Linnæus University
Sweden

Bachelor thesis

The use of colors in social media advertisements

An exploratory study about consumers' mental response

Authors: Lina Krondahl and Rebecca
                   Nilsson
Supervisor: Dan Halvarsson
Examiner: Åsa Devine
University: Linnaeus University
Term: Spring 2023
Subject: Independent degree project
Level: Bachelor

Abstract

The purpose of this study is to explore how the use of primary colors in social media advertisements influences consumers' mental response, which was done by analyzing how consumers responded to the primary colors through cognition, emotion and perception in social media advertising posts. The theoretical framework was built on the concepts of primary colors (e.g. red, blue and yellow) and the mental response through cognition, emotion and perception.

A qualitative research approach was chosen due to the study's exploratory nature. Focus groups were conducted since it is argued to effectively meet the purpose based on the participants' possibility to elaborate and provide the discussion with comprehensive insights. Each focus group engaged and discussed three social media advertisements, in an Instagram context, with each advertisement featuring a primary color.

Coding inspired by grounded theory was used in order to establish mental response categories. These mental responses were then analyzed and explored together with a theoretical framework to be able to answer the research question. The analysis provided the reader with an understanding of how consumers respond to SMAs and presented six mental response categories. In conclusion, there were four mental response patterns which were identified. Firstly, *perception, cognition and emotion.* Secondly, *cognition, emotion and perception.* Thirdly, *emotion, perception and cognition*. Finally, *perception, emotion and cognition*.

Keywords

Acknowledgements

Lina Krondahl	**Rebecca Nilsson**

Table of content

1. Introduction

1.1 Background

Marketing communication is often used in a context where advertising is in the center and the goal is to establish a successful company on the market (Rosenbaum-Elliott et. al, 2018). In order to accomplish this, companies must communicate their message in a way that will catch peoples attention and influence the consumer perception (Solomon et.al., 2016). A consumer's perception is a collection of absorbed senses from consumers' surroundings and are decisive in whether a marketing message will be attractive or noticeable (Solomon et.al., 2016). Marketing communication is strategically planned to deliver a certain message that will relate to people's associations (Rosenbaum-Elliott et. al, 2018). However, the amount of opportunities and ways to design marketing communications is endless, therefore it is critical to make sure that the communication relates to the intended message (Rosenbaum-Elliott et. al, 2018).

Online marketing communication has over the years become a competitive advantage due to the constantly increasing development and availability of online technology (Kiang et al., 2000). The internet is an effective way to convey information and reach a larger audience where social media is the major platform (Solomon et.al., 2016). Social media makes it possible for companies to communicate and share information via several platforms. Therefore it is considered to be an effective communication channel for companies to enter and use to communicate with social media advertisements (SMA) (Solomon et.al., 2016).

Moreover, visual expression is the sense that dominates marketing and marketing communication today (Hultén et al., 2009). Visual communication refers to the sight sense where the company uses visual communication tools to convey their message. The primary visual communication is color, since most of our decisions are based on our sight (Hultén et al., 2009). The enigma of color has attracted interest throughout history (Goethe [1840] 1970). However, it was not until 1810, that the characteristics of the colors were scientifically researched by Johann Wolfgang von Goethe, who argued that color emerges by the perception of the human eye (Goethe [1840] 1970). Goethe identifies the colors' natural order into three primary colors; red, yellow and blue, since these three colors can blend into one another and create hues and new

colors such as orange, green and purple (Vendler, 1995). In addition, colors can in fact activate customers' thoughts and evoke memories from earlier experience, which will create associations (Hultén et al., 2009). Research shows that colors have a psychological effect on consumers where a powerful visual communication will evoke personal emotions and associations (He & LV, 2022). However, using colors in the wrong way can create misleading information and communication since different colors have different associations, which is due to the complexity of the consumer's mind (Solomon et.al., 2016).

Additionally, consumers' minds consist of three main mental responses; cognition, emotions and perception (Schindler, 2012) and contributes to how consumers respond to SMA. In order for perception to be created, consumers go through the perceptual process where stimuli responses decide the initial attention (Solomon et al., 2016). This further leads to meaningful associations and interpretations. The perceptual process is a way to feed consumers associations that will generate a perception that aligns with a company's intentions (Solomon et al., 2016). In addition, emotional marketing tends to have a significant influence on customers where the emotional responses prove whether the right emotions were targeted by the advertising activity or not (Solomon et al., 2016). A positive emotional response is optimal since it will increase the possibility of competitive advantage (Sharma et. al., 2022). Cognitive competence refers to customers ability to process information and knowledge to finalize a decision. This phenomenon exists inside of the consumer's mind and is invisible from the naked eye, but of utmost importance for companies to get understanding to effectivize their communication (Solomon et al., 2016).

1.2 Problem discussion

By evaluating the mental response phenomenon a marketer can get a better understanding of customers' mental responses and how they are developed (Schindler, 2012). Moreover, consumers make inferences with a company based on what they communicate through visualization (Affonso & Janiszewski, 2023). When companies use a visual communication that is in alignment with the correlation of stimulus, the consumers will more likely try to adopt the communication (Affonso & Janiszewski, 2023). In order for a consumer to create an opinion

about a company, they go through stages where different categories of information are processed (Solomon et.al., 2016). This perceptual process considers the stimulus responses collected from human senses. People are constantly exposed to a large amount of impressions and could not possibly notice every stimuli. Therefore it is of utmost importance to use stimuli that attract attention. Out of all the stimuli, Arabi (2018) explains that the first visual source of information is from color. Earlier research argues that printed advertisment's choice of color had an important role in the advertising since it affected consumers' response (Gorn et al., 1997). In addition, color is directly related to customers emotions and associations (Solomon et.al., 2016). The challenge for a marketer is therefore to understand and learn how to best use colors in order to communicate their intentions as accurately as possible (Solomon et.al., 2016).

Moreover, the theory of color has created interest and commitment among philosophers, scientists and researchers for centuries (Goethe [1840] 1970). The research field of color psychology has been widely recognized in regards to different fields such as product packaging (Garaus & Halkias, 2019), brand recognition (Amsteus et al., 2015) brand logotypes (Labrecque & Milne, 2012) and the atmosphere in physical stores (Reynolds-McIlnay et al, 2017). Despite the increasing number of companies entering the platforms of social media as a result of the internet era, there is a limited amount of research done where the consumers' response towards color in social media advertising has been tested. The research field has gained interest, but the research conducted is mainly quantitative (Mustatea & Gociman, 2022; Terwogt & Hoeksma, 1995; Yuanyuan et.al., 2023) and lacks deep exploration of the consumers' mental response. Instead, studies attempt to explain consumer behavior and consumer engagement on social media by analyzing likes and comments (Cuevas-Molano, et al., 2021), but neglects to explore the reasoning behind their responses to advertising posts on social media.

Nonetheless, due to its relevance the research field has gained interest, warranting further investigation in the context of online advertising situations (Yu et.al., 2020).Future research is encouraged to explore this research field further in order to get an understanding of the underlying mechanism for the identified affect between color and the mental response from customers in a social media context (Yuanyuan et.al., 2023). It is especially important to get a better understanding of the cognitive and affective responses from customers when encountering

color in advertisement, since it will give marketers knowledge of how to make their marketing communication effective (Solomon et al., 2016).

The research field expresses a need for more research in the area of graphical elements in advertisement in relation to how it affects the customer response (Yuanyuan et.al., 2023). This is of interest for marketers since marketing communication is developing from traditional marketing into social media marketing. Social media marketing differs from traditional marketing in many aspects. For example, social media enables companies and consumers to interact with each other (Cuevas-Molano, et al., 2021) and also makes it possible for consumers to decide what companies to follow and hence what company communication they want to take part in (Kotler et al., 2017). However, there is a suggestion that the average human attention span has significantly decreased due to overwhelming and demanding attention from smartphones and social media. As a result, marketers are facing a challenging future where it will be difficult to effectively convey a brand message (Kotler et al., 2017). Therefore, it is more crucial than ever for marketers to develop a deep understanding of how consumers respond to marketing messages on social media. This understanding is essential in determining which factors that can be used to facilitate conveying the intended message in their marketing communications.

1.3 Purpose

The purpose of this study is to explore how the use of primary colors in social media advertisements influences consumer's mental response.

1.4 Research question

How do consumers respond to the primary colors through cognition, emotion and perception in social media advertising posts?

2. Theoretical framework

2.1 The mental response

2.1.1 Cognition

The cognitive aspect of the mental response explains customers' decision making as the gathering of information about an item and adding it to their already existing knowledge (Solomon et al., 2016). Cognition is a difficult area for a marketer to understand, since it exists inside the mind of the consumer (Charan et al., 2017). The knowledge exists in consumers memory and recognition of earlier encounters with the item (McInnes et al., 2023). The knowledge is continuously divided and the pros and cons are evaluated and the consumer forms a decision that feels relevant based on the information gathered. This is a slow and calm process where the information is integrated with carefulness and under a period of time (Solomon et al., 2016). Marketers' task is to study customer cognitive processing in order to get an understanding of the criterias that makes customers form certain beliefs, choose one alternative over the other, and consider which information weighs highest (Solomon et al., 2016). Knowing the reason for why a consumer selects, perceives and organizes information, would be of big interest for a marketer to make their communication more efficient (Charan et al., 2017).

Cognitive competence is the customer's ability to receive and adapt information form marketing communications and use it in regards to solving problems and reasoning (Devine, 1999). Having a high cognitive competence tends to have a positive effect on customers' willingness to participate and increase engagement as a result of customers' ability to process information and form an opinion (Jia & Wang, 2016). In addition, when the consumer has reached competence ability, consumers can experience an information overload which is followed by frustration and dissatisfaction ((Dai & Wang , 2020) & Wang, 2020). Social media offers a large and wide base of information that consumers can collect information and use in their comparison of knowledge (Charan et.al., 2017). Social networks communicate information fast and have the ability to include all types of consumers. Getting an understanding of a consumer's cognition is therefore considered a crucial advantage to possess as a company (Charan et.al., 2017). However, information overload is common amongst social media users since a consumer could never

perceive that amount of information ((Dai & Wang , 2020) et.al., 2020). Consequently, the consumer unintentionally avoids certain content on their social media due to their cognitive competence ((Dai & Wang , 2020) et.al., 2020). Furthermore, there is a connection between emotional responses and cognition in relation to cognitive competence, where high cognitive competence tends to more easily evoke emotions amongst customers (Wang, J. et al., 2017).

2.1.2 Emotion

The second aspect in a customer's mental response is the emotional responses (Solomon et.al., 2016). Emotions is a well used marketing strategy and has become successful because of the ability to make a company stand out from its competitors and make their customers passionate for their brand (Sharma et. al., 2022). Emotional responses more or less explains how a customer responds emotionally to companies' marketing communication (Solomon et.al., 2016). Marketers use different ways to arouse emotions in their marketing activities that generate an effective response (Solomon et.al., 2016). These emotions are carried by the customer pre, during and post viewing the advertisement, but are developed continuously over the process (Sharma et. al., 2022). The emotional response interplays with how customers access the information existing in the mind with new encountering information (Solomon et.al., 2016). Emotional response has a significant relation with brand evaluation, which means that positive emotional response from advertising activity will result in the customer having a positive perception about the brand itself (Hahn et al., 2016). Customer satisfaction has a significantly positive impact on emotions and is created from gaining the consumers trust (Sharma et. al., 2022). Moreover, having awareness of the relationship between emotional response to advertisement and brand evaluation generates an understanding of how online media affects performance variables (Hahn et al., 2016). The emotional responses can have different effects depending on the situation since some emotions are more relevant in some contexts while others are not. The successful strategy is to arouse the right emotions that are representing the brands intentions (Solomon et.al., 2016).

Another perspective of the emotional aspect is that it works as a tool to compare the pros and cons against each other and instead create an emotion of what the attributes makes the customer feel like (Solomon et.al., 2016). Referring to customers' emotions in advertising in a relevant

way tends to affect customer perception positively and make their experience with the advertisement as pleasant as possible (Sharma et. al., 2022). If the attributes of the marketing activity reflects a feeling that the customer appreciates, it is more likely that that emotion weighs heavier than functionality and thereby results in competitive advantage (Solomon et.al., 2016). Including humoristic elements in advertising tends to create long lasting resemblance (Sharma et. al., 2022). The opposite would not be as advantageous. Consumers use their emotions to selectively make choices that are of their interest, consequently, the feeling of dislike is a way to protect oneself from contamination and avoid unpleasant situations (Solomon et.al., 2016).

2.1.3 Perception

Perception is the result of gathering responses from stimuli and processing them through the mind where they will be transformed to actual associations (Solomon et.al., 2016). The construct of perception consists of three main steps; exposure (sensation), attention and interpretation. These three categories lay the foundation for the model that explains the process of how perception is developed (Solomon et.al., 2016) and have been proven to be highly influential in the consumer decision making process (McInnes et.al., 2023). The first category, exposure, refers to the initial response from consumers' sensory receptors when encountering stimulus. The sensory receptors are equal to the human senses sight, sound, smell, taste and texture. Consequently they react to stimulus that triggers these senses, such as light, color and sound (Solomon et.al., 2016). The following step in the process is called attention and can be described as a cognitive scheme that decides which stimuli will be chosen and get the most attention and further be interpreted into the mind of the consumer (Solomon et.al., 2016). Attention plays an important role in whether the consumer's processing capacity will notice the marketing stimuli or not (Teichert et.al., 2019). The function of attention makes selective choices amongst stimuli and, depending on consumers ability to process, the stimuli will or will not be processed (Teichert et.al., 2019). The third step, interpretation, refers to the human mind's capacity to generate associations out of the attentive stimulus (Solomon et.al., 2016).

Together with cognitive interactions, the perceptual process has a significant influence on a consumer's decision process (McInnes et.al., 2023). When a consumer reaches the purchase

decision phase they are acting based on the response to the interpretation of influences during the perceptual process (Solomon et.al., 2016). The response to a marketing stimulus is dependent on the delivery of stimuli and will either be enhanced or reduced. Consumers tend to be more receptive towards visual communication when it is in line with the correlation of stimulus (Affonso & Janiszewski, 2023). Marketers should therefore be aware of the context and how to use stimulus to generate as favorable outcomes as possible (McInnes et.al., 2023). Moreover, research shows that positive perceptions are created when a consumer believes the advertisement's value is trustworthy and credible (Liu et.al., 2012).

2.2 Colors in advertising

It has been established that color has an important role in marketing overall but is a dominating element in marketing communication where it works as a tool to influence consumer perception (Hunjet & Vuk, 2017). Colors have different meanings, e.g. emotional associations, and can have both positive and negative perception status (Demir, 2020). With this knowledge, a marketer has the chance to affect the perception of their communication by choosing colors that align with the associations (Solomon et.al., 2016). Color has influence on consumers emotions and psychological associations, hence does the color of choice generate beliefs and influence judgments (Arabi, 2018).

A majority of consumers consider color in advertising to be of importance and to have an effect on purchase intention, product selection (Hunjet & Vuk, 2017) and consumer behavior (Bagchi & Cheema, 2013). Furthermore, Bagchi and Cheema (2013), suggest that a web page's background color can affect a consumer's willingness to pay. A specific color or hue can have a strong connection to a specific brand and be part of the brand's recognition and brand equity (Gorn et al., 1997). More and more companies are actively using social media channels in order to achieve their branding goals (Cuevas-Molano, et al., 2021). There are several positive aspects for companies to take advantage of by being present on social media. For example, social media enables companies to access a wide range of information regarding their customers due to customers connecting to brands on social media (Cuevas-Molano, et al., 2021).

However, Singh (2006), brings up the contradictions within color research: Some researchers argue that the way humans respond to color is stable and hence without the influence of culture or other demographic variables such as age and gender. In contrast, Bagchi and Cheema (2013), are doubtful and argue that color associations may be psychological or cultural, since research has shown that color has different associations across different cultures. According to Grossman and Wisenblit (1999) consumers create color preferences through associative learning. In addition, Demir (2020) explains in his research that the perception of colors among university students can differ based on gender and field of study. While this is not true for all colors, it shows that demographics can have an influence on the respondent's perception of the color (Demir, 2020).

2.2.2 Primary colors

According to Goethe ([1840] 1970) there are three primary colors: red, yellow and blue. These colors will further be elaborated on in this theoretical chapter.

2.2.2.1 Blue

According to Singh (2006), different colors can provoke different emotions within the respondent. As a result, colors can be categorized as either "happy" or "sad" colors, where blue, together with yellow and orange, is associated with happiness (Singh, 2006). Blue is the most popular and favorable color (Hunjet & Vuk, 2017), regardless of demographic attributes such as age and gender (Terwogt & Hoeksma, 1995). Demir (2020), further suggests that blue is the color which is most perceived positively among university students. According to North and Ficorilli (2017) blue is suggested to convey feelings of relaxation in an online environment. However, another study by Jonauskaite et al. (2019), argues that cool hues, such as blue, were not more likely to be associated with relaxation than warm hues, which indicates contradictions within the research field.

Overall, the color is associated with feelings of peace, hope, happiness (Demir, 2020), trust (Demir, 2020; Hunjet & Vuk, 2017), wisdom, truth and formality (Hunjet & Vuk, 2017). Blue is also said to be associated with calmness, peace and hope, while presented in advertisements (Kaya & Epps, 2004). Furthermore, the color blue is mainly associated with positive feelings and

the color is connected to physical attributes such as the ocean, the sky and water. On the other hand, there are some negative associations with the color as well, for example depression and sadness, although the negative feelings are in a strong minority (Kaya & Epps, 2004). Blue is also argued to be a functional color and more suitable to use in brand- and product logotypes of functional nature, such as soap and breakfast food, than for sensory-social products e.g. luxury products (Bottomley & Doyle, 2006).

While using colors in online banner advertisements, blue is more appropriate than red, since consumers tend to interact more with blue advertisements (North & Ficorilli, 2017). Furthermore, by using blue in tourism-related art and culture photographs on Instagram, the amount of interactions as "likes" was increased (Yu et al., 2020). However, the color blue is not always a favorable color to use. For example, blue is proven to decrease appetite and it would hence not be a suitable color choice for food advertisements (Hunjet & Vuk, 2017).

2.2.2.2 Red

Red is the second most preferred color by adult correspondents within western society (Terwogt & Hoeksma, 1995). In contrast to blue, red is said to be considered a "sad" color (Singh, 2006). On the other hand, Hunjet and Vuk (2017), discovered that red is associated with emotions such as love and passion and is further shown to increase appetite. Red is most appropriate to be used while marketing sensory-social products, for example luxury and dignity products, since it is a sensory-social color (Bottomley & Doyle, 2006). The use of red in advertisements is argued to evoke participants' arousal (Yu et al., 2020; Mustatea & Gociman, 2022) and according to a study made by Bagchi and Cheema (2013), red is also proven to increase aggression. Moreover, according to Kaya and Epps (2004), Western cultures see the color red as a fiery color. Nonetheless, the emotions associated with red are courage, enthusiasm and fun, but also anxiety (Demir, 2020). The color red is said to be the most noticeable color (Hunjet & Vuk, 2017). However, according to Mustatea and Gociman (2022), consumers' attitudes towards an ad will not increase due to the use of red as the advertisements dominant color. In contrast, the research made by Demir (2020), establishes that red is the color which is the second most common color, after blue, to be perceived as positive.

2.2.2.3 Yellow

Yellow is associated with the feeling of light (Hunjet & Vuk, 2017). Yellow is said to be the color which is most noticeable, after red, and does hence attract attention due to the fact that the color is the lightest for the eye. However, yellow is argued to be the one least favored color (Hunjet & Vuk, 2017), which is further supported by research made by Terwogt and Hoeksma (1995), where the adult respondents had yellow as one of their least preferred colors. Just as blue and orange, yellow is considered to be a "happy" color (Singh, 2006). Furthermore, university students are associating yellow with emotions such as enthusiasm, fun, hope and peace (Demir, 2020). Jonauskaite et al. (2019) demonstrates that color matches specific affective states, where yellow was the color most frequently associated with the affective state of joy among respondents. Joy is considered a positive affective state (Jonauskaite et al., 2019). Compared to blue and red, while looking at the percentage of participants perceiving a certain color positive, it was found that the perception of yellow was generally positive (Demir, 2020). According to Yu et al. (2020), emotions are contagious in the perspective of Instagram users. Yellow is argued to evoke arousal and excitement in a tourism context on Instagram, as a result the colors may influence Instagram users' interactions and interest in city view posts (Yu et al., 2020).

2.3 Conceptual model

This conceptual model demonstrates the components that will be explored in this research. The model works as a visual guide of how the theoretical and empirical data will be explored in order to be able to fulfill the purpose and answer the research question. Primary colors will be visualized through the context of SMA. The responses will further be explored through the mental responses of cognition, emotion and perception. Which will help explain how color can affect how consumers respond to advertisements on social media.

Figure 1.

Conceptual model
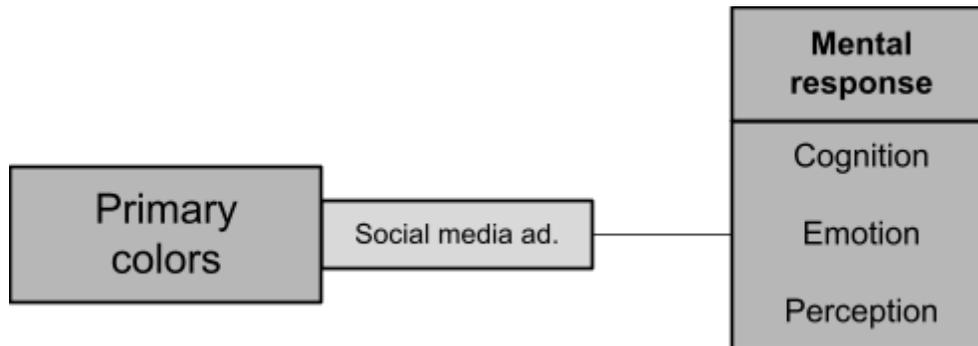
Note. This figure visualizes the components included in this exploratory study

3. Method

3.1 Qualitative research strategy

In this study, a qualitative research strategy was conducted. The researcher's intentions with this study was more concerned with gathering words and images rather than numbers in the process of collecting data and analyzing it (Bell et al, 2019). Instead of testing an already existing theory, this qualitative study took the inductive approach which enables a theory to develop from the analysis of the empirical data collection. The inductive strategy is most often connected to qualitative research since inductivism describes the relationship between theory and research, as theory being the outcome of the research made. This study aims to generate findings out of the gathering of empirical data, which made the inductive approach relevant to apply (Bell et al, 2019).

In addition, the research method contains an epistemological position since the researchers want to understand the participants' interpretation of the subject (Bell et al, 2019). This approach is called interpretive and in this study the subject is colors on SMAs. In order to gain understanding and have the possibility to explore the view of social properties this research adapts the ontological qualitative view of social properties called constructivism. This approach views social properties as creations from social interactions (Bell et al, 2019) and was highly relevant for this research since it allowed for further exploration and discussion in the focus groups in regards to influential factors of their mental response.

3.2 Exploratory research design

To be able to answer the research question, an exploratory research design was used. Since the study field of colors in SMAs does not contain much earlier research or literature, the exploratory research design was appropriate. The exploratory research design focuses more on finding out the natural behavior of the field accompanied by an unstructured approach (Bell et al, 2019). The intention with using this research method was to generate explanatory responses that could explore the mental response of consumers in regards to color in advertising. By applying

this research design, it was possible to explore our research field with and receive a natural response from our participants and receive more depth into the research (Bell et al, 2019).

3.3 Focus groups - A qualitative research method

The research method chosen for this study is focus group discussions. Focus groups are a relatively unstructured method which is suitable to use if a subject needs to be explored in-depth (Bell et al, 2019). The method is explorative since the researcher explores the opinions and reasons behind them (Kitzinger, 1994), in order to understand why the respondents feel the way they do (Bell et al, 2019). The discussion is characterized by being relaxed, comfortable and an enjoyable way for participants to share their perceptions and point of view regarding a specific subject (Krueger, 2014). Focus groups offer several advantages which can be gained from the participants' interaction with each other (Kitzinger, 1994). The focus group method does also enable the researcher to get an understanding of the individuals' opinions as a group member, as they respond to others' views, take the groups opinions into account and interact with the other participants in the group (Bell et al, 2019). The discussion highlights the attitudes and priorities of the respondents and encourages the type of conversation which creates understanding. Furthermore, focus groups can be used in order to identify the norms that exist within the group (Kitzinger, 1994). The research method does also enable the researcher to create an understanding of the participants' mental response, why they believe the things that they do and what factors that have the influence to change their minds (Kitzinger, 1994). Focus groups are commonly used to test consumers' reaction to advertising initiatives (Bell et al, 2019).

3.4 Generic purposive sampling

The sampling method chosen for this study was generic purposive sampling. Generic purposive sampling is a form of non-probability sampling where the participants are not selected on a random basis, but sampled with the research goal in mind (Bell et al, 2019). The sampling method was considered appropriate for this study, as the participants are strategically selected based on their anticipated contributions to fulfill the purpose of this study. In order to ensure the participants relevance to the study and establish that the participants have the necessary

knowledge, experiences and expertise to provide valuable insights, it is necessary to determine a certain criterions of which the sample will be selected (Bell et al, 2019). Around 84% of the internet users in Sweden use social media (Dai & Wang, 2020) and smartphones are considered an essential part of everyday life for the general population aged 18 to 25 years old (Internetstiftelsen, 2022). People born in the 90s and 00s are the age groups that use social media to the greatest extent on a daily basis (Dai & Wang , 2020). In Sweden, 40% of all internet users are following brands and companies on social media, most commonly on platforms such as Instagram and Facebook. Consumers born in the 1990s are the age group which are most likely to follow a company on social media (Internetstiftelsen, 2022). Furthermore, in research made by Terwogt and Hoeksma (1995), it was found that color and emotion preferences change with age.

As a result, the focus group participants will be sampled within a predetermined ages range to determine age-specific relevance of the study. However, different education faculties and age are proven to influence a consumers' mental response (Demir, 2020). Hence, the sample is chosen within the School of Business and Economics at Linnaeus University. Furthermore, the participants must not be colorblind, as accurate color perception is essential for this study. Consequently, the criterions require the sample to be Instagram users, belong to the age range 20-25 years olds and be students at School of Business and Economics at Linnaeus University, as an indication for the same education level. To have the ability to explore the collective understanding of the research field and to find recurrent patterns, the focus groups consisted of people that were acquainted with each other, since these natural groups were argued to be comfortable to share their thoughts and opinions with each other (Bell et al, 2019). It was deemed feasible to do by applying a type of snowball sampling to the study as well. The researchers contacted an already established group who fulfilled the sample criterion. At least one of the participants in each focus group was known to one or both of the researchers. However, since the researchers were not completely familiar with the group consultation, the participant known arranged for the final group consultation with between 5-6 participants. Each participant was required to fulfill the sample criterion.

3.4.1 Sample size

A focus group should consist of five to eight participants in order to give each participant the ability to speak its mind (Krueger, 2014). In the case of advertising initiatives, it is recommended that each focus group should consist of six to twelve consumers (Bell et al, 2019). However, too many participants can make the discussion hard to control and result in participants not having enough time to express their opinion. On the other hand, having too small focus groups can result in too little experiences being shared (Krueger, 2014). However, the level of the participants' expertise, the complexity of the topic and the participants' level of passion for the topic can also influence the appropriateness of the number of participants, since these factors can influence how much the participants will have to say about the topic (Krueger, 2014). Due to the purpose of creating an in-depth understanding of the consumers' mental response, it is argued appropriate to have fewer participants in each focus group to ensure the quality of the discussion. Consequently, five or six participants were chosen to participate in each focus group and a total of 16 participants overall. By including fewer participants in each focus group discussion each participant will have the opportunity to share their opinion, experiences and ideas on the subject (Bell et al, 2019).

Qualitative research strives towards data saturations, which means that an appropriate sample of participants is depending on the research area. It is important to identify a sample size adequate to gain conceptual depth (or saturation) and create an understanding of the complexity and validity of the issues in the data. Nelson (2017) argues that saturation is created in alignment with specific research designs, for example grounded theory approach. While using focus groups, several groups should be used in order to establish trends (Krueger, 2014). By conducting two or three focus groups, more than 80% of a topic can be covered and 90% of a topic can be covered if the study has three to six focus groups. This means that by using three different focus groups, the 90% levels of saturation will be achieved (Guest et al., 2017). There are two approaches to saturation; *code saturation* and *meaning saturation*. Code saturation identifies the presence of issues, but is not providing an understanding of the issues in regards to their nuances (Hennink et al., 2019). According to Hennink et al, (2019), four focus groups were required in order to reach 94% of all codes necessary, with the first focus group generating the most codes. It is further argued that there are relatively few focus group discussions needed to

achieve code saturation, but the codes needed different amounts of data in order to reach meaning saturation (Hennink et al., 2019). Since this study aims to create an in-depth understanding of the issue, it was determined that three focus groups would be an appropriate number of focus groups for the topic of this paper.

Table 1.

The participants of focus group 1

Focus group 1			
Participant	Age 20-25	Gender	Linnaeus University School of Economics
Participant 1	Yes	Women	Yes
Participant 2	Yes	Women	Yes
Participant 3	Yes	Women	Yes
Participant 4	Yes	Women	Yes
Participant 5	Yes	Male	Yes

Note. This table demonstrates the participants in focus group 1.

Table 2.

The participants of focus group 2

Focus group 2			
Participant	Age 20-25	Gender	Linnaeus University School of Economics
Participant 6	Yes	Male	Yes
Participant 7	Yes	Male	Yes
Participant 8	Yes	Male	Yes
Participant 9	Yes	Male	Yes
Participant 10	Yes	Female	Yes

Note. This table demonstrates the participants in focus group 2.

Table 3.

The participants of focus group 3

Focus group 3			
Participant	Age 20-25	Gender	Linnaeus University School of Economics
Participant 11	Yes	Female	Yes
Participant 12	Yes	Female	Yes
Participant 13	Yes	Female	Yes
Participant 14	Yes	Male	Yes
Participant 15	Yes	Male	Yes
Participant 16	Yes	Male	Yes

Note. This table demonstrates the participants in focus group 3.

3.5 Operationalization

Table 4.

Operationalization table

Concept	Subconcept	Categories	Items	Reference
Mental response	Cognition	Knowledge	Memory Recognition	(Solomon et.al., 2016) (McInnes et.al., 2023) (Wang, J. et al., 2017) ((Dai & Wang , 2020) et.al., 2020) (Charan et.al., 2017) (Jia & Wang, 2016) (Devine, 1999)
	Emotion	Emotional arousal	Feelings Positive Negative	(Solomon et.al., 2016) (Hahn et al., 2016) (Sharma et. al., 2022)

Concept	Subconcept	Categories	Items	Reference
	Perception	Interpretation of stimuli	Sight Initial reaction Attention	(Solomon et.al., 2016) (McInnes et.al., 2023) (Teichert et.al., 2019) (Liu et.al., 2012)
Color	Primary color	Yellow	Happy color Attention Light Disliked Fun Hope Enthusiasm Peace Joy Arousal Excitement	(Singh, 2006) (Hunjet & Vuk, 2017) (Terwogt & Hoeksma, 1995) (Demir, 2020). (Jonauskaite et al., 2019) (Yu et al., 2020)
		Blue	Happy color Trust Positivity Peace Hope Calmness Happiness Wisdom Truth Formality Popular/favorable Relaxation Functional Interactive	(Singh, 2006) (Demir, 2020) (Hunjet & Vuk, 2017) (Kaya & Epps, 2004) (North & Ficorilli, 2017) (Bottomley & Doyle, 2006) (Yu et al., 2020)
		Red	Arousal	(Yu et al., 2020

Concept	Subconcept	Categories	Items	Reference
			Noticeable	(Mustatea & Gociman, 2022)
			Sad color	(Hunjet & Vuk, 2017)
			Love	(Singh, 2006)
			Passion	(Bottomley & Doyle, 2006)
			Increase appetite	(Demir, 2020)
			Sensory-social products	(Bagchi & Cheema, 2013)
			Courage	(Kaya & Epps, 2004)
			Enthusiasm	
			Fun	
			Anxiety	
			Positiv	
			Aggression	
			Fiery	

Note. This table categories the theoretical framework into concepts, sub-concepts, categories and items.

3.6 Types of questions

Consistency in the questions asked is an important part of the focus groups, if wishing to establish saturation (Krueger, 2014) and transferability that makes it possible for other researchers to remake the study (Bell et al, 2019). It is hence important to establish certain key questions, which will be consistent within all focus groups (Krueger, 2014). The importance of core questions are supported by Ryan et al (2014), since it improves the credibility of focus group evidence. However, since the study has an exploratory nature it is important to formulate the questions in a way which enables the participants to elaborate their answers. Hence, the focus group discussion had a semi-structured approach, where the researchers followed a script to a certain extent in order to establish that all topics were covered. However, open questions were constructed and used, which enabled the discussion to be flexible and let the participants express themselves freely (Bell et al, 2019).

The use of probing questions allows the researcher to receive an exploration of concepts (Priede & Farrall, 2011). It was used by the researchers when they felt that their respondents needed help with their answers, when they might not have understood the question or needed more information to give an answer (Bell et al, 2019). The probing questions were also used as a tool for when the respondents did not give enough information and the researcher wanted more out of the question. By using a probing question in that situation, the researcher was able to receive more complete answers that were of interest for this study (Bell et al, 2019). Moreover, it was highly important to rigorously structure the probing questions so they would provide relevant information (Priede & Farrall, 2011). The aim is to carefully structure the questions so that they include both the general theme and the specific issue. The probing questions should be used as a tool to keep the conversation going and contribute to the specific issue. To make sure that the respondents were continuously engaged and provide more information, the questions should preferably be user-friendly, not too repetitive (Priede & Farrall, 2011) and open-ended (Bell et al, 2019).

3.6.1 Interview guide

The focus group discussion is a form of qualitative research method which aims to explore an issue into depth. A semi-structured approach was taken in the focus group discussions, which included open ended questions, of both main and probing characteristics. In order to keep the discussion focused and cover all the desired topics needed in order to answer to the purpose of the study, the moderators included an interview guide. The guide was used as a tool to ensure that all topics were asked and discussed within each of the three focus groups. The main questions were asked in order to improve the credibility of the focus groups. Furthermore, probing questions were used to facilitate the discussion between the participants and provide the study with depth.

Table 5.

Interview guide for focus group discussion

Concept	Mental response	Main question	Probing questions
Ad 1 Red	Cognition	What are your prior knowledge or experience with the color in a social media advertisement setting? Of what nature are you expecting the message's nature? What message are you expected to receive and read about based on the color? What information do you get out of this advertisement?	• What knowledge do you have about this color in general? • What are your previous experiences with the color in marketing? • What are your previous experiences with the color in social media advertisements? • What is influencing your anticipation of the message?
	Emotion	What are you feeling while watching the advertisement? Do you have an overall good/positive feeling or bad/negative feeling?	• Why do you think that you feel this way? • What emotion did you associate the color with? • What emotions were evoked within you while watching the advertisement? • How do these emotions influence the anticipated advertisement's message?
	Perception	What was the initial thought that came to mind when looking at the social media advertisement? What is your initial reaction to the color as a company's advertising message?	• Can you elaborate a bit more? • What was the first reaction for the other of you? • Why is this your first thought? • How do you think this association was created?
Ad 2 Blue	Cognition	What are your prior knowledge or experience with the color in a social media advertisement setting? Of what nature are you expecting the message's nature?	• What knowledge do you have about this color in general? • What are your previous experiences with the color in marketing? • What are your previous experiences with the color in social media advertisements?

Linnæus University
Sweden

		What message are you expected to receive and read about based on the color? What information do you get out of this advertisement?	• What is influencing your anticipation of the message?
	Emotion	What are you feeling while watching the advertisement? Do you have an overall good/positive feeling or bad/negative feeling?	• Why do you think that you feel this way? • What emotion did you associate the color with? • What emotions were evoked within you while watching the advertisement? • How do these emotions influence the anticipated advertisement's message?
	Perception	What was the initial thought that came to mind when looking at the social media advertisement? What is your initial reaction to the color as a company's advertising message?	• Can you elaborate a bit more? • What was the first reaction for the other of you? • Why is this your first thought? • How do you think this association was created?
Ad 3 Yellow	Cognition	What are your prior knowledge or experience with the color in a social media advertisement setting? Of what nature are you expecting the message's nature? What message are you expected to receive and read about based on the color? What information do you get out of this advertisement?	• What knowledge do you have about this color in general? • What are your previous experiences with the color in marketing? • What are your previous experiences with the color in social media advertisements? • What is influencing your anticipation of the message?
	Emotion	What are you feeling while watching the advertisement? Do you have an overall good/positive feeling or bad/negative feeling?	• Why do you think that you feel this way? • What emotion did you associate the color with? • What emotions were evoked within you while watching the advertisement?

			● How do these emotions influence the anticipated advertisement's message?
	Perception	What was the initial thought that came to mind when looking at the social media advertisement? What is your initial reaction to the color as a company's advertising message?	● Can you elaborate a bit more? ● What was the first reaction for the other of you? ● Why is this your first thought? ● How do you think this association was created?
Overall examples of probing questions	● Would you like to elaborate a bit more about that? ● What are your thoughts on that? ● Would anyone else like to comment on that opinion? ● What is the reason behind that? ● If we connect back to the expected message ○ What type of information are you expected to receive? ○ What type of message are you expecting?		

Note. This table demonstrates examples of main and probing questions which were used during the focus group discussions.

3.6.2 Pilot study

Before the actual execution of focus groups, the researchers conducted a pilot study to ensure the content and functionality of the execution was as efficient as possible. The researcher gathered a pilot focus group with participants that matches the intended sample (Bell et al, 2019). The pilot study was conducted as a discussion between two people, where the main question was tested on a male and a female who were aligned with the desired sample. In order to strengthen the credibility and dependability of the main study, a pilot study can be used to pretest the method and the interview questions. Pilot studies of a qualitative nature are not as commonly published and there is little research available regarding the process of conducting a qualitative pilot (Malmqvist et al., 2019). However, pilot studies play an important role to successfully conduct a full scale study, since a pilot study can reveal and identify potential problems and issues, which hence can be avoided in the main study (Jairath et al., 2000). Pilot research can provide the future directions of the study, since pilot research can provide crucial information for the main study (Rožman et al., 2022). Furthermore, a pilot study can be used in order to test and confirm if the subjects of interest are possible to study in the desired way (Rožman et al., 2022).

During the pilot study, it was shown that some of the probing questions were limited to a yes/no answer, which was seen as a limitation of the study and that it might have prevented the study from meeting its purpose. Consequently, many probing questions were changed and rephrased from for example "*Do you have any previous experiences with the color in social media advertisements?*" to "*What are your previous experiences with the color in social media advertisements?*". These rephrased questions enabled the discussion to go into depth, make a better conversation between the participants and created a better foundation for creating an understanding for the participants' mental responses. Furthermore, it was revealed that the participants tended to talk about the colors in general terms, instead of in connection to the color as part of a company's marketing communication. It was understood that probing questions about the expected message was necessary. For example, in the pilot study, the participants talked about what feelings they connected to the color, but a probing question was added about how the specific advertisement made them feel. This enabled the participants to really elaborate and provide more detailed explanations regarding their statements. Such probing questions were proved to be highly significant, since it revealed a discrepancy between the emotions associated with the color of the advertisement and the actual emotions experienced by the participants when viewing it on Instagram. It was hence important to move the discussion from associations to expectations.

Van Teijlingen and Hundley (2001), argue that it is part of a researcher's ethical obligations to report what type of issues and changes which were made due to the outcome of a pilot study. Moreover, it is argued that the most appropriate research processes can come as a result of a well designed and well conducted pilot study, hence its importance to be included in the research study (Van Teijlingen & Hundley, 2001). Consequently, the authors choose to include examples of the changes made as a result of the pilot study's findings.

