

Examining parental sharing behavior on Instagram

An experimental study measuring the effect of emotions and colors on the sharing behavior of Dutch parents towards their children between the ages of 6 and 12

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Abstract

Along with the transition from the static stage of Web 1.0 to the interactive Web 2.0 stage, children become increasingly represented in the online environment. However, as the minimum age to use social media is still 13, children below the age of 13 are highly dependent on their parents when it comes to their access to social media content. Existing literature claims that colors and emotions have always affected human sharing behavior prior to the age of social media: indeed, positive emotions and colored images tend to be shared more often. This study aimed to examine whether these findings hold for parental sharing behavior on Instagram as well, with the objective to find out in which ways children below the age of 13 could be reached best on the online platform. The main research question of this study was 'To what extent do emotions and colors on Instagram affect the sharing behavior of parents towards their children between the ages of 6 and 12?' To answer this research question, a quantitative study with an online experiment was conducted using a 2 (positive vs. negative emotions) by 2 (colored vs. black and white images) between-subjects design. The survey was completed by 211 participants (N = 211), who were equally divided over the four experimental groups. Surprisingly and in stark contrast with existing literature, findings showed that emotions and colors did not have a significant effect on both online and offline parental sharing behavior. Additionally, an interaction effect between positive emotions and black and white Instagram images was found, as well as an interaction effect between negative emotions and colored Instagram images. The contradicting results could be caused by the fact that this study had an extremely specific target group, namely Dutch parents with children between the ages of 6 and 12, whereas existing studies used a broad target group and were conducted with a more global mindset. It can thus be concluded that when it comes to Dutch parents with children between the ages of 6 and 12, emotions and color use do not affect the sharing behavior of Instagram content towards their children.

KEYWORDS: Offline/online parental sharing behavior, Social media, Instagram, Color, Emotions

Preface

This report is the result of my master thesis project, fulfilling the master Media & Business degree at the Erasmus University Rotterdam. I have been able to complete this research with confidence thanks to the years of knowledge and experience gained during my Premaster and Master at the Erasmus University Rotterdam, the four years of Media and Entertainment Management at the NHTV university of applied sciