are scientifically backed up. The merchandising displays are displayed in figure 1.



Figure 1: The merchandising displays created for the neurological subliminal test

Former studies unveiled that the use of testimonials with brown hair is very beneficial when advertising confectionary to consumers as they are considered to be more intelligent and thus are more attention-grabbing than testimonials with other hair colours (Anonymous, 2005). Also, the involvement of people considered as physically attractive was proven to raise the level of awareness as they tend to be more understandable, likable, easier to remember and more suitable (Statista, 2016b). However, when choosing a testimonial, image, sympathy, recognition and trustworthiness are critical factors that need to be taken into account. Therefore, two out of the three merchandising displays include male or female brunette testimonials considered as being attractive, whereas for the third display a neutral image of the product was chosen.

Within this subliminal test a short video is shown, which consists of three frames. Firstly, a black screen appears for 2.5 seconds. Secondly, one of the three merchandising displays occurs for 25 milliseconds, i.e. a subliminal. Finally, the black screen

reappeared for further 2.4 seconds. The merchandising displays are assigned to participants to ensure an equal distribution to both genders. Hence, the research design is 3 x 2, i.e. three subliminal marketing triggers and two sexes. Showing the displays, i.e. the subliminal marketing triggers, only for an extremely short period of time, ensures only emotional and no cognitive processes to be stimulated. Moreover, the video is only shown once to each participant. Within the final part, participants are asked to rate their willingness to pay for the product on a scale ranging from € 1,49 to € 4,49. A low score on the scale indicates a low level of willingness to purchase, whereas a high score on the scale indicates a higher level of willingness to purchase. The use of such a rating scale increases the specificity of the judgement and therefore the reliability of the results (Marcoulides, 1998).

4.2 Focus Groups

Combining this method with a qualitative data collection technique to further investigate results of the subliminal test provides additional value. As a qualitative research technique, neuro-scientific tests are a specific form of market research, allowing a sizeable advantage over more traditional forms of market research (Taher, 2006). However, due to limited financial resources, this study does not include complex qualitative neuroscientific research methods. In order to still get consumer insights and to explore what may influence the consumer behaviour of both, men and women, this research conducts focus groups to delve into the motivations and emotions of the consumers, when being exposed to visual subliminal marketing triggers at the POS. Therefore, the main purpose of the focus groups is to potentially verify and understand the results that were obtained within the prior neurological subliminal test. Being a form of group interviews focus groups are an ingenious way to collect multiple data simultaneously (Kitzinger, 1995). Through encouraging the participants to ask questions, share opinions and comment on each other's opinions and experiences, valuable insights and several perspectives can be elicited in a relatively quick manner. Some researchers note that group discussions generate more critical comments than interviews (Watts and Ebbutt, 1987). However, this method obtains depths and reveals underlying issues. Thus, it can be used to not only identify gender differences in the perception of the visual subliminal marketing triggers but also may explain why different triggers subliminally influence them in a certain way.

The focus groups of this research consists of people of different age with a general interest in confectionary and moreover with an interest in chocolates such as Celebrations. Furthermore, homogeneity within focus groups is advised to benefit from participant's shared opinions and to explore the existing gender-related disparities. Therefore, two homogenous groups were formed – one focus group consisting of men and one group consisting of women - to examine the gender-specific differences in their perception of the visual subliminal marketing triggers. In order to give each

participant the opportunity to be involved in the discussion, small groups, one comprising of six female and one consisting of five male participants, are conducted. Furthermore, questions of an open nature are used as they encourage the participants to provide an extensive answer, reveal attitudes and obtain hidden emotions (Saunders et al., 2009).

The focus group sessions are divided into four parts. Within the first part a creative association technique is used to identify what is associated with good advertising in general and to find generic terms to summarise the participants' associations. Therefore, participants are asked to collect articles, words, symbols or images from the magazines available, reminding them of good advertising. Through their individual explanation of why they chose a certain article or image and the following discussion within the group, the participants categorize all associations under generic terms. Within the second part a prioritisation technique, is used to test the attraction of the three created merchandising displays. For this purpose, the participants are asked to establish a ranking of the displays. Within this part there are five displays the participants can chose from including the ones used in the subliminal test. Those displays are presented in figure 2.



Figure 2: The merchandising displays created for the focus groups

Hence, participants are asked to evaluate the displays individually using a point system. Each participant receives four points, which they should assign to the displays that are most appealing to them. To ensure that the participants do not assign all points to one display, the participants are only given permission to allocate a maximum of three points to one display. Discussing their choices afterwards, they find a common ground providing a clear picture. The third part consists of a mapping technique, where participants are requested to identify those attributes collected, fitting best to the three merchandising displays chosen. Explaining the reasons for their decision individually and discussing the result in the group, unveils further insights and missing attributes. The final part consists of a preference and characterisation technique, asking the participants to describe the perfect look of a testimonial in an advertisement. Hence, participants are requested to spontaneously characterise what they prefer in a women or men. Discussing their opinions and preferences creates a final group outcome and thus provides a clear picture of how an appealing advertisement should look like.

4.3 Sample

For the quantitative research, a non-probability sampling method in the form of convenience sampling is used. The sample consists of 305 participants in groups ranging between 18 and over 70 years with a mean age of 30-39 years. Moreover, the sample consists almost equally of men and women in all age groups. The resulting data is submitted to focus groups to further examine the obtained results.

For the qualitative research an equal number of men and women is recruited to participate in the focus group, also using a non-probability sampling method in the form of convenience sampling (Saunders et al., 2009). The actual sample group consists of six female participants and five male participants. Most of the participants are contacted via personal networks. Invitations were distributed via e-mail containing information about the set-up, a pre-course questionnaire to assess if the requirements for participation are fulfilled and the date of the focus group implementation. No information about the purpose of the research is included in the invitation, ensuring that the research project is not jeopardized.

5 Results

5.1 Subliminal Test

Starting the data analysis, information about the demographic study variables (gender and age) are summarised to provide details on descriptive statistics of the study variables. Frequencies are used to obtain the number of respondents within each category in the dataset. The total number of cases in this dataset is $N=305$, consisting of an even spread of male ($n=154$) and female ($n=151$) respondents of all ages. The age is recorded in six categories. The demographic analysis of the final sample reveals that respondents mainly belong to the younger age group, consisting of the 18 to 29 year olds (26,9%). Participants are fairly evenly distributed across the younger age groups (< 60) and across gender.

Following the descriptive statistics, the main analysis is conducted via a two-way ANOVA. As a univariate general linear model (GLM) with exactly two independent variables, the two-way ANOVA contains all main effects and interactions between the two independent variables, i.e. gender and merchandising displays, on the dependent variable, i.e. consumers' willingness to pay (see Appendix 2). The dataset consists of two between subject factors, gender with two levels and merchandising displays with three levels. Thus, the ANOVA has a 2×3 between subjects design. The preliminary analysis of the two-way ANOVA outlines the means and standard deviations of the study variables. Exploring the means and standard deviations of the study variables is important, in order to test theses 3, 4, 5, 6 and 7 regarding the gender-specific differences in perception of the merchandising displays, as well as the influence on

their willingness to pay. The first merchandising display, supposed to be attractive for men, has the highest mean (€ 2.51) among men. Accordingly, the second merchandising display, designed to be attractive for women, has the highest mean (€ 2.90) among women. The third and neutral display has the lowest mean (€ 2.41) among women. Meanwhile, the second merchandising display has the lowest mean (€ 1.98) not only among men, but in general.

Further the variability is assessed via the values of the standard deviation, being useful for anticipating further analyses. As indicated by the values, male and female participants are affected differently by the merchandising displays influencing their willingness to pay. Specifically, the attractiveness of the merchandising display that is supposed to be attractive to men (display 1) is rated similarly among males ($M = 2.51$, $SD = 0.74$) and females ($M = 2.66$, $SD = 0.70$). The attractiveness of the third display, supposed to be attractive to both sexes is also rated similarly among males ($M = 2.32$, $SD = 0.63$) and females ($M = 2.41$, $SD = 0.52$). However, the attractiveness of the second display is significantly less attractive to men ($M = 1.98$, $SD = 0.38$) than to women ($M = 2.90$, $SD = 0.78$). Thus, it can be stated that thesis 2, 3, 4, 6 and 7 appear to be supported. In contrast, thesis 5 has to be rejected.

In order to test for theses 1 and 2 and to determine, whether any of the independent variables has an effect on the dependent variable, the two-way ANOVA is conducted. The significance values of the independent variables have to be considered. The first finding of importance is the significant main effect of the gender of a person, with $p < .001$. The F-ratio is highly significant indicating that the gender significantly affects the amount the respondent is willing to pay for the product. Supporting thesis 2, the gender of the participant does influence the willingness to pay directly, no matter which display is shown to each respondent. Hence, there is a significant main effect of gender on the consumers' willingness to pay, $F(2, 299) = 3.225$, $p < .001$, $\eta^2 = .021$. Hence men (€ 2.26) generally intend to pay less for a box of Celebrations in comparison to women (€ 2.65). Therefore, gender seems to influence the willingness to pay, i.e. in a negative way for male consumers and in a positive direction for female consumers.

Testing for thesis 1, the main effect of the shown merchandising displays is also captured. The F-ratio is significant ($p < .05$). Hence, ignoring the gender of respondents, the shown merchandising displays directly influence the consumers' willingness to pay, supporting thesis 1. Thus, there is a significant main effect of the shown merchandising displays on the consumers' willingness to pay, $F(2, 299) = 3.225$, $p = .041$ with $\eta^2 = .086$, showing that consumers tend to pay the most after viewing the first merchandising display (€ 2.58). Hence, the first subliminal marketing trigger in the form of a merchandising display seems to influence the willingness to pay of the con-

sumers in a more positive direction than the second (€ 2.43) and the third display (€ 2.36).

Special attention should be drawn to the interaction effect between gender and the merchandising displays shown. The F-ratio is highly significant as the p-value is less than .001. Thus, there is a significant interaction between the gender of the person and the shown merchandising displays on the consumers' willingness to pay, $F(2, 299) = 13.543$, $p < .001$, $\eta^2 = .083$. Thus, theses 1 and 2 are further supported. This indicates that the effect of the merchandising displays on the consumers' willingness to pay is moderated by gender. In particular, the willingness to pay of men and women does not vary when viewing the first and third display. However, the willingness to pay largely differs between both genders, when looking at the second display. Therefore, men show a lower willingness to pay, when seeing the second display (showing the male), than women. The total R^2 of .173 (adjusted $R^2 = .159$) supports this thesis further, even if only a small amount, about 17% of the variance of the willingness to pay, can be explained by the merchandising displays and their accordingly different influences on either male or female consumers, as well as their interaction effect.

To further investigate this interaction effect a pairwise comparison test is carried out (Fields, 2009). As there is a clear difference in the willingness to pay between men and women in combination with the second merchandising display (attractive to women), the focus is on testing the assumption that the willingness to pay of men and women is statistically significantly different when viewing the second merchandising display. According to the results, the difference between men and women when being confronted with the first and third merchandising display is expected to be less significant.

Having a significant main effect reflects a statistically significant difference between men and women, when viewing the second merchandising display (attractive to women), as the willingness to pay among women is higher than among men ($F(1, 299) = 53.88$, $p < .001$, $\eta^2 = .15$). Therefore, the difference between men and women in the willingness to pay does depend on the merchandising display, outlining the interaction of the two variables. For merchandising display 1 ($F(1, 299) = 1.43$, $p > .05$, $\eta^2 = .01$) as well as for display 3 ($F(1, 299) = .51$, $p > .05$, $\eta^2 < .01$) the gender however has no significant effect. These findings indicate that the size of the effect is bigger across one category (display 2) in comparison to the other two categories (display 1 and 3). Thus, the difference in willingness to pay between men and women when viewing merchandising display 2 is bigger than for merchandising display 1 and 3, indicating that men are less attracted by an attractive men than women. Hence, the second merchandising display has the biggest interaction effect. Further, the difference between the second and the third merchandising display ($p = .477$) is larger

than that for merchandising display 1 and 2 ($p = .234$). This inconsistency can be explained by the standard error of merchandising display 1 compared to merchandising display 3. The standard error for display 3 is slightly smaller and thus the difference between means is larger. Yet, both effects are non-significant ($p > .05$). Thus, the pairwise comparison test supports the difference between the merchandising displays outlined before, clearly showing that the interaction of merchandising display and gender is only statistically significant for merchandising display 2.

5.2 Focus Group

Following up on the analysis of the neurological subliminal test, focus groups are conducted based on its results. During the course of a six-step process, participants provide information in two ways: written responses and responses in-group discussions.

Step I

Initially, as a first step, the demographic profile of the participants is analysed. All in all, eleven participants take part in this research, five men and six women. The participants are subdivided into two gender homogeneous focus groups. The large majority ($n=9$) of all participants is in the age group of the 20 to 29 year olds. Only one man (60-69) and one woman (50-59) are belonging to an older age group. More than half of all participants ($n=6$) are full-time students, whereas the other participants are fully employed. The large majority of male participants ($n=4$) live in a single household, while only one female participant indicates to live alone. About half of the women live in a flat-sharing community, i.e. as a single. The results also show that male participants spend more money (on average € 300-450) on grocery shopping than female participants (on average € 150-300), as the large majority of them are situated in a one-person household.

Furthermore, the consumption level of chocolate is examined to identify whether the participants tend to be heavy users of chocolate. All participants frequently consume chocolate. However, against previous studies (Statista, 2016e), indicating that men eat more chocolate than women, it appears that women eat more chocolate than men. While the majority ($n=5$) of female participants indicates to be heavy users consuming chocolate at least weekly or even on a daily basis, the majority of male participants ($n=3$) barely eat chocolate once a month.

Step II

In order to understand what is associated with good advertising in general, the second step identifies advertising elements, such as different slogans, images and words that are considered attractive or appealing in an advertisement. Further, generic

terms are determined to summarise the participants' associations. This information is assessed in two different ways. Firstly, spontaneous unsupported associations are generated, discussed and summarised in generic terms. Secondly, factors are provided by to support the participants in finding associations.

Within the male focus group, the following thirteen factors are developed in relation with good advertising: (1) Clever, (2) Trendy, (3) Informative/Interesting, (4) Diverse, (5) Stylish, (6) Fun/Funny, (7) Consistent, (8) Simple/Unsophisticated, (9) Dynamic, (10) Sexy, (11) Focused/Precise, (12) Clarity and (13) Target-group oriented (see Appendix 3). Only six out of the thirteen factors, including interesting, unsophisticated, dynamic, focused, clarity and target-group oriented, are written down as generic terms. The other factors (clever, trendy, diverse, stylish, funny, consistent, sexy) are only mentioned verbally in the course of the discussion, as participants do not find anything matching with these factors within the magazines provided. Further, only fifteen out of the eighteen factors provided are considered as suitable for good advertising, including: (1) Credible, (2) Conspicuous/Colourful, (3) Sensitively, (4) Understandable, (5) Concisely, (6) Trustworthy, (7) Thrilling, (8) Passionately, (9) Good looking people, (12) Elegant, (13) Exclusive, (14) Seductively, (15) Attractive, (16) Aesthetic and (18) Vivid (see Appendix 3). The identified factors are associated with different kinds of advertisements (see Appendix 3). Some independently developed factors and some of the ones provided are linked to one and the same advert.

Within the female focus group nineteen factors are stated unsupported: (1) Emotional, (2) Cool/Trendy/Modern, (3) Luxurious, (4) Inspiring, (5) Fun/Vitality, (6) Stylish, (7) Structured, (8) Classical/Precious, (9) Dynamic, (10) Sexy/Seductively, (11) Playful, (12) Naturally, (13) Friendly, (14) Serious, (15) Vibrant, (16) Beautiful/Attractive, (17) Sporty, (18) Cosy and (19) Healthy (see Appendix 4). All factors are not only mentioned in the discussion, but also written down as generic factors. Even though the group creates some generic terms that are quite similar to the factors that the male participants have developed (trendy, dynamic, fun, sexy), the female focus group interprets them differently. Moreover, the female focus group identifies all factors which are provided as being appropriate for good advertising, consisting of: (1) Credible, (2) Conspicuous/Colourful, (3) Sensitively, (4) Understandable, (5) Concisely, (6) Trustworthy, (7) Thrilling, (8) Passionately, (9) Good looking people, (10) Genuine, (11) Celebrities, (12) Elegant, (13) Exclusive, (14) Seductively, (15) Attractive, (16) Aesthetic, (17) Lovable and (18) Vivid (see Appendix 4). Like the male focus group, also the female participants link more than one factor to the images cut-out from the magazines and vice versa (see Appendix 4). However, the factors (5) Concisely and (7) Thrilling are mentioned to be important for every good advertisement. Thus, they are identified as generic terms for all other factors.

Revealing some similarities but also differences in the perception of advertising in general, and subliminal marketing triggers in particular, between men and women, the results indicate that gender-specific differences in perceiving subliminal marketing triggers exist. Even though both focus groups identify a few similar factors, they assign them to different images. As a result, thesis 3 is supported.

Step III

As a third step, the ranking of display is analysed to test for theses 4, 5 and 6 of gender-specific differences, identifying further important aspects and the underlying reasons that cannot be revealed through direct questioning. While men rank merchandising display 1 (displaying an attractive woman) before 2 (showing an attractive man) and 3 (showing hands grabbing for the product), women decide for merchandising displays 1, 3 but also 5 (displaying an advertising slogan). The participants offer a number of reasons for their choices. The first display, showing the attractive woman, is unanimously selected from both focus groups, appealing to the emotions of all participants. All participants indicate that the first merchandising display is the most suitable one for a Celebrations advertisement as the focus is on the product itself as it is actively displayed. Furthermore, the participants mention that the advertisement is not overloaded and clearly structured, attractively photographed, fashionably and oriented towards the target-group. Furthermore, both focus groups state that it is appealing, catchy and encourages to buy Celebrations as it embodies aesthetics, sexiness, seduction, style and classiness. Those attributes were identified earlier as important for good advertising. Moreover, the male participants choose the second merchandising display showing the attractive man. Even though they mention that this advert could advertise any kind of product, missing the focus on chocolate advertising, the gaze of the pictured testimonial is perceived as extremely captivating, creating a connection to the consumer. Furthermore, both focus groups agree upon the selection of the third display. All participants mention the aspects of community, friendship, vivacity, fun, and celebration/party as encouraging factors for buying the product. The participants also agree upon the exclusion of the fourth merchandising display. Both focus groups consider this display as colourless, boring, not enjoyable and not very appealing. However, a female participant also indicates a positive aspect relating it to a small gift for a party or to take it to the office. Opinions diverge regarding the fifth display. While all male and most female participants reject the last merchandising display, declaring that it is not attention-grabbing or appealing, one female participant intuitively identifies this display as most suitable to the product Celebrations. However, all participants agree on the overload of red colour and text within this display and the lack of contrast.

Above all, both focus groups state that advertisements displaying people are considered more attractive and attention-grabbing than adverts solely showing the product. However, they also indicate that there should be some kind of interaction between the testimonial and the advertised product. Within this part of the focus group, participants support theses 4 and 6, whereas thesis 5 that women are attracted to merchandising displays showing attractive men is rejected.

Step IV

In the fourth step, an allocation analysis is used to find similarities between the identified factors and the merchandising displays observed. All participants identify several factors as matching with the displays shown. However, almost all factors are matching with display 1 and 3. The factors varied between male and female participants. The male focus group experiences the nine factors concisely, seductively, passionately, attractive, aesthetic, vivid, focused/precise, trendy and sexy as most suitable to merchandising display 1. Meanwhile, the focus group consisting of women considers the factors conspicuous/colourful, thrilling, good-looking people, aesthetic, sexy/seductively, stylish, beautiful/attractive and classical/precious as appropriate. However, men also mention that display 1 appears not natural, as it does not reflect reality, which would rather be display 3 as it describes a daily situation, when hanging out with friends on the settee. A similar situation is also pictured by the female participants. They consider the factors fun and friendly as matching with display 3.

Step V

In a fifth step, attributes and characteristics that are considered to be the most attractive to men and to women are determined. Within this step the established sub theses 4.1, 4.2 and 4.3 as well as 5.1, 5.2 and 5.3 are tested to create the perfect appearance of a testimonial in advertising. While men picture a female testimonial, women describe a male one. However, all participants create a rather stereotyped image of a woman and a man recalling a clichéd depiction of them.

The male participants describe the female testimonial as an appealing and attractive young woman with symmetrical facial features and full red lips. Further, physical features such as a slim figure, a beautiful and healthy skin tone, a wide smile, big eyes, well-maintained 'natural looking' eyebrows and a natural radiance are perceived as attractive. All male participants agree on the attraction of moderately long hair or anything close to shoulder length, as it looks more feminine. Concerning the hair colour one male participant mentions that "blond is always fine". However, all male participants consider brunettes as fresher and more natural, while blondes are more the objects of desire for every man. Thus, this part of the focus group supports the sub theses 4.1, 4.2 and 4.3.

The female participants mention that the perfect appearance of a person in advertising is to a large extent depending on the product that is promoted. However, they also have a stereotypical idea of a male testimonial, describing the perfect male testimonial as a young man (25-35 years old) with an athletic body, thick hair and designer stubble. The female participants also claim that they prefer a man, who is taller than they are. Further, dark hair, a deep husky voice and a confident, rebellious, independent and powerful attitude are considered attractive. All these physical attributes are referred to as the “bad-boy”-features and characteristics of “a real man” that women have a soft spot for. The female participants claim these attributes as the embodiment of all that is masculine, which encourages them to buy. This part of the focus group supports the sub theses 5.1, 5.2 and 5.3 and reveals more valuable insights into the preferences of female consumers.

Since both focus groups perceive a testimonial of the opposite sex as very appealing and attention-grabbing, it appears appropriate to also learn more about males’ and female’s reaction on an advertisement that shows a testimonial of the same sex. All participants state that the choice of the testimonial largely depends on the product or the product category that is advertised. However, men and women perceive advertisement with testimonials of the same sex differently. Male participants mention that when it comes to products that are clearly ascribed to men, such as after shave lotion, they would rather prefer an advert that displays a male testimonial, indicating that they do not reject adverts showing male testimonials in general. However, thinking about fast moving consumer goods such as Celebrations, they clearly point out to prefer adverts showing attractive female testimonials. In contrast, females seem to be more open-minded in contrast to men. As outlined above, female participants state to be attracted by adverts displaying testimonials of the same sex, indicating that they can identify themselves with the advertising testimonial.

Step VI

Finally, in a last step the dynamics of both focus groups are analysed. Concerning the overall group dynamics it can be said that there is diversity between the groups. Interesting about the focus group dynamics are the differences between male and female participants while discussing their opinions.

Within the female group, the time of talking is fairly equally distributed. However, as in any group situation, some participants state their position and opinion stronger than others. There are two female participants having the largest portion of talking time. These, so-called, “opinion leaders” shape the overall group discussion. Through their dominance they are found to be the ones leading every given task. Still, all female participants constantly take part in all tasks. Further, the female focus group is very interactive, for example they discuss every generic term in the group to find a

joint solution with which everyone is happy. Listening to other opinions helps them to cultivate some basic ideas as a team. By engaging in substantive exchange, some new ideas are raised that would not come up without teamwork. Solving all tasks as a group thus provides further insights.

Within the male focus group the talking time was rather unequally distributed among the participants. Two participants are more restrained and introverted than the others. Therefore, it is attempted to involve everyone, especially those two, in the discussion. Thus, three out of the five participants are constantly part of the discussion, having the largest time of talking. However, instead of developing ideas together, most of them uphold their own ideas and defend their own views and opinions. The lack of openness to discuss and alter their opinions, makes it difficult for the group to find a common ground. However, it is important to note that all participants respect the opinion of the others, even if it differs from their own.

While it seems relatively easy for the women to express their opinion in front of the other participants, some male participants are more restrained. Expressing their opinion by laughing, especially when they were asked to characterise the perfect appearance of a testimonial in advertising, signalled that it is a rather embarrassing topic for them. Thus, it can be concluded that the female participants conduct a debate that stimulates furthering solutions, whereas the male focus group simply exchange opinions.

6 Discussion

The purpose of this exploratory research is to identify visual subliminal marketing triggers at the POS as an influencing factor on the consumers' willingness to purchase and moreover sheds further light on the impact of gender on the consumer buying behaviour.