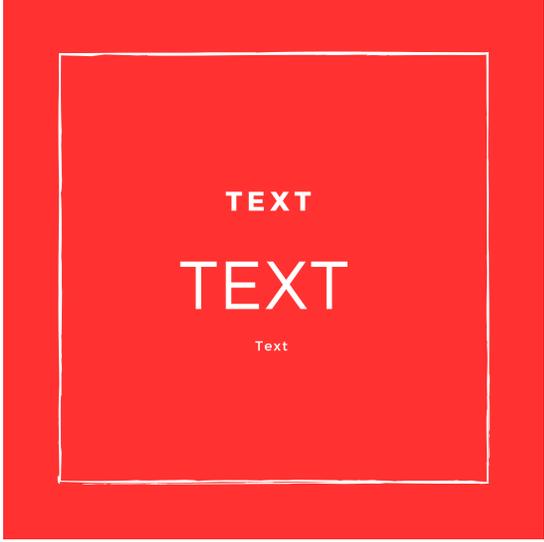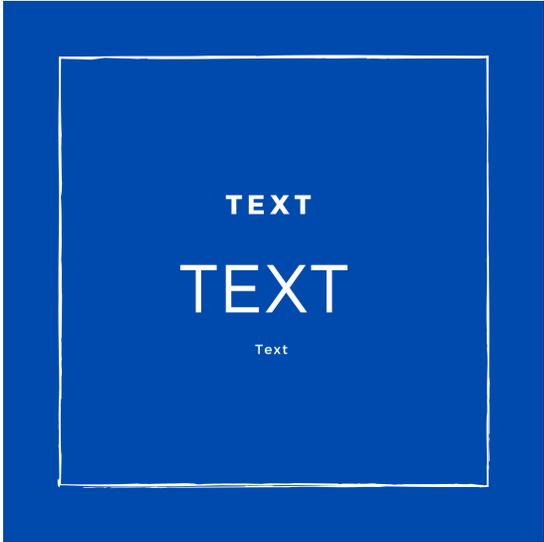## 3.7 Production of the social media advertisements

In a visual advertising message, a color is not commonly used alone, but in combination with other colors and attributes such as pictures, graphics and text (Solomon et.al., 2016). However, the research aims to explore how the color of an advertisement post affects the consumers' response through cognition, emotion and perception. It is argued that animated banner ads are negatively associated with advertising and the consumers' attention is often lost before the animation has finished. It is hence suggested that static banner ads should be used (North & Ficorilli, 2017). In addition, social media posts commonly contain both several visual components that contribute to conveying a message visually (Dale et.al., 2020). Earlier research explains that the visual components could be more influential than others and thereby affect the outcome more. Furthermore, it is suggested to further research how visual components, such as color, images and text, can create different effects from an advertising post. Therefore, the researcher of this study decided to focus on the color in this post and created a post where the color was in main focus. But since a post normally contains more than one component, a text without context was added for the post to feel more realistic (Dale et.al., 2020).
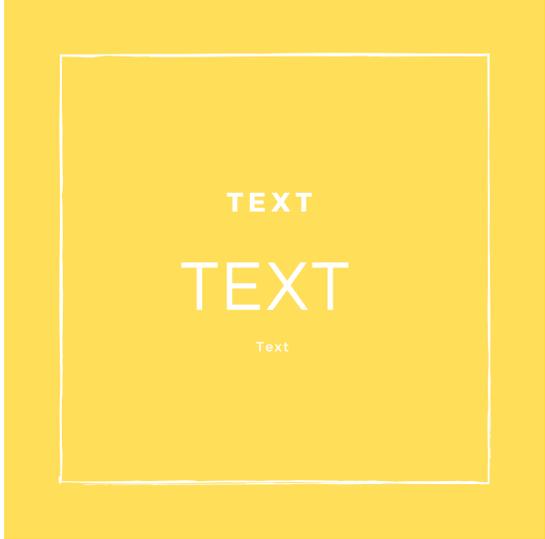
In the Instagram Feed, the user will see content from individuals and companies which they have chosen to follow. However, the user will also be introduced to content and ads which the algorithm thinks would be of interest for the user (Instagram. A., n.d.). An Instagram post is a photo or a video, which is posted and shared on an Instagram account. It is also possible to share several videos or photographs presented as a one post, known as a carousel. Users can like, comment and share the post with their own account (Instagram. B., n.d.). Instagram can be a way for companies to interact with their consumers and followers (Instagram. C., n.d.). By applying the research findings in a social media setting, the SMA created was of static nature. While creating the visual SMAs, the three primary colors red, yellow and blue were used, where the primary colors had the following digital color codes: Red #FF3131, Yellow #FFDE59 and Blue #004AAD. These SMAs were presented in an Instagram feed context during the focus group discussions. The participants viewed the ads on their own phones in order to give an authentic scenario and create a natural experience.

Table 6.

Social media advertisements

Social media advertisement	Primary color	Visualization
1.	Red	
2.	Blue	

3.	Yellow	

Note. This table demonstrates the created social media advertisements which were discussed and interpreted in the focus group discussions.

3.8 Research quality

In order to make sure that this study would establish research of good quality, the criterion of trustworthiness and authenticity was applied. The usual criterias used for evaluation of quality is reliability and validity, but when it comes to qualitative research these criteria are not always the most appropriate applicators to ensure quality. Trustworthiness and authenticity work as qualitative equalizers to reliability and validity. Consequently, trustworthiness and authenticity are applied in this research due to higher relevance. By using trustworthiness and authenticity as evaluation criterias, it was possible to conduct the research more efficiently and with as high quality as possible. In addition it was possible to explore several perspectives of the construction of the social world (Bell et al., 2019).

3.8.1 Trustworthiness

The criterias used when evaluating the trustworthiness of this research was *credibility, transferability, dependability and confirmability*. These four criterions each contribute to creating trustworthiness and by inheriting these during the process the research quality gained more substance and transparency (Sinkovics et.al., 2008). Firstly, *credibility* was gained by ensuring that the research was transparent with the participants, which were representatives of the social

world, about the research findings and ensuring that the research is conducted to fulfill a contributing outcome (Bell et al., 2019). The researchers provided the participants with research findings in order to ensure that the result matches their answers and thereby gives the correct picture of the social world (Bell et al., 2019).

Secondly, *transferability* was created by providing an extended description of the study with as much details and information as possible. Hence, the chances for the research to be applied in other environments would increase (Bell et al., 2019). The thick description of the research provides other researchers with enough information to make their own judgments of the possible transferability into other research environments (Bell et al., 2019).

Thirdly, in order for this study to contain dependability the researchers made sure to have complete recordings of the process and the large amount of data that comes with qualitative data. Therefore, the researchers kept records of problem formulations, field notes, transcripts and sample selections, which is an important contributor to trustworthiness (Bell et al., 2019). However, the researchers were aware that when conducting qualitative research the possibility of replication is non-existent. Even if the research is provided with the exact same data set the outcome will be different (Stahl and King, 2020). But in order to make sure that the process followed the right track, notes were kept during the whole process in alignment with the structure of dependability. Thus avoid getting lost in the large data collection (Bell et al., 2019). Dependability therefore works as a parallel to replicability (Bell et al., 2019) and in this research, the non-replicability phenomenon is based on constructivism (Stahl and King, 2020). Which means that reality is considered constructed and constantly changing inline with society. Hence, it being impossible to get identical answers when conducting qualitative research and explaining the logic with dependability (Bell et al., 2019).

Lastly, this study was conducted without any personal values or theoretical inclinations that could influence the outcomes from the study in order to ensure *confirmability*. Confirmability refers to the objectivity of the research (Sinkovics et al., 2008). However, the researchers were aware of the fact that complete objectivity is impossible to achieve, therefore it was of utmost importance to prove that the study is acting in good faith and could be trusted to have good

intentions. This was done by giving the participants transparent information about how the intentions are to contribute to efficiency in marketing communication. But also in the way of privacy precautions to create a safe environment (Bell et al., 2019).

3.8.2 Authenticity

The evaluation criteria of authenticity concerns the social and political issue and considers the wider impact of the research. For a research to be authentic, the participants were responsible for the viewpoints of social settings in order to generate engagement and understanding amongst the participants (Bell et al., 2019). Being transparent with the evidence that proves authenticity, provides the reader with more confidence with the research (Amin et.al., 2020). Therefore the authors provide this study with both ethical and societal considerations. Authenticity is specially designed for qualitative evaluation and was therefore of high relevance for this research (Amin et.al., 2020).

3.9 The focus group discussion process

There were three focus groups conducted in this study and all were conducted with two moderators e.g. the researchers of this study. The day before the focus group discussions each participant was sent a consent form, which they were told to read through. In the beginning of each focus group discussion, the moderators went through the consent form and answered any potential questions and the participants gave their consent orally. The participants were also told to give their consent in writing. The focus group discussion took place physically and in alignment with the nature of focus groups as a research method, the researchers were keen to create an environment where the participants felt comfortable. The location was therefore chosen by taking these into consideration and the focus groups were conducted in a home environment, either at one of the participants or at the moderators. Each participant was offered coffee, tea or soda, in order to contribute to the creation of a comfortable and relaxing environment for the participants to feel free and safe to share their opinions about the subject (Bell et al, 2019). To ensure that the participants could express themselves as freely as possible, the discussions were in Swedish, since it was the native language of the participants.

As consented to in the consent form each focus group discussion was audio recorded as a way for the moderators to focus on moderating the discussion, rather than transcribing it. Furthermore, the audio recordings were used in order to establish accuracy and validity of what was being said (Bell et al, 2019). It also enabled the researchers to capture details and who said what, especially while several participants were talking at the same time. The audio recordings were tested before each focus group, to ensure that the quality was good and that all participants were heard (Bell et al, 2019). The recordings were made on the moderators' phones and were not to be shared with anyone except for the researchers themselves. The audio recordings were used by the researchers while transcribing the focus group discussions (Bell et al, 2019).

There were two moderators present during the three focus group discussion, who guided the group throughout the discussion (Bell et al, 2019). The moderators did not interrupt, unless the discussion went off topic, but let the participants discuss their opinions freely. In other words, the focus group discussion was mainly unstructured (Bell et al, 2019). The focus group discussion process had the same structure for all three focus groups. The participants were informed to pick up their phones and go on Instagram to look at the first advertisement in a realistic environment on social media. This approach was chosen in order to present the SMA in an authentic scenario and create a natural experience. Thereafter, they were asked to share their initial thoughts or emotions to get the discussion started. The SMAs were shown in the same order for each focus group, in order to be consistent and contribute to the research quality by simplifying the possibility of transferability (Bell et al, 2019). Each focus group discussion was between 38-51 minutes, where the minimum time of discussing a color was 12 minutes.

3.10 Data analysis method

Qualitative data analysis is mainly gathered in the form of transcripts, notes, documents and visual images. These data collections have a tendency to rapidly grow and contain a large amount of data. (Bell et al, 2019). In this study, the data analysis method was inspired by the grounded theory, which is a well established qualitative data approach (Bell et al, 2019). Grounded theory expects complexity and it normally treats large amounts of data (Chametzky, 2022). The researcher took inspiration from the classical coding process from the grounded

theory by creating several components that left the researcher with an increasing amount of data to analyze (Chametzky, 2022). The coding process began with using open coding to break down the collected data from transcripted focus groups, into concepts, where components that have theoretical significance are given labels. A valuable concept was classified as frequently arising and to have a recognition factor amongst the members participating in the study. The researchers went through the transcription and wrote down words that were commonly mentioned and classified as valuable for the study. For instance, the words "happy", "joy" and "summer" were repetitively mentioned in relation to the yellow social media post. These words were considered valuable and therefore noted as labels and kept for later elaboration into concepts. The concept was further put into categories associated with real life phenomena, followed by giving the categories properties that describe its attributes which gave the researchers enough information to form a concluding pattern that connects concepts. For instance, the blue social media post was assigned with concepts such as trust, security, informative and formal selling. Based on these concepts two main mental response categories could be identified and named *reliability* and *substantial selling*. The final step in this data collection method was to form a theory out of the systematically developed categories. The theory should be able to explore some kind of phenomenon, social or other (Bell et al, 2019). In this case it explores the fact that mental response performs differently in the explored categories, which became clear since some certain mental responses were more activated than others. In order to avoid difficulties, the researcher compared codes, categories and properties to find connections rather than differences (Chametzky, 2022).

3.11 Considerations

3.11.1 Ethical

Prior to the conduction of focus groups, the researchers designed the process with ethical considerations (Bell et al., 2019). Prior to the execution of the focus groups, the participants were well informed about what to expect and how it would be structured in order for them to arrive with full awareness of the situation and confidence. They were informed that the session would be recorded, the amount of other participants and that there was no time limit since the

discussion is unstructured. The researchers explained that participation is harmless and if the participants ever felt any uncomfort, they could back out any time. In addition, the researchers made sure that the focus groups were held at a location that felt comfortable atmosfear for the participants and if there ever were to be any noticeable uncomfort the researchers would steer the conversation in another direction (Bell et al., 2019).

The participants were provided with a consent form, a type of privacy agreement, prior to the focus group to give clarity to what information will be included. The consent form was also gone through and explained by the moderators to rule out any potential misunderstandings. The participants gave their consent both orally and written, in order to establish that no hasty decisions were made. The agreement explained that the participant's name, exact age and education was only going to be known to the researchers. Instead, the participants will be referred to as *Participant n* and presented to belong to the age range 20-25 years old and studying at the Linnaeus University School of Economics, in the paper. The reason for giving the participants this kind of privacy is to ensure their comfortability of participation and avoid intruding on their individual values and privacy (Bell et al., 2019).

3.11.2 Societal

The researchers of this study made sure to consider the possible societal impact this study will entail. The findings produced from this research will be of most interest for marketing communicators, since it aims to give understanding of how colors influence the minds of consumers in regards to SMA. This could further contribute to a more efficient marketing communication where colors are used accurately. However, there is a possibility that the findings will be used manipulatively by using color in communication to send a message that is not truthful, just to enhance consumption. Relevant to this study of the mental response are the manipulative aspects of playing on consumers' three decision making vulnerabilities: emotion, perception and cognition (Sher, 2011). Companies can make use of a consumer's emotional vulnerabilities by exposing feelings of fear, worries or insecurities in their advertising and utilizing their response to their advantage. In addition, perceptual vulnerabilities can create distortion of the reality of an object or situation and cognitive vulnerability refers to how consumers memory and knowledge can be altered with. Instead of exploiting these mental

vulnerabilities, companies should use the findings of this study as a tool to create as satisfactory experiences as possible for customers encountering the marketing communication. However, it is difficult to know what companies' real intentions are and when these vulnerabilities are exploited or when they are used for genuine motivational engagement (Sher, 2011).

4. Empirical investigation

4.1 Focus group 1

4.1.1 Red

The initial reaction within the focus group was the word "warning" which was the first word uttered. The statement came instantly, without hesitation and with a serious tone, and it was seen on the participants' faces that they took the message seriously. Furthermore, the participants agreed that the advertisement would have caught their attention while scrolling on Instagram and that they felt the need to stop and read what the advertisement is about. The participants showed somewhat stiff body language and had clenched facial expressions. It was expected that the company post had something very serious to mediate. It was stated that the color really attracts attention. To emphasize, it was stated by one of the participants that "*I would not say that it only attracts attention, it is like it demands attention.*"

Another initial thought was that the color was quite ugly and that the advertisement was minimalistic, which stands out because Instagram is often all about the aesthetic. The participants commented on the red shade, that it was quite soft, but that it did not change or influence their interpretation of what the message would be. The group discussed that they felt like they needed to prepare themselves for the information they were about to receive in the advertisement. They expected information of an unfortunate kind or like something serious with negative emphasis. However, the focus group struggled with identifying what type of negative information they were expecting the company to convey. However, the discussion also brought up that the conveyed message might be of informative nature, information that was important and should not be missed.

Furthermore, they argued that they would quickly ascertain who the sender of the advertisement was, since they believed this would influence their perception of the anticipated message. Nevertheless, the color created assumptions of the sender company such as SOS, help organizations or other companies connected to emergency situations due to either their graphical profile or connections to warning. The participants suggested that their expected message could

have something to do with acute blood shortage in the hospitals, which indirectly can be life threatening. The participants did also associate the color with sport teams such as football clubs. In this context they only predicted that they would receive information about an upcoming game or information about the club, which did not necessarily was of a negative nature, instead aligned with their graphic profile.

The participants had several previous experiences with the color red in different situations. It was shared that their general previous experiences with the color red were connected to *stop*, *warnings* and *emergencies,* such as traffic lights and warning flags. After some reflection the focus group stated that the color red also could be associated with happy and positive feelings such as love, hearts or christmas, which were discussed with a casual tone. Nevertheless, the participants did not perceive that these associations prompted an expectation of a positive message within the advertisement. The participants have a limited knowledge and experience of the color red in marketing communication. The format of the advertisement was also discussed, since the participants were more used to photographs in advertising, as a result, they had no previous knowledge of what to expect. The advertisement was argued to create a feeling of nervousness, seriousness and alertness, which were also observed among the participants. The participants said that the advertisement evoked many different emotions, but agreed that they did by no means feel peaceful or calm while looking at the post. Instead, the social media ad created a negative feeling within the participants. The participants also discussed the possibility of companies taking advantage of this reaction, which made them aware of the fact that the message perhaps not always will be as serious as they expect it to be.

4.1.2 Blue

After discussing the red advertisement, the focus group got to see the blue advertisement, where the initial reactions were completely different. It was stated that the blue advertisement created a positive feeling directly. The participants agreed that they expected the message to be positive and informative. Furthermore, they expected the message to be clear and without frills. Early in the discussion, participants noted that the advertisement evoked feelings of happiness. However, instead of stirring up intense enthusiasm or excitement, it brought about a calm and joyful state. Furthermore, they also generated an expectation that the advertisement would contain an

informative message. The focus group discussed that they preferred the blue colored advertisement and argued that it was better looking than the red advertisement. They also remarked that the blue color appeared vibrant, refreshing, and had a kind quality to it.

In addition to this, very early in the discussion, there was talk of associations related to companies, with the participants making connections based on prior experiences to crisis management and more specifically concerning COVID-19. Despite the group's prior experiences with the use of the color in crisis management, it did not influence their decision about the advertisement message being positive. While comparing the blue advertisement with the red one, the participants believed the intended message to be informative, though not with the same level of seriousness as they anticipated from the red advertisement. Nonetheless, the focus group determined that the color blue led them to believe that the message being conveyed would be of importance. The blue advertisement caught their attention and made the participants want to know more. Previous experiences created predictions about the sender being government agencies, since both the Swedish national flag, the police and EU use the color blue in different contexts. They also mentioned insurance companies and banks which include blue in their graphic profile. Companies and student committees, which are present in the participants' lives today, were also brought up during the discussion and believed to be a possible sender of the SMA. Regardless of the sender of the post, the participants established that they would have expected the information provided to be informative, but with a safer, warmer and more positive feeling. It was also predicted that the information would be important and formulated clearly and restricted without funny words or sentences.

However, the focus group discussed what type of information they were expecting and they had to cognitate.It was presumed that the message was informative and conveys a positive sentiment, although it might not necessarily be good news. Furthermore, it was suggested that the message was not going to be about products or of a selling nature. Later it was suggested that the company might be seeking to fill a new position. The participants stated that the SMA created a positive feeling, which was calming and safe. Although, the ad made the participants feel curious about what type of information they were about to receive. The color was also connected to the sea and the sky. Associations to politics and football teams were also brought up in the

discussion, which due to preference, was said to influence whether the viewer felt a positive or negative feeling by the SMA in the context. However, this did not influence what type of message the participants expected, since it was still anticipated to be informative.

4.1.3 Yellow

The yellow SMA created division within the focus group instantly. The first sentence was "Oh, it's very yellow. I almost find it a bit bothersome to look at." while the second sentence was "What? No! I love it, I feel so happy!". However, the participants argued very passionately for their viewpoints and showed a high level of engagement in the discussion. The overall discussion maintained a positive and enthusiastic tone about the advertisement, with associations being drawn to seasons like spring and summer, and more specifically, the sun. It was stated that the advertisement conveyed positive feelings and that happy or positive news was anticipated in the message. They would probably have been surprised if it were a negative message. Other emotions such as playfulness and joy, were also promptly mentioned. Moreover, the group felt a lot of energy while viewing the advertisement.

The participants anticipated the SMA to be of an inviting nature or introducing something new, such as an event, product launch or a campaign, but not overly salesy. However, the discussion brought up contradictions in the anticipated message, since yellow also was negatively associated with content of typical advertising type and low price companies and grocery stores. The predicted advertising messages and connection to low price and low quality was said to influence the attention of the participants. Consequently, the negative associations would have prompted the participant not to linger on the advertisement, but rather to simply scroll past it since they felt annoyed and disturbed by it. These emotions were also observed by the moderators. On the other hand, the participants felt a bubbling energy while looking at the social media ad and were excited to read about the fun that is about to happen. They talked about the SMA with a smile on their faces. It did really catch their attention, since if the participants were to see this on social media, they would think something joyful, like a campaign or event, was about to happen. Holidays such as Easter, making the anticipated message seasonal. Depending on the time of the publication the participants would have predicted the message of the advertisement differently. During spring, summer or Easter, the participants would have believed

that the company would have shared information about, for example, opening hours during vacations or other seasonal related information such as a product launch. If the yellow advertisement would have been posted during autumn or winter, the participants were not really sure what message to expect, since they most likely connected it to summer.

The focus group had little or limited knowledge about yellow in advertising in social media or marketing over all. Rather than promptly articulating associations or prior experiences with the color, there was a moment of silence as everyone reflected. Eventually, it was hesitantly mentioned that yellow was symbolizing energy. Hence, it was stated that it was hard to suggest an expected message due to no prior experience of the color in this context. Yellow was not established as a color which symbolized or represented a certain marketing message. Moreover, the color created attention and was suggested by the participants that it was a good color to use in social media while conveying a positive and energetic message. However, the color was also creating negative feelings as it was connected to fast sales and low quality due to prior experiences with companies with yellow in their graphic profile and who had used it in their marketing communications. It was also stated that the color was ugly, however, this was counter argued by other participants in the group.

Overall, the advertisement created positive feelings and energy among the participants. It was suggested that it created a feeling of leisure, warmth and happiness. But it was also stated that this color did not create any emotional response at all, and if any, the emotions created were negative, as the color was irritating on the eye and somewhat garish. At the end of the focus group discussion, yellow was recognized as a challenging color to categorize, as it is neither definitively positive nor negative in a societal context. Conclusions were drawn to the yellow card in football, the traffic lights and the yellow flag at the beach, all symbolizing some form of caution or the transition from green to red. At the end of the focus group discussion, the participants started to discuss the different colored advertisements, where yellow was said to create more positivity, than blue and red. Blue came in second place, while red was suggested to not create positive feelings at all.

4.2 Focus group 2

4.2.1 Red

The initial thoughts amongst the focus group was a bit fragmented, where some initially thought of sales and some mentioned that it felt serious. The seriousness was further elaborated on and discussed in the context of Instagram. This color is not related to something happy, instead the participants stated that this color made them feel like it is important to read this post, for instance they mentioned that it could be instructions or user terms. But it was also dependent on what type of company that was responsible for the post. The feeling was said to differ depending on whether the sender was a non profit organization or a profit driven company. If the sender was a non profit organization the participants would have continuously believed the message to be of significant importance. However, if the sender was a profit driven company, the participants argued that the feeling of importance and seriousness decreased significantly. It was further argued that the type of profit driven company had an influence on the anticipated message and hence, how it would be received.

The participants had a hard time figuring out if the color radiated positivity or negativity. An example was mentioned and described as the difference between a bank using red in their communication compared to a clothing store using the color red in their communication. They discussed the credibility of the color and discussed that if it were a more serious company such as a bank using red in the graphical profile they would choose another bank since it made the bank feel unreliable. However, if a bank with for example blue in their graphical profile had posted this red colored SMA, the participants instinctively thought something really bad had happened that demanded the customers attention, like the bank being hacked. However, if it was a post by a company who sold sunglasses, they would feel more positive about the post and expect a discounted offer and if not, be a bit irritated.

In addition did the participants express that they did not encounter this type of post on Instagram that often, and elaborated that it is more common with aesthetic content rather than a one colored post. But if it would appear they would stop and read because it is attentive and evokes curiosity. However the color did not radiate feelings of security, more feelings such as doubt and suspicion,

and a parallel to cheap mass sales that seeks attention where quantity is more important than quality. The participants ended up with the conclusion that it is more suitable for a clothing store to use this color in posts, since the participants did not associate red with something serious or informative in this context, rather their association leaned towards red being positive and therefore more likely to be used by a clothing store in relation to sale.

The participants agreed on the color red being a noticeable color and they mentioned that they definitely would stop scrolling and read the post if it showed up in their instagram feed. The participants' earlier experiences with the color red was that it means *"Stop"* and is used in context to create attention. Therefore, they stated that it could be a possible reason for why they felt the urge to stop and read if it showed up in their feed compared to another color such as blue. A reappearing comment is the fact that the type of company that posts will influence the participants' opinions. If it is a company that uses the color red otherwise in their marketing or has associations with the color there would not be as much suspicion or surprises. The participants exemplified with the Red Cross and political parties. However, if it was a company that is not associated with the color red, the participants would be extra attentive and curious. This was exemplified with a political party that is associated with the color blue and if they were to use red in their post it would mean that they used the color of a competitor. In general the participants agreed that it is a very attentive color that gives a reaction.

4.2.2 Blue

The initial thoughts amongst the participants when viewing the blue post was that it made them feel good and associated it with safety and trustworthiness. Compared to the red post, the blue one made the participants believe that the message with the post was going to be a serious or informative post, rather than a post with a selling approach. Associations were made to companies that work with safety such as insurance or government. It was mentioned that the color blue often is used by larger companies rather than smaller, but also that it is a typically used color in the political environment. When the participants discussed their earlier experiences and knowledge related to the color blue they mentioned water firstly, quickly followed by associations to companies' logotypes, such as Länsförsäkringar, IF and EHVS, which are banks, insurance companies and the Economics School board. The Swedish political parties

Moderaterna and Liberalena were also mentioned. The participants' collective opinion was that it is a color used by organizations or companies that should be seen as trustworthy and secure.

Moreover, the participants phrased that the color was not very attentive and did not necessarily catch their attention. Instead they felt more seriousness, calmness and safety. However, it was discussed that the color blue could bring happiness for some of the participants since they could associate it with personal interest in sports teams, and phrased that it is *"my color"*. The participants had a hard time finding anything negative related or associated with the color blue and believed that there was only one purpose of using the color blue, which was to send an informative, secure and trustworthy message. The focus group ended with a discussion where one of the participants pointed out an angle of approach which was how the answer would be if the participant would have been highly politically invested. They believed that it would affect the answers depending on what political opinion one has since color is used as a tool to separate parties and their opinions.

4.2.3 Yellow

The initial thought or feeling when the participant viewed the yellow post was that it felt hip, modern and a bit daring. Their expectations on the intentions with the yellow post was that it would advertise something joyful since they felt happiness when they saw the color. A well mentioned association was summer, and the participants reflected upon that it very likely could be a post about summer clothes or other summer related activities.

When taking the color yellow into company context, the participants felt that this post had quite a selling approach. But still a young hip company that does not have to be very big. The intention of posting this was, according to the participants, when the company released a new product or service, but with a touch of summer. They exemplified it with sunglasses or a beach restaurant. It was discussed that the difference between the red selling approach and the yellow selling approach was in their opinion that red is associated with low priced products and yellow is a bit more pricey and modern.