Since the study is divided into a quantitative and a qualitative two parts, each part of the study is designed to test a different set of theses. The impact of merchandising displays on the consumer buying behaviour is only tested in the quantitative part of the study, i.e. the neurological subliminal test. Within this test, merchandising displays are identified as an influencing factor on the consumers' willingness to pay. Consumers' willingness to pay is seen as a good indicator for buying, i.e. the purchase intentions of consumers. Therefore, the consumers' willingness to pay appears to be the key variable in this research. Also, the relationship between merchandising displays and willingness to pay is found to be statistically significant. From this it can be postulated that that visual subliminal triggers may have an effect on consumer buying behaviour. However, the results also show that the impact of the tested merchandising displays is lower than expected at the outset of this research. Thus, con-

sumer buying behaviour must be also determined by further, other variables that are not part of the research design of this study. Facing a complex concept, prior research already tried to uncover the influencing factors of consumer buying behaviour and consumer decision-making processes. Garcia and Saad (2008) examined the neuroimaging factors that trigger consumers to select a certain brand or product. They found that subliminal marketing triggers influence consumer's behaviour, as different brands and products stimulate different areas of the brain, which are responsible for consumers' preferences and emotions. These findings are in line with Lee and colleagues (2007), who proved that subliminal marketing triggers are a reliable predictor of consumption habits of respondents. However, it has to be acknowledged that subliminal marketing triggers in the form of merchandising displays only account for a certain amount of variance in the consumers' willingness to pay and subsequently the consumer buying behaviour.

A second variable of interest is the influence of gender on the consumer buying behaviour. This variable is not particularly tested within the qualitative part of the research, but in the quantitative part. Whether and to what extent men and women differ has been a controversial discussion for years. Therefore, the main focus of attention was on the investigation of gender differences concerning consumers' buying behaviour. As outlined above, differences in the perception of merchandising displays indicate an impact of gender on consumer buying behaviour. Thus it can be stated, that men and women perform substantially different buying decisions. The results of the subliminal test show an impact of gender on the consumers' willingness to pay, indicating that gender is an influencing factor on consumer buying behaviour. The test reveals some further interesting findings. It can be stated that women are generally willing to spend more money. i.e. accept higher prices on snack food and confectionary, such as Celebrations, than men. One explanatory reason for this result may be that, even though women's personal and professional advancements have grown significantly in recent decades, they still handle traditionally most of the grocery shopping. Spending generally more than an hour shopping in supermarkets (Anonymous, 2013) women seem to know and compare prices more frequently and therefore seem to be in a better position to estimate prices for several groceries, such as Celebrations, more adequately. This result of gender differences is independent of the merchandising displays which are shown. Thus, there are gender-specific differences that affect the willingness to pay, supporting the thesis that the gender has an effect on the consumer buying behaviour. These results are in line with prior findings, revealing that there are observable differences between the brains of men and women and how they process information. However, trying to accurately stereotype a single individual is difficult. Nevertheless, recognizing the general characteristics of each sex appears important to producers and retailers, especially when the product is designed to appeal predominately to only one sex (Lewis, n.d.).

Further, the influence of gender on the willingness to pay is higher than it is for the tested merchandising displays. However, even if it is higher, the impact is still lower than expected. Thus, it is important to notice that gender determines a rather small amount of the consumers' willingness to pay, also implying that there are further factors determining the consumers' buying behaviour that have not been investigated in this study.

Further, both quantitative and qualitative research approaches identify gender as an influencing factor on the perception of visual subliminal triggers. The results of the neurological subliminal test show that men and women perceive the three tested merchandising displays differently. According to the results, men on average are willing to spend the most when being confronted with an advert displaying an attractive female. In contrast, women are willing to pay the most, when looking at an advert with an attractive man. A possible explanation for this result is the often cited theory that "sex sells" and is an archaic motive of mankind. Advertisers use attractive images to positively relate products to feelings and emotions that already pre-exist within the consumers (Sheehan, 2014). However, to get that connection, advertisements must grab the consumers' attention. Often, sexual imagery is used to break through the ever-growing clutter in the advertising environment. As Twitchell (1996) pointed out earlier "sex doesn't sell, but it certainly captures attention" (p. 157). Also, it appears surprising that women were willing to spend even more than men, when seeing an advert showing an attractive woman (display 1). A possible explanation is that men may see each other more as rivals whereas women perceive other women as part of a team. Again this may be linked to archaic patterns in human behaviour. This is possibly underlined by the displayed result in the willingness to pay of men and women while seeing an attractive man (display 2) as this is significantly different. Male participants were willing to spend only about half of the amount of what female participants indicated to be willing to pay. On average, women were willing to spend always more than men, also when seeing a neutral advertisement (display 3). This could also be due to the fact that women do take responsibility of a large proportion of grocery shopping for households, families, etc. as mentioned earlier (Anonymous, 2013).

Gender differences among the perception of visual subliminal marketing triggers are also tested in the qualitative part of the research. In line with the results of the neurological subliminal test, male and female participants experience different visual subliminal marketing triggers as attractive. Surprisingly, the focus group consisting of male participants rates the second merchandising display, showing an attractive man, as appealing, whereas the female participants, against all expectations, did not. The choice of the testimonial could be a possible explanation for this result. Since female participants indicated that the male testimonial appeared unappealing and

unauthentic, the assumption of choosing the wrong model would be supported. Additionally to these results, prior studies emphasised the importance of choosing an adequate testimonial for merchandising displays. Especially the image, sympathy, recognition and trustworthiness are critical factors, which can enhance or reduce the impact of such testimonials on the consumer (Statista, 2016b). The female participants yet give a further explanation for women choosing the display displaying the attractive woman. They indicate that women consider advertisements showing testimonials whom they can identify with as very appealing and attractive. These findings are in line with the study conducted by Perrachione and Perrachione (2008).

In order to identify differences between men and women in the perception of visual subliminal marketing triggers, the idea of what good advertising in general is about, is further investigated in this study to gain additional insights. Within the focus groups, six factors – trendy, vitality, stylish, fun/funny, dynamic and sexy – illustrate the most important aspects of good advertising as they are self-created by both, male and female participants. However, those factors are associated with different kinds of advertisements promoting different products. The underlying reasons for this result are differences of general interests. Therefore, men are drawn to be more interested in ‘thing-oriented’ activities, such as repairing cars, carpentry or engineering. Women, in contrast, are more interested in ‘people-oriented’ activities like nursing, dancing or acting (Liben and Bigler, 2002). While the male focus group names thirteen factors without prompting, female participants mentioned nineteen unaided factors that are associated with good advertising.