In addition, the color yellow was considered to be associated with freshness and associations were made with hygiene products since these often have blossom and honey flavor. In general the associations continued to revolve around summer. However, in the broader context they could mention some negative aspects such as a yellow card in sports, which signals warning. But they highlighted the importance of what type of yellow that was used, since a more sharp yellow would give more of a serious association, while a softer yellow feels more light and happy. The participants were asked whether this aspect would be the same for all colors, and firstly they agreed that it would but after some discussion it was mentioned that the tint of yellow was of more importance than blue and red. Other associations to yellow mentioned were countries' flags and sports teams.

The participant explained that they felt that yellow was an appropriate color to use on Instagram and that it could be used in most branches such as banks, politics and clothing. This was in the participants opinion because it is a calm and happy color and could therefore be used in several contexts when a company wants to send a happy, summary message. Which they mentioned could be a reason for why they felt that they did not have as many specific associations with yellow in regards to marketing contexts.

4.3 Focus group 3

4.3.1 Red

The third focus group had a hard time figuring out what their initial thought was of the red post and their first comment was minimalistic creativity. But after some discussion they reached an opinion about the color being distasteful and not very attractive. The participants felt discomfort and mentioned that the color was very strong. It was further elaborated amongst the participants that the intention of using this color on Instagram posts was to send a serious message or to highlight something important. There were also associations that connected the color with a selling approach where sale, in conjunction with the color red, was brought up as an example. However the participants believed that their associations and opinions of the post depends on what type of company is posting. The participants mean that if they were familiar with the company their opinions might be more positive and not as deterrent as if it was an unknown random company. If it was a familiar company the participants explained that they could recognise and associate it with what they are selling. Thereby, it will be more or less expected by the company to use this color.

Furthemore, the participants discussed other associations they had with the color red. They connected it to *"Stop"* in context of both the expression itself but also as signs, as a result they felt the need to stop and read Their earlier experiences placed red in situations where a message needed to be distinct and intensified. However, the discussion took another turn when the association was connected with warmth and thoughtfulness, since red is the color of love. Despite this new perspective, the participants concluded that they mainly had negative associations with red and the post gave them emotions such as warning and stop. It was further explained that the reason for why they would stop scrolling and notice this post in their instagram feed was because of its attentive attributes and how it evokes some kind of curiosity of what this could possibly contain. According to the participants, this post could be used by companies when they want to express a special happening that differs from the usual. But their earlier encounters with red in marketing communication was principally in relation with sales.

4.3.2 Blue

The initial words from the focus group in regards to the blue post were *"boring insurance companies and banks"*. After further consideration the participants also mentioned politics since several political parties are very well associated with the color blue and use it as a statement to which politic they stand for. It was further discussed that blue in politics was related to liberty, freedom and the Swedish political party Liberalerna was mentioned.

Furthemore, the focus group associated the color blue in this marketing context with feelings of safety since it made them think of insurances. But also a feeling of seriousness and that the content includes important information. Therefore the participants believed that this post could be about selling important stuff that might not be so fun, but necessary and important, for example different types of insurance. It was agreed amongst the group that the post contained a sell feeling, but not similar to the red post. Instead the blue gave the participant an indication of salesment of services or financial products. Blue was argued to be associated with selling vital human necessities such as home insurance, rather than advertisement for another unnecessary clothing garment to put in your closet amongst the others. In conclusion, blue made the participants believe that it was selling more substantial things rather than tricking them to buy something just to buy it.

When discussing other general associations with the color blue, the participants mentioned seriousness, coldness, police and traffic signs that lead the way. The latter association was further elaborated on and the group discussed that, in comparison to the red post, the blue was more sending a message of guidance rather than attention. The participants further reflected upon whether or not they would stop scrolling if they saw the blue post in their feed and mentioned that it is not as attentive and does not evoke as much curiosity as the red post. Blue was more connected with positivity and the participants main emotional relations to the color was calmness and security. The only negativity that was brought up was from a few earlier experiences of blue where it could appear a bit deceiving, meaning that the ad could look safe and trustworthy, but in reality have other intentions that are profit driven.

4.3.3 Yellow

The initial words that the participant mentioned when viewing the yellow post were *"kindness"* and *"happiness"* which also was shown in their facial expressions. The focus group believed that this post could be about presenting news, such as opening a new store, a premier of some kind or presenting new products. All of which they pictured in relation to summer and spring themes. The main association that was discussed was their association with summer, in different settings. The participants gave examples of summer clothes, summer trips and summer events in general. In addition when reflecting on what type of company that could be posting an advertisement like this, the participants said clothing stores with summer clothes and traveling agencies that offer suntrips. The participants were very certain that they did not feel any negativity associated with the yellow post or yellow in general. Only positive feelings and experiences related to yellow made the participants think of memories from days in the summer. There was no hesitation amongst the group regarding whether they would scroll past the post in their feed. They thought the color was very intriguing and made them curious about what this post could be about and would definitely stop scrolling and view the post. If the post was according to what the participants mentioned as earlier associations, they would have high interest in reading the post.

The discussion about color is often connected to politics, mainly the color red and blue, but the participants could not see any connection to politics associated with yellow. They believed that yellow was less serious and more fun and was therefore, or should not be associated with serious stuff such as politics. In comparison to both red and blue, the participants thought that red was more related to warnings and seriousness, while blue was related to calmness and trust. Yellow did thereby stand out to the participants and became "happy news".

5. Analysis

5.1 Mental response categories - Red social media advertisement

5.1.1 Warning

For the red advertisement, the initial response came instinctively and without hesitation: *Warning*! Red is a very noticeable color (Hunjet & Vuk, 2017) and thereby has an advantage to be an attentive stimuli (Teichert et.al., 2019). Considering the first impression, it is obvious that red color in SMAs is an attentive stimulus that will impact the final perception dependent on how it is delivered (McInnes et.al., 2023). Depending on the context (McInnes et.al. 2023), the participants felt discomfort and stated that red was a strong color, while others viewed the color as quite soft. However, both aspects anticipate a negative message to be the outcome of the advertisement which is interesting since previous research findings classified red as a positive and preferred color (Terwogt & Hoeksma, 1995). This clarifies how individual the adoption of information is (Devine, 1999) and how cognitive competence can be decisive in how a consumer's form opinions (Jia & Wang, 2016). Especially in regards to social media, where the amount of information is too large for anyone to fully adapt everything ((Dai & Wang , 2020) et.al., 2020).

A collective adoption of red advertisement being negative messages, however the cognitive associations could differ. For example, associations such as *warning, serious, attention, SOS, important, alert, nervous, unfortunate information* and *emergency*, all with a negative approach but based on different experiences. Furthermore, these connections were aligned with the fact that red is a sad color (Singh, 2006), but highly contradict previous findings of the color in other contexts where red is said to evoke emotions such as fun, courage and enthusiasm (Demir, 2020). In the context of SMA, the participant did only briefly talk about the color red as connected to emotions of love and passion, as stated by Hunjet and Vuk (2017). However, these emotions were not connected to how the participants interpreted the message of the advertisement and were not the participants own emotional response towards the advertisement. The advertisement created and demanded the participants attention, which red is argued to do (Hunjet & Vuk, 2017).

5.1.2 Sale

A second mental response pattern was found in relation to the red social media post and it is named "*Sale*". Despite the strong association and first impression of warning, the red color also gave indications of sale, as in discounts offers and lower prices. In contradiction to the argument that red is a sensory-social color and most appropriate to be used while marketing for luxury and dignity products (Bottomley & Doyle, 2006), the cognitive findings predict otherwise. Intreslingy, in the context of SMA, red was rather experienced in relation to cheap mass sales than with luxury products, therefore a cognitive response exists in the consumer mind and is recognised anew (Charan et.al., 2017). This also imposes that the emotional arousal lacks alignment with the argument about red being a sensory-social color and influences the perception negatively (Hahn et al., 2016).

The emotional responses included in this pattern have both positive and negative aspects. The reason for the fragmented emotions is based on the uncertainty of what type of company that the post belongs to. Since associations were made with sales, it would be inappropriate for a bank to post a red colored picture on social media since it would disrupt the cognitive associations amongst customers and generate negative emotions, decreased credibility and lack of trust (Solomon et.al., 2016). Consumers would nevertheless be as receptive to the actual message since there is no alignment with the stimulus correlation (Affonso & Janiszewski, 2023). However, if the post was posted by a company who sells sunglasses, it would feel more accurate since they are more expected to have discounted offers. If a company's graphical profile does not match the color of the SMA it would send out a doubtful message and create suspicion amongst the consumers due to a disruption in their cognitive scheme (Solomon et.al., 2016). The emotional response would be negative. In addition, red is considered the most noticeable color and very easily catches consumers attention (Hunjet & Vuk, 2017). Thereby it would create negative emotions if the expectations of the social media post is not in line with the company's identity (Gorn et al., 1997). This type of disparity between company and graphical profile also affects consumers perception (Solomon et.al., 2016) considering that color influences consumers beliefs and judgements (Arabi, 2018), and when the beliefs and judgments of this post being about sales no longer cohere, the post will seem misleading and generate negativity.

5.2 Mental response categories - Blue social media advertisement

5.2.1 Reliability

One of the mental responses discovered in regards to the color blue is *Reliability*. This mental response was developed out of a combination and connection with the three categories cognition, emotion and perception. A consumer's perception of an advertisement is based on first impressions and attention (Teichert et.al., 2019) and similar to earlier research (Singh, 2006, Hunjet & Vuk, 2017), blue was considered to be a very likable color which instantly generated a positive first impression. The main emotional response was that the blue social media post expressed trustworthiness, calmness and security, which coherence with earlier theories about emotional associations with blue (Demir, 2020; Hunjet & Vuk, 2017). Consequently, these feelings made the participants believe that this social media post would contain reliable information and, since emotions are considered a tool for brand evaluation, it will result in consumers applying and associating the emotions from the social media post with the company (Hahn et al., 2016). In this case it would make the company seem reliable. Moreover, since the participants believed that the SMA was trustworthy and reliable, it will consequently mean that the consumer has a positive perception about the advertisement (Liu et.al., 2012)

Despite the good first impression, the blue post was not necessarily very attentive. In fact the color blue has a tendency of generating engagement and interactions on social media (North & Ficorilli, 2017) and due to the cognitive knowledge of blue, the participant knew that this post contains important information and therefore felt the need to stop and read. It was not necessarily the initial exposure that caught their attention and influenced perception rather due to high cognitive competence (Jia & Wang, 2016). The willingness to stop and read the post, came from a learned cognitive behavior from earlier experiences with blue advertisement (McInnes et al., 2023) that has been received and adapted by the consumer's mind to be included in all the reasoning and problem solving that happens (Devine, 1999). The result of the reasoning became a cognitive response of curiosity, rather than demand of attention. Adding to these cognitive responses are the associations with blue traffic signs, where the guiding function of the signs is reflecting the opinion of blue. The blue SMA is therefore believed to contain reliable information that will guide the way. Which is an interesting finding since it means that the cognitive

association not only refers to the appearance but also associations to the function of the item, in this case guidance.

5.2.2 Substantial sales

Different from the reliability pattern, this coded mental response was found from reappearing beliefs that the social media post actually do generate a feeling of selling, but it is more of the substantial kind, hence named *Substantial sales*. Cognitive associations were made with insurance companies, banks, politics and government, which all have serious and important roles in society. Therefore, blue was argued to be used by large companies that sell products or services that are seen as a necessity, rather than in relation to cheap mass selling.

Very few negative associations were made with the color blue in the SMA context, however, it was mentioned that it could seem a bit boring in some contexts. This argument was based out of associations and emotional connections with companies that use the color blue in their graphical profile. The companies that were exemplified mainly had connections with finance and politics, where the personal opinion from earlier experiences labeled them as boring. This is analyzed as cognitive responses since it was described as earlier experiences and knowledge amongst the participants and had therefore become a natural association from their memory (McInnes et.al., 2023). Intrestlingy, similar findings as McInnes et.al., (2023) stated was explored when cognitive interactions and perception seem to affect each other in this situation. The initial perception is based on earlier experiences and knowledge with blue, therefore the participants might not receive a positive first impression of the message (Solomon et.al., 2016). In further elaboration, the cognitive responses were mostly created from recognised company logotypes and graphical profiles, and not necessarily from social media posts. Moreover, it was said that if a company used a different color than what is included in their graphic profile, it would make the viewers suspicious. Colors have different meanings depending on the situation, and therefore the type of company becomes dependent on how the post will be perceived (Demir, 2020).

5.3 Mental response categories - Yellow social media advertisement

5.3.1 Happiness

The third version of the SMA created was yellow where one of the mental responses was *Happiness*, an emotional response (Solomon, et al., 2016). According to previous research by Demir (2020), the color yellow is commonly associated with emotions like enthusiasm, fun and hope. Moreover, even in this context the participants were anticipating a new release or product launch and their observed emotional reactions were characterized by enthusiasm and energy. Yellow is considered to be a "happy" (Singh, 2006) and positive color (Jonauskaite et al., 2019; Demir, 2020), which were also corresponding with the words *happiness*, *playfulness*, *joy* and *energy*, which were instinctively uttered. The participants had a smile on their face while talking about the color and said that they loved it, which contradicts with research about yellow being the least favorable color (Hunjet & Vuk, 2017).

It was early brought up that yellow was associated with summer and the sun, which corresponds to previous research about yellow being associated with the feeling of light (Hunjet & Vuk, 2017). The yellow SMA caught the attention directly, which is not surprising due to the fact that yellow is a noticeable color (Hunjet & Vuk, 2017). Yellow is therefore considered to be a attentive stimuli that most likely will be processed by consumers (Teichert et.al., 2019). Since the associations mentioned in association with yellow are mainly positive, it will result in positive perception (Teichert et.al., 2019). The initial reaction was an emotional response (Solomon et.al., 2016), where the color was initially perceived with happiness, which is in correspondence of earlier studies, with yellow being associated with the affective state of joy (Jonauskaite et al., 2019). However, an interesting aspect of the yellow SMA was that the participants struggled to identify an anticipated message, since they argued that they lacked prior knowledge of the color in this context (McInnes et al., 2023). Instead, their feelings led the way in how they chose to interpret the advertisement and acted responsible for the expectations of how the advertising message would be conveyed (Hahn et al., 2016). The yellow colored ad made them happy and they did hence expect the advertisement to be about suntrips, an event, an invitation, a new product launch, a premiere or about summer.

5.3.2 Irritation

The second categorized mental response found was *Irritation*, where the initial reaction was that the color was too yellow, which made it hard to look at. According to previous research, yellow is stated to be one least favored and preferred color (Hunjet & Vuk, 2017; Terwogt & Hoeksma, 1995), which corresponds to the perception within the second mental response of the yellow colored SMA. Yellow is a noticeable color (Hunjet & Vuk, 2017), which did have a negative effect within the mental response, since it was argued to be too bright and irritating on the eye. Furthermore, the color was perceived as garish and as a result the advertisements were interpreted as annoying. The color created attention, but in a negative manner since the emotional reaction towards it was irritation. Just because the color is attentive does not automatically mean that it is interpreted positively, solely that it proceeds in the perceptual process (Teichert et.al., 2019). In the perceptual process, there will be associations interpreted that result in a consumer perception and in this case the associations were negatively inclined (Teichert et.al., 2019).

The emotional response made the participants aware of its existence which made it possible to avoid an unpleasant situation (Solomon et.al., 2016) by easily scrolling past the Instagram post, since there was no interest in engaging with the information. In contrast to the other mental response towards the yellow ad, it was anticipated that the SMA would convey a message of fast sales of products with low quality, which was not of interest to the participants. This assumption was made based on previous experience and knowledge of the color being used in marketing communication of this kind. The prior cognitive competence (Jia & Wang, 2016) of the color mostly consisted of conventional advertising content, offered by low price companies and grocery stores, with lower quality. It was observed that the participants with this mental response were annoyed by the advertisement.

5.4 Overall discussion

The analysis has provided an understanding of how the participants responded to the SMAs. However, some overall comments are deemed necessary to this analysis.

The analysis has resulted in six response categories to the three primary color advertisements through cognition, emotion and perception. The categories which were found were: *Warning, Sale, Reliability, Substantial sales, Happiness* and *Irritation.* Worth mentioning is that each color resulted in two response categories. In all cases, while analyzing one color at the time, these response categories had different mental response patterns, which demonstrates that each individual color had two different mental response patterns. The mental response categories *Warning* and *Reliability,* evoked similar mental response patterns, where perceptual responses represented the majority of the mental response, followed by cognition and least emotion. Moreover, similarities in mental responses were also found in the response categories *Sales* and *Substantial sales*, but compared to the previous pattern the mental response majorly consisted of cognitive associations, followed by emotional and least perceptual associations. *Happiness* and *Irritation* each had an individual mental response pattern. *Happiness* consisted mostly of emotional responses, followed by perception and least cognition. Finally, the response category *Irritation* was mainly based out of perceptual associations, followed by emotions and least cognition.

6. Conclusions

The purpose of this study is to explore how the use of primary colors in social media advertisements influences consumer's mental response. Based on our analysis, the use of primary colors in advertisements generated four different mental response patterns. It is therefore concluded that the colors activated the mental response categories differently, which further proves that colors, as a communication tool, cannot be used over the same premises in all situations. The cognitive, emotional and perceptual responses activate differently depending on earlier knowledge, emotional associations and initial attention. The patterns were found based on which part of the mental response that was mostly activated and found to be the underlying factor to the empirical data.

The first pattern found was; *Perception, cognition and emotion,* which entails that the mental response was mainly based on perception, followed by cognition and last emotion. Further explained is that the initial impression was of great importance and laid the foundation of how the mental response would end up. Earlier experiences and knowledge had influence as well but to a limited amount. Continuously, very few emotional associations were included in this mental response pattern. The second pattern was; *Cognition, emotion and perception,* which entails that mental response was mainly based on knowledge and experiences. Secondly, this pattern contained certain emotional associations that played a role in the final outcome of mental response. However, this pattern did not seem to consider or notice any attentive first stimuli and therefore lacked perceptual responses. The third pattern was; *Emotion, perception and cognition*, which entails the mental response was mainly created out of emotional reactions and emotional associations. The pattern also indicates that the mental response was generated out of an attentive initial response that led to further interpretations. Moreover, there was a lack of earlier knowledge and experiences in this mental response pattern based on few cognitive associations. The final pattern was; *Perception, emotion and cognition,* where the mental response was mainly perceptual, similar to patter one, but was followed by emotional response instead of cognition. This indicates that the emotional associations weighed higher than the cognitive associations, meaning that there were not many earlier experiences or knowledge involved in the mental response. In conclusion, the fact that there were several different mental response patterns proves

color's complexity in social media context and its diverse influence on consumers' mental response.

7. Research implications

7.1 Theoretical implications

This study was conducted qualitative since earlier research in this research field has been majority quantitative (Mustatea & Gociman, 2022; Terwogt & Hoeksma, 1995; Yuanyuan et.al., 2023). Earlier research has been describing what the color itself is associated with, but not how the associations are created. This study can therefore contribute theoretically with an understanding of how associations are created and how the mental response is influenced by colors in SMA. The researchers already knew from earlier research that blue was associated with trust (Hunjet & Vuk, 2017), but did not have any understanding of why that association was made. The findings in this study explores how associations are made cognitively, emotionally and perceptually in the consumer's mind. Consequently, the findings will provide an understanding of how mental responses are created when encountering SMA. Certain categories are identified based on reappearing mental associations and thereby gives an understanding to what the typical mental response is applicable to each color.

7.2 Managerial implications

The amount of companies who are active on social media has grown largely in line with the development and increased availability of online technology (Cuevas-Molano, et al., 2021). Conquering the traditional way of marketing communication is no longer as advantageous when social media exists (Cuevas-Molano, et al., 2021). The findings of this study provides practical findings and understanding of how to accurately communicate on social media in order to convey the intended message. The study moreover shows how mental responses have been discussed and concluded to act differently depending on what context or who the sender is. This could be important to take into account especially the understanding of the response of using colors outside an established graphical profile, since an other response was created than if the color was already included in the graphical profile. Additionally, these findings can be used by

companies who want to mediate the same significant message in every graphical expression. For instance, it would be inappropriate for a bank to choose the color red as their graphical color since it created a frivolous feeling amongst the participants. While it was appreciated and relevant when a clothing company posted a sales advertisement in the color red.

Since it was established that the mental responses did not always align with previous research, it can be established that the context of the advertisement influences the mental response of the consumers. Consequently, this means that the previous research made of the phenomenon can not be considered suitable to apply in a SMA context and therefore need research finding such as the ones from this study. For example, earlier research, in other contexts, said that red had associations with love and warmth, but in SMAs red was mainly negatively associated.

8. Limitations

This study had some limitations which are considered necessary to point out. Firstly, the SMAs were shown in the same order (e.g. 1. Red, 2. Blue & 3. Yellow), which enabled a comparison in the reaction from the previous color ad. However, since the order of which the advertisements were shown were the same in all focus groups, the study could not reveal if the order influenced the participants' mental responses. The graphic design of the advertisement could also have influenced the mental response. For example, the font, the size and the color of the text could have influenced how the completed advertisement (not only the colors) were perceived. This was noted as some participants commented on the advertisement as minimalistic and not being typically aesthetic. One final limitation is the fact that this study only explored the research phenomenon on one social media platform; Instagram. Considering that social media platforms contain different strengths and weaknesses (Voorveld et.al., 2018) will information be less relevant on one platform, while it could be very effective on another (Voorveld et.al., 2018). It is therefore not certain that the findings of this study is true for other social media platforms.

9. Future research

While conducting the focus group discussions it became clear that the interpretation of the SMAs in some cases was very dependent and influenced by who the sender company of the post was. It is therefore recommended to explore further how consumers' mental responses change depending on the branch of the sender, but also the characteristics or personality traits of the sender company. It is further recommended to explore both secondary and tertiary colors, since this study revealed that the mental responses towards the colors of the SMAs, in many cases, did not align with previous research. For example, the emotional responses and interpreted messages acted in another way than the cognitive associations did in some cases, as a result, secondary and tertiary colors could bring even more understanding of the mental response.

The sample did also rule out participants with color blindness. Nevertheless, there are many people who are suffering from colorblindness, who are still users of social media, exposed to colors in advertisements and hence are potential consumers and connections to companies. The study did further limit its sample regards to ages and education. It would be interesting to see further research exploring the unobserved samples and see if there will be diversity in the findings that could give insights on mental responses in between ages, other occupations and how to communicate with limited color options.

Considering earlier limitations regarding the study only exploring Instagram as a social media platform, future research should include other social media platforms in their exploration. Since there are differences between social media platforms today, the findings could appear different from the ones in this study. But also considering how online marketing is in need for deeper understanding of consumers' mental responses on more than one platform. Therefore, the authors suggest future research to explore this research phenomenon on other social media platforms.

10. Reference list

Affonso, F.M. and Janiszewski, C. (2023). 'Marketing by Design: The Influence of Perceptual Structure on Brand Performance', Journal of Marketing, p. 1. doi:10.1177/00222429221142281. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=162339417&site=ehost-live

Amin, Nørgaard, L. S., Cavaco, A. M., Witry, M. J., Hillman, L., Cernasev, A., & Desselle, S. P. (2020). Establishing trustworthiness and authenticity in qualitative pharmacy research. Research in social and administrative pharmacy. [Online] 16 (10), 1472–1482. Available at: https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_proquest_miscellaneous_2357469363

Amsteus, M., Al-schaban, S., Wallin, E., Sjöqvist, S., (2015). Colors in Marketing: A Study of Color Associations and Context (in) Dependence. International journal of academic research in business and social sciences. 6 (3), 32–.http://ijbssnet.com/journals/Vol_6_No_3_March_2015/4.pdf

Arabi, A. (2018). 'Impact of Packaging' Color on Pharmaceutical Product Perception and Consumer Beliefs', Annals of 'Constantin Brancusi' University of Targu-Jiu. Economy Series, (2), pp. 115–121. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=130048473&site=ehost-live

Bagchi, R. & Cheema, A. (2013). The Effect of Red Background Color on Willingness-to-Pay: The Moderating Role of Selling Mechanism. The Journal of consumer research. [Online] 39 (5), 947–960. https://academic.oup.com/jcr/article/39/5/947/1795180?login=true

Bell, E., Bryman, A. & Harley, B., (2019). *Business research methods.* 5th ed. Oxford: Oxford University Press.

Bottomley, P. A. & Doyle, J. R. (2006). The interactive effects of colors and products on perceptions of brand logo appropriateness. Marketing theory. [Online] 6 (1), 63–83. https://journals-sagepub-com.proxy.lnu.se/doi/epdf/10.1177/1470593106061263

Chametzky, B. (2022). 'Coding in Classic Grounded Theory: I've Done an Interview; Now What?', Grounded Theory Review, 21(2), pp. 22–32. Available at: https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=161241574&site=ehost-live

Charan, A., Puri, P. and Bansal, E. (2017). 'Social Media Marketing and Cognitive Development in Indian Youth', Delhi Business Review, 18(1), pp. 101–113. doi:10.51768/dbr.v18i1.181201718. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=127751255&site=ehost-live

Cuevas-Molano, E. et al. (2021) Factors Increasing Consumer Engagement of Branded Content in Instagram. IEEE access. [Online] 9143531–143548. https://ieeexplore.ieee.org/document/9580497/authors

Dale, Raney, A. A., Ji, Q., Janicke-Bowles, S. H., Baldwin, J., Rowlett, J. T., Wang, C., & Oliver, M. B. (2020) Self-transcendent emotions and social media: Exploring the content and consumers of inspirational Facebook posts. New media & society. [Online] 22 (3), 507–527. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_webofscience_primary_000481487100001CitationCount

Dai, Ali, A., & Wang, H. (2020) Exploring information avoidance intention of social media users: a cognition–affect–conation perspective. Internet research. [Online] 30 (5), 1455–1478. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_webofscience_primary_000547870200001

Demir, Ü. (2020) Investigation of color‑emotion associations of the university students. Color research and application. [Online] 45 (5), 871–884. https://onlinelibrary-wiley-com.proxy.lnu.se/doi/full/10.1002/col.22522

Devine, D. J. (1999). Effects of cognitive ability, task knowledge, information sharing, and conflict on group decision-making effectiveness. Small Group Research, 30, 608–634. doi: 10.1177/104649649903000506 https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_crossref_primary_10_1177_104649649903000506

Garaus, M., Halkias, G. (2020). One color fits all: product category color norms and (a)typical package colors. Rev Manag Sci 14, 1077–1099. https://doi-org.proxy.lnu.se/10.1007/s11846-018-0325-9

Goethe, Johann Wolfgang von. (1840) 1970. Theory of Colours. Translated from the German with Notes by Charles Lock Eastlake. Originally published: London: John Murray, 1840. https://books.google.se/books?hl=en&lr=&id=7uVMAQAAMAAJ&oi=fnd&pg=PR2&ots=8oWSSJUZoR&sig=xIdjgKMwQ0RT1ddrFziifE_Eshg&redir_esc=y#v=onepage&q&f=false

Gorn, G. J. Chattopadhyay, A., Yi, T., Dahl, W.D, (1997). Effects of Color as an Executional Cue in Advertising: They're in the Shade. Management science. [Online] 43 (10), 1387–1400. https://www.jstor.org/stable/pdf/2634413.pdf?casa_token=C7nXmImLOAkAAAAA:idStl2Z2WUVc4SK5xTqjUeHTxEnfrwMd0bZze5bXROyKYXWfYy8EVUVlvorDEm2PKY9TvlQ0hTqX5IEgSlEKK23aPLC4EIUnVCHfV4Ox2gaAFXi_wHY