While some factors created by the female focus group are already similar to the provided factors, the male focus group mainly deviates from these attributes. All these findings were expected, as women appear to be generally more inclined to process words and to use language compared to men (Van Baalen, 2001). An explanation for this result could be the difference in communication patterns and habits between men and women. The centre that is responsible for communication is significantly larger in a woman’s brain than in a man’s brain. While women inspire each other, men are rather inhibited to talk in front of other men in a group. Thus, it is not unusual that the focus group of women creates more sophisticated and positive factors than the one consisting of male participants. All these findings support the assumption that gender-specific differences in the perception of visual subliminal marketing triggers exist.

Another important factor is the attractiveness of testimonials in advertisements and how men and women perceive them. Men attracted by physically attractive women. The results of the neurological subliminal test show that men are willing to spend the most when the advert displayed an attractive woman. However, this thesis is not specifically tested in the neurological subliminal test, as it requires some deeper dis-

cussions. The outcome of the focus groups, however, supports the assumptions of the neurological subliminal test, indicating that men are attracted to physically beautiful woman. Thus, the reason for men being attracted by the first display seems to be related to archaic patterns in human behaviour. A possible explanation for this is also provided by Aharon et al (2001), who pointed out in their research that beautiful female faces or positive facial expressions are an essential component of attractive advertisements, since they lead to an activation of reward-related areas in the brains of heterosexual males which is also supported by Hubert and Kenning (2008). However, they did not only concentrate their studies on female faces, but also on full body images of attractive women. Their study revealed that such images stimulate areas of reward and well-being in the brain of heterosexual men. Hence, results are consistent with previous findings, indicating that especially when advertising confectionary goods, using female testimonials with brown hair, is beneficial, as they are considered to be more intelligent and attention-grabbing in comparison to testimonials with other hair colours (Anonymous, 2005).

Earlier research, detecting that the presence of beautiful people activates the area of the brain involved in the process of recognition and creation of trust also supports these findings. Thus, advertisements with attractive people seem to be more understandable, likable, easier to remember and more suitable (Statista, 2016b). Therefore, attractive people positively influence consumers' preferences and their buying behaviour. Surprisingly, not only men but also women were highly attracted by the advertisement showing a physical attractive woman. Another possible explanation for this result is that women compare themselves and can identify themselves with adverts showing women and wish to be like the woman displayed in the advertisement. As outlined above, earlier results of Perrachione, Perrachione (2008) support these findings, revealing that testimonials, with which people can identify themselves, create a positive reaction.

Looking at the opposite situation with females, it is supposed that manly and mature looking men are attractive for women. This thesis is supported through the results of the neurological subliminal test, which show that women are willing to spend most when being confronted with an advert, displaying an attractive man. However, these findings disagree with the results of the focus groups as the male testimonial was "dumped" by the group and consequently the display could not convince when analysed consciously. The female focus group stated clearly that young and mid-aged man (25-35 years old) with an athletic body, thick hair and designer stubble as attractive. All these physical attributes were referred to as the "bad-boy" image and characteristics of a "real man". This was found to be the embodiment of all that is masculine for which female participants have a soft spot for (Banks, n.d.). Hence, displaying testimonials with such characteristics encourage women to buy a product. The testi-

monial in display 2 does not embody these ideal features desired. When exposed subliminally to this display it may still work as women are generally attracted to males. Some research indicates that the reason for this goes way back in time. A group of researchers from the University of Utah (Anonymous, 2012) conducted a study, revealing that the reason for women preferring tall men can be dated back to the Stone Age. In these times, it appeared essential for women and their children to be protected from potential threats by men, ideally physically strong and tall men, which also appeared to be better hunters to feed their clan. Thus, women are evolutionary inclined to prefer taller men, since they have a physical advantage in a confrontation and a greater likelihood of being able to provide food. Even though nowadays, such advantages appear no longer of importance, researchers are convinced that the evolutionary programming is still embedded in the female preferences and psyches. In line with these findings, the Australian researchers Dixon and Brooks (2013) from The University of New South Wales conducted a survey with over 350 women on their preferences for male facial hair, and the vast majority agreed that a bit of stubble is attractive. Experts in human evolutionary psychology even claim that from an evolutionary standpoint, men with a bit of stubble are considered more dominant, masculine, aggressive and socially mature. Further, researchers did try to identify the underlying reasons why women generally seem to find men with deeper, huskier voices more attractive. They found out that the reason for this result is that women perceive a deeper voice as a sign of stronger physicality, which is also something that women are evolutionarily geared to find attractive. Hence, numerous findings and studies support thesis 5 that manly and mature looking men are attractive to women.

Thesis 6 assumes men and women to be equally attracted to gender-neutral advertisements, showing simply the product. This thesis is supported within both, the quantitative and qualitative research phase, testing unisex merchandising displays. The willingness to pay among men and women is quite similar, indicating that both sexes are equally attracted to gender-neutral adverts. Further, the thesis is also supported within both focus groups, as all participants unanimously identify the neutral commercial (display 3) as attractive and attention-grabbing. As it is a neutral display, showing hands grabbing for the product, it appears to be attractive to both, men and women, and does not incline different perceptions based on gender. Moreover, it reflects reality with a positive group experience of an evening with good friends. Therefore, it is experienced as very authentic and natural.

Additionally, it is proposed that visual subliminal marketing triggers that are perceived as attractive increase the consumer willingness to purchase. Since this thesis involves the willingness to pay, which predicts the willingness to purchase, it can only be tested in the quantitative part of the study, as the results of the qualitative part

would be biased. The higher the attractiveness of the advertisement is, the higher is the average consumer's willingness to pay for each of the three displays. Accordingly, the results of the neurological subliminal test support the assumption that visual subliminal marketing triggers, considered to be attractive, can positively influence the consumers' willingness to purchase. This result is in line with prior findings about the theory that "sex sells". Sheehan (2014) found that advertisers often use sexual imagery to positively influence the purchasing decision by connecting products to feelings and emotions that already exist within the consumers. Another possible explanation for this result was made within the prior study of Cîrneai et al (2014), who investigated the correlation between consumption of food products and the activation of specific brain regions to test factors of attraction. Their findings show that certain brain areas changed accordingly to the fact whether or not participants consumed a certain brand. The positive correlation found between those two concepts, the brain activity and the brand, implied that brands trigger personal relevance. Therefore, they stated that the personal relevance of advertisements and other marketing-related triggers could be evaluated in order to improve the communication strategy.