Guest, G., Namey, E. and McKenna, K. (2017). 'How Many Focus Groups Are Enough? Building an Evidence Base for Nonprobability Sample Sizes', Field Methods, 29(1), pp. 3–22. doi: 10.1177/1525822X16639015. https://journals-sagepub-com.proxy.lnu.se/doi/pdf/10.1177/1525822X16639015

Grossman, R. P., & Wisenblit, J. Z. (1999). What we know about consumers' color choices. Journal of Marketing Practice: Applied Marketing Science, 5(3), 78-88. https://www.emerald.com/insight/content/doi/10.1108/EUM0000000004565/full/html

Hahn, I. S., Scherer, F. L., Basso, K., & dos Santos, M. B (2016). 'Consumer Trust in and Emotional Response to Advertisements on Social Media and their Influence on Brand Evaluation', Brazilian Business Review (English Edition), 13(4), pp. 49–71. doi:10.15728/bbr.2016.13.4.3. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=117580464&site=ehost-live

He, X.F. and Lv, X.G. (2022). "From the color composition to the color psychology: Soft drink packaging in warm colors, and spirits packaging in dark colors," Color research and application, 47(3), pp. 758–770. https://lnu-se-primo.hosted.exlibrisgroup.com/permalink/f/e1gdub/TN_cdi_webofscience_primary_000711844700001

Hennink, M. M. et al. (2019). What Influences Saturation? Estimating Sample Sizes in Focus Group Research. Qualitative health research. [Online] 29 (10), 1483–1496. https://journals-sagepub-com.proxy.lnu.se/doi/10.1177/1049732318821692

Hultén, Bertil, Broweus, Niklas & Dijk, Marcus van (2009). Sensory marketing [Elektronisk resurs]. Basingstoke: Palgrave Macmillan

Hunjet, A. & Vuk, S. (2017) THE PSYCHOLOGICAL IMPACT OF COLORS IN MARKETING. Vallis Aurea. [Online] 3 (2), 42–54. https://hrcak.srce.hr/file/283574

Instagram. A. (n.d.). How Instagram Feed works. Available at: https://help.instagram.com/1986234648360433 [Accessed 2023-05-01].

Instagram. B. (n.d.). Share a post with multiple photos or videos on Instagram. Available at: https://help.instagram.com/269314186824048/?helpref=related_articles [Accessed 2023-05-01].

Instagram. C. (n.d.). Skapa framgångsrika Instagram-inlägg. Available at: https://business.instagram.com/instagram-post-tips?locale=sv_SE [Accessed 2023-05-01].

Internetstiftelsen (2022). Svenskarna och Internet 2022. Available at: https://svenskarnaochinternet.se/utvalt/sociala-medier-i-sverige/ [Accessed 2022-04-17]

Jairath, N., Hogerney, M. and Parsons, C., (2000). The role of the pilot study: A case illustration from cardiac nursing research. Applied Nursing Research, 13(2), pp.92-96. https://reader.elsevier.com/reader/sd/pii/S0897189700800063?token=DC181FD90286D92F553E4129B1728B5BD15DFCE83E17A12D256253F066E9F59704ABD0D362A9E6661B3F3265C1B776DF&originRegion=eu-west-1&originCreation=20230508104555

Jia, J. & Wang, J. (2016). Do customer participation and cognitive ability influence satisfaction? The Service industries journal. [Online] 36 (9-10), 416–437. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_gale_business insightsgauss_A481068851

Jonauskaite, D., Althaus, B., Dael, N., Dan‑Glauser, E. and Mohr, C., (2019). What color do you feel? Color choices are driven by mood. Color Research & Application, 44(2), pp.272-284. https://onlinelibrary.wiley.com/doi/abs/10.1002/col.22327

Kaya, N. and Epps, H.H., (2004). Relationship between color and emotion: A study of college students. College student journal, 38(3), pp.396-405. https://go.gale.com/ps/i.do?p=AONE&u=googlescholar&id=GALE%7CA123321897&v=2.1&it =r&sid=AONE&asid=96b09980

Kiang, Raghu, T. ., Shang, K. H.-M. (2000). Marketing on the Internet — who can benefit from an online marketing approach? Decision Support Systems. [Online] 27 (4), 383–393. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_scopus_prima ry_30567440

Kitzinger, J., (1994). The methodology of focus groups: the importance of interaction between research participants. Sociology of health & illness, 16(1), pp.103-121. https://onlinelibrary.wiley.com/doi/pdf/10.1111/1467-9566.ep11347023

Kotler, P., Kartajaya, H. & Setiawan, I. (2017). *MARKETING 4.0 Moving from Traditional to Digital*. John Wiley & Sons, Inc. Hoboken, New Jersey.

Krueger, R.A., 2014. *Focus groups: A practical guide for applied research*. Sage publications. https://books.google.se/books?hl=en&lr=&id=8wASBAAAQBAJ&oi=fnd&pg=PP1&ots=XfiH FBeGvT&sig=v3oV_8efCcSovuA-AYAHo9uO548&redir_esc=y#v=onepage&q&f=false

Labrecque, L. I., & Milne, G. R. (2012). Exciting red and competent blue: The importance of color in marketing. Journal of the Academy of Marketing Science, 40(5), 711–727. https://doi.org/10.1007/s11747-010-0245-y

Liu, C-L 'Eunice', Sinkovics, RR, Pezderka, N & Haghirian, P 2012, 'Determinants of Consumer Perceptions toward Mobile Advertising -- A Comparison between Japan and Austria', Journal of Interactive Marketing, vol. 26, no. 1, pp. 21–32, http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=70275320&site= ehost-live

Malmqvist, J., Hellberg, K., Möllås, G., Rose, R., Shelvin, M., (2019). Conducting the Pilot Study: A Neglected Part of the Research Process? Methodological Findings Supporting the Importance of Piloting in Qualitative Research
Studies. International journal of qualitative methods. [Online] 181609406919878341. https://journals.sagepub.com/doi/full/10.1177/1609406919878341

McInnes, A.N., Sung, B. and Hooshmand, R. (2023) 'A practical review of electroencephalography's value to consumer research', International Journal of Market Research, 65(1), pp. 52–82. doi:10.1177/14707853221112622. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=161098826&site=ehost-live

MUSTĂȚEA, M. & GOCIMAN, D. (2022) Stripping down the Execution Process. Colors in Digital Print Ads as an Emotional Response Indicator. Styles of communication. [Online] 14 (2), 108–130. https://drive.google.com/file/d/1etuG_bzLqWugFbJVUXS1a6sRJ0Ky66b1/view

Nelson, J., (2017). Using conceptual depth criteria: addressing the challenge of reaching saturation in qualitative research. *Qualitative research*, *17*(5), pp.554-570. https://journals-sagepub-com.proxy.lnu.se/doi/pdf/10.1177/1468794116679873

North, M. & Ficorilli, M. (2017). Click me: an examination of the impact size, color, and design has on banner advertisements generating clicks. Journal of financial services marketing. [Online] 22 (3), 99–108. https://link.springer.com/article/10.1057/s41264-017-0028-3

Priede, C & Farrall, S (2011), 'Comparing results from different styles of cognitive interviewing: "verbal probing" vs. "thinking aloud"', International Journal of Social Research Methodology, vol. 14, no. 4, pp. 271–287. https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=63295532&site=ehost-live

Reynolds-McIlnay, R., Morrin, M., Nordfält, J., (2017). How Product–Environment Brightness Contrast and Product Disarray Impact Consumer Choice in Retail Environments. https://www-sciencedirect-com.proxy.lnu.se/science/article/pii/S0022435917300295

Rosenbaum-Elliott, Richard, Percy, Larry & Pervan, Simon (2018). Strategic brand management. 4th edition Oxford: Oxford University Press

Rožman M.,Oreški D. and Tominc P. (2022). A Pilot Study of Some Aspects of the Perceived Usability of Mobile Advertising Among Students. Nase Gospodarstvo (English). [Online] 68 (3), 50–60. https://sciendo.com/article/10.2478/ngoe-2022-0017

Ryan, K. E., Gandha, T., Culbertson, J . M., Carlson, C. (2014). Focus Group Evidence: Implications for Design and Analysis. The American journal of evaluation. [Online] 35 (3), 328–345. https://journals.sagepub.com/doi/10.1177/1098214013508300

Schindler, Robert (2012). Pricing strategies: a marketing approach. Thousand Oaks, Calif.: Sage Publications, Inc

Sharma, K., Kodhati, P. and Sukhavasi, S. (2022). 'Emotional Marketing on Consumer Behaviour - Perception Study', International Journal on Customer Relations, 10(2), pp. 1–8. http://search.ebscohost.com.proxy.lnu.se/login.aspx?direct=true&db=bsu&AN=161726001&site=ehost-live

Sher, S. (2011). A Framework for Assessing Immorally Manipulative Marketing Tactics. Journal of business ethics. [Online] 102 (1), 97–118. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_proquest_miscellaneous_884844074

Singh, S. (2006). "Impact of color on marketing", Management Decision, Vol. 44 No. 6, pp. 783-789. https://doi.org/10.1108/00251740610673332

Sinkovics, Penz, E., Ghauri, P. N (2008) Enhancing the Trustworthiness of Qualitative Research in International Business. Management international review. [Online] 48 (6), 689–713. Available at: https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_webofscience_primary_000207618600003

Solomon, Michael R., Bamossy, Gary J., Askegaard, Søren & Hogg, Margaret K. (2016). Consumer behaviour: a European perspective. Sixth Edition. Harlow: Pearson

Stahl, N.A. & King, J.R. (2020). "Expanding Approaches for Research:Understanding and Using Trustworthiness in Qualitative Research", Journal of Developmental Education, vol. 44, no. 1, pp. 26-29. Available at: https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_proquest_journals_2467348904

Teichert, T, Graf, A, Rezaei, S, Worfel, P & Duh, H (2019). 'Measures of Implicit Cognition for Marketing Research', Marketing ZFP - Journal of Research & Management, vol. 41, no. 3, pp. 48–76, <https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=138214822&site=ehost-live>.

Terwogt, M. M. & Hoeksma, J. B. (1995). Colors and Emotions: Preferences and Combinations. The Journal of general psychology. [Online] 122 (1), 5–17. https://www.researchgate.net/publication/15483690_Colors_and_Emotions_Preferences_and_Combinations

Van Teijlingen, E. and Hundley, V., (2001). The importance of pilot studies. Social research update, (35), pp.1-4. https://eprints.bournemouth.ac.uk/10149/1/SRU35_pilot_studies.pdf

Vendler, Z. (1995) Goethe, Wittgenstein, and the Essence of Color. The Monist. [Online] 78 (4), 391–410. https://www.jstor.org/stable/pdf/27903447.pdf?refreqid=excelsior%3A82a233beabc281d3ead1e915f2c22c95&ab_segments=&origin=&initiator=&acceptTC=1

Voorveld, van Noort, G., Muntinga, D. G., & Bronner, F. (2018) Engagement with Social Media and Social Media Advertising: The Differentiating Role of Platform Type. Journal of advertising. [Online] 47 (1), 38–54. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_webofscience_primary_000426104500004CitationCount

Wang, Zhao, M., & Zhao, G. (2017) The impact of customer cognitive competence on online service decision-making: an event-related potentials perspective. The Service industries journal. [Online] 37 (5-6), 363–380. https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_scopus_primary_616223675

Yu, Xie, S. Y., & Wen, J. (2020) Coloring the destination: The role of color psychology on Instagram. Tourism management (1982). [Online] Vol.80, p.104110 https://gslg-lnu.primo.exlibrisgroup.com/permalink/46GSLG_VAXJO/1pjp4ic/cdi_crossref_primary_10_1016_j_tourman_2020_104110

Yuanyuan Zhu, Tessitore, T, Harrigan, P & Coussement, K, (2023), 'A Guide to Graphic Design For Functional versus Experiential Ads Color-Evoked Emotion and Design Complexity Can Enhance Effectiveness', Journal of Advertising Research, vol. 63, no. 1, pp. 81–104, https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=162478452&site=ehost-live >.

11. Appendices

11.1 Appendix A - Consent form 15ht of May

Focus Group Participant consent form

- I understand the purpose of this study.
- I participate in this study voluntarily.
- I understand that I can leave this focus group discussion whenever I want.
- I understand how my personal information will be present in the study, e.g:
  - Only available for the researchers:
    - My exact age and current education programme
    - My name
  - Information available in the study
    - Identification as Participant n
    - Gender
    - Confirmation of studying at Linnaeus University School of Economics, Växjö
    - Confirmation that I am between 20-25 years old.
- I understand that the focus group discussion will be audio recorded, but that the recording only will be for the researchers.
- I confirm that the focus group discussion took place on Monday 15th of May, 2023.
- I understand that I need to consent both oral and in writing.

11.2 Appendix B - Consent form 16th of May

Focus Group Participant consent form

- I understand the purpose of this study.
- I participate in this study voluntarily.
- I understand that I can leave this focus group discussion whenever I want.
- I understand how my personal information will be present in the study, e.g:
  - Only available for the researchers:
    - My exact age and current education programme
    - My name
  - Information available in the study
    - Identification as Participant n
    - Gender
    - Confirmation of studying at Linnaeus University School of Economics, Växjö
    - Confirmation that I am between 20-25 years old.
- I understand that the focus group discussion will be audio recorded, but that the recording only will be for the researchers.
- I confirm that the focus group discussion took place on Tuesday 16th of May, 2023.
- I understand that I need to consent both oral and in writing.