6.1 Practical Implications - for Marketing to Men

Analysing the results of this research provides some valuable insights on how to implement appealing subliminal marketing triggers in the form of a merchandising display to increase the willingness to purchase among male consumers. Examining the level of attraction of different subliminal marketing triggers, the quantitative as well as the qualitative part of the research reveals the highest level of attraction among men to the advert showing the attractive woman (display 1). Delving even deeper into the mind of the consumers, the qualitative part helped to gain more valuable insights about male preferences regarding the appearance of the female advertising testimonial. The results of this research as well as the findings of some previous studies show that it is recommended to use an attractive female testimonial to increase the attraction of, in this case, the Celebrations advert among male consumers. As females with symmetrical facial features and full red lips are considered as appealing, Celebrations should choose display 1 to successfully market their product to male consumers. Furthermore, physical features such as a slim figure, a beautiful skin, a wide smile, big eyes, long hair and a natural radiance were perceived as attractive and thus should be considered. Therefore, marketers of Celebrations could use these insights gained to adjust and develop their advertisement imagery according to these requirements, as it could help them to target male consumers more effectively.

6.2 Practical Implications - for Marketing to Women

It can also be suggested that in order to attract female consumers, different advertising elements should be used in comparison to male consumers. Women are found to

be highly attracted to the advert showing the attractive man (display 2). These findings are only indirectly confirmed within the qualitative part of the research. Even though female participants reject the advert showing an attractive man, indicating that the testimonial was not authentic and appealing at all, they however mention that male testimonials in general are very attractive to them. Especially male testimonials in advertisements encourage them to buy a certain product. Thus, the results emphasize the importance of choosing the right testimonial. These findings are in line with prior research, highlighting the importance of selecting an adequate testimonial. To be more specific, the image, sympathy, recognition and trustworthiness are crucial factors that impact the willingness to purchase of consumers (Statista, 2016b). Therefore, it is recommended to use a testimonial that meets the expectations demanded by the female consumers. Thus, the testimonial should be between 25-35 years old, with an athletic body, thick dark hair and designer stubble. Moreover, the male testimonial should be tall with a powerful attitude, radiating confidence and independency. All these attributes are also referred to as characteristics of a “real man” that were found to be the embodiment of all that is considered masculine (Banks, n. d.). Hence, displaying testimonials with such characteristics encourage female consumers to purchase a product.

6.3 Practical Implications - for Marketing to Both

To target both genders at the same time, marketers of Celebrations should choose the first display showing the attractive woman. Even though, the average willingness to purchase between men and women is quite similar, when viewing the third neutral display, the average willingness to purchase of both genders is higher, when seeing the first display of the attractive women. This research, as well as some previous studies, give several explanations for women also being attracted to the first display. Accordingly, women consider advertisements showing testimonials, with which they can identify as very appealing and attractive. These findings are consistent with the findings of Perrachione and Perrachione (2008), who pointed out that such testimonials trigger a positive reaction and thus influence the consumers’ willingness to purchase positively. Hence, in order to target female and male consumers at the same time, the selection of the first display may be the best possible choice exploiting the full market potential.

Summing up the implications of the research for Celebrations three different strategic options are possible. One option would be to attract only male consumers, the second option is to solely target the female consumers and the last and in this case most advisable option would be to target both consumer groups with one display (display 1) at the same time.

6.3.1 Limitations and further Research

Like any other study, this research is not without limitations. First of all using a multi-method research design can be very complex. Also, it appears to be difficult to plan and implement one method by drawing on the findings of another, as the first part could potentially provide biased results. However, using the multi-method approach, this research benefits from the strengths of both methodologies, providing a better understanding of the underlying reasons for the gender differences in the perception of subliminal marketing triggers than each method would provide just on its own. Thus, conducting a multi-method research provides the best opportunity for the current research question to be answered (Anonymous, 2016).

Secondly, due to limited time as well as limited access to POS in a supermarket, the quantitative data is only derived from a single source. Being only conducted in one German supermarket and in a very short time span, it is difficult to get sufficient data, in order to draw general conclusions on the larger population in Germany. However, choosing a REWE supermarket in Cologne as a very frequented, well-known and popular supermarket representing consumers of various social groups in Germany has been the right decision as it can be assumed that meaningful generalised implications can be derived from the data. With a duration of only two minutes for the test, people are very much inclined to participate. However, future studies should also be conducted in different areas and supermarket chains in Germany in order to validate findings of this study.

Thirdly, the qualitative data relies on self-report only. Self-reported data is limited by the fact that it can rarely be independently verified. Thus, the data can contain several sources of biases. As participants may have not responded truthfully, but rather in a socially desirable way, the internal validity of the research may be at stake. Also, it is hard to express emotions and feelings in words. Participants rather evaluate ads than reacting to them so the group discussion may become an assessment rather than indicating spontaneous feelings. Therefore, it would be desirable to include non-self-report data. However, within the current research design, self-report offered the best possibility to gain insights into the construct of investigation. Other researchers (Edell and Burke, 1989) used this method in a similar setting. Thus, it appears to be an appropriate assessment method to shed further lights on the results of the neurological subliminal test (Holt et al., 2007).

6.3.2 Conclusion

Focusing on food retailing, this research aims to identify gender differences in the perception of visual subliminal marketing triggers that influence consumers' willingness to purchase. Pairing innovative neuromarketing research techniques with traditional research methods enables to reveal subconscious responses of male and female consumers to subliminal marketing triggers (Eser et al., 2011). Uncovering pat-

terns lying beyond the conscious threshold identify advertising elements that can positively influence the consumers' emotions and thus their buying behaviour (Fugate, 2007). Differences in the perception of merchandising displays indicate an impact of gender on the consumer buying behaviour. Knowing what provokes male and female consumers to purchase a product like Celebrations and how they make their buying decisions, gives the opportunity to draw some practical implications to optimise Celebrations' communication strategy. All in all it can be said that these findings clearly show the complexity of consumer buying behaviour. As it can be derived from this study gender as well as visual subliminal marketing triggers are important factors influencing the willingness to purchase. Companies, aiming to design a tailored advertising campaign for their products are may want to consider these influencing factors to generate a competitive advantage and increase their sales. Still, the construct of willingness to purchase appears to be influenced by further factors that were not investigated in this study. Hence there is a plethora of future research to be done that may uncover further constructs in peoples' unconscious decision making processes.

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Appendix

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Appendix 1: SPSS Syntax

FREQUENCIES VARIABLES=Gender Age

/ORDER=ANALYSIS.

*Gender and Age Distribution

UNIANOVA Willingness_to_pay BY Gender Display

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/PLOT=PROFILE(Display*Gender)

/EMMEANS=TABLES(Gender) COMPARE ADJ(LSD)

/EMMEANS=TABLES(Display) COMPARE ADJ(LSD)

/EMMEANS=TABLES(Gender*Display)

/PRINT=ETASQ HOMOGENEITY DESCRIPTIVE

/CRITERIA=ALPHA(.05)

/DESIGN=Gender Display Gender*Display.

*Performed ANOVA

UNIANOVA Willingness_to_pay BY Gender Display

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/PLOT=PROFILE(Display*Gender)

/EMMEANS=TABLES(Gender) COMPARE ADJ(LSD)

/EMMEANS=TABLES(Display) COMPARE ADJ(LSD)

/EMMEANS=TABLES(Gender*Display) COMPARE(Gender)

/PRINT=ETASQ HOMOGENEITY DESCRIPTIVE

/CRITERIA=ALPHA(.05)

/DESIGN=Gender Display Gender*Display.

*Pairwise Comparison of Gender*Display

Appendix 2: SPSS Results

Descriptive Statistics				
Gender	Merchandising Displays	M	SD	N
Male	Attractive to men	2.51	.737	50
	Attractive to women	1.977	.377	53
	Attractive to both	2.316	.635	51
	Total	2.262	.635	154
Female	Attractive to men	2.662	.702	50
	Attractive to women	2.901	.784	50
	Attractive to both	2.406	.518	51
	Total	2.654	.702	151
Total	Attractive to men	2.586	.720	100
	Attractive to women	2.425	.763	103
	Attractive to both	2.361	.578	102
	Total	2.457	.696	305

Appendix 3: Male Focus Group Results

Supported Factors:					
Men:	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Credible	x		x		
Conspicuous/Colourful	x		x		x
Sensitively			x		
Understandable	x				x
Concisely	x	x	x		
Trustworthy			x		
Thrilling				x	x
Passionately					x
Good looking people		x		x	x
Genuine					
Celebrities					
Elegant			x		
Exclusive			x		
Seductively	x		x		x
Attractive	x			x	
Aesthetic			x		
Lovable					
Vivid			x		x

Created Factors:
Clever
Trendy
Informative/Interesting
Diverse
Stylish
Fun/Funny
Consistent
Simple/Unsophisticated
Dynamic
Sexy
Focused/Precise
Clarity
Target-group oriented

Appendix 4: Female Focus Group Results

Supported Factors:						
Women:	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Credible			x	x		
Conspicuous/Colourful	x	x	x	x		x
Sensitively	x	x	x			
Understandable	x					x
Concisely	x			x	x	
Trustworthy	x					
Thrilling	x	x	x	x	x	x
Passionately	x				x	
Good looking people			x		x	x
Genuine	x					
Celebrities		x		x		
Elegant		x				
Exclusive	x	x	x			
Seductively	x			x		x
Attractive			x	x	x	
Aesthetic			x			x
Lovable		x		x		
Vivid					x	x

The authors

Prof. Dr. Ralf **Brickau** gained a Double Degree in Business Studies both from the Fachhochschule (FH) in Dortmund and University of Plymouth. 1993 he finished his doctoral studies (PhD) at the University of Plymouth and simultaneously obtained a Diploma in Marketing from the Chartered Institute of Marketing. Subsequently he worked as a Key Account Manager for a Trade and Service-Agency in the Food Sector. After part-time lecturing for several years at various institutions Brickau received a call for a Professorship at the FHW Berlin. He returned in 1999 to the FH Dortmund and in 2001 finally took up a Professorship at ISM where he was the Dean for several years. During the last 15 years he also worked as a Consultant for several companies such as Volkswagen, Fujitsu, BVB 09, Lambertz, BMW, Mercedes-Benz, Signal Iduna, REWE, Ferrero, Frosta and Apetito. Not only in his professional life but also in his leisure time Analysis, Planning and Strategy have an important role: Frequently he successfully takes part in yacht racing events. His main research interest lies in Strategy Development, Brand Management, Trust Management, Neuro-Scientific Aspects of POS-Marketing as well as CRM/Sales-Management in various industries.



Jasmin **Cornelsen** studied Strategic Marketing Management and Management (M.Sc. and M.A.) at the International School of Management Dortmund and Napier University of Edinburgh, Scotland. Before, during and after her studies at the International School of Management, Cornelsen gained versatile international experience in the form of a semester abroad and social projects in South Africa, Scotland and South America. In addition, she completed an internship at DBA Deutschland GmbH, where she obtained practical experience in product management, helped in developing marketing concepts through product launches and fashion collections and worked closely with external agencies and internal contacts. Likewise, Cornelsen was able to contribute to the identification of consumer trends and needs when preparing various competitor and market analyses. After successfully completing her studies, Cornelsen intends to focus on her main interests; international brand development, brand communication and strategic marketing management.



International School of Management

Since 1990, the International School of Management (ISM), a state-recognized, private university, has been training young managers for international business in Dortmund, Frankfurt / Main, Munich, Hamburg, Cologne and Stuttgart. The study program consists of seven full-time Bachelor's programs, nine full-time Master's programs, a Master's degree, a preparatory pre-master, three dual courses, and three MBA programs. All ISM courses are characterized by their international nature and practical orientation. Factors such as close co-operation with companies, projects in small groups, as well as integrated foreign semesters and modules with more than 175 partner universities throughout the world, have helped to guarantee their success. The quality of the education has been confirmed by both students and University rankings where the ISM has for years consistently occupied the top placings. The ISM Working Paper presents the results of work from theses, workshops and from the ISM's own research work. Similar to the ISM Research Journal, also part of the new ISM publication series, contributions to the ISM Working Paper are subjected to a peer review.

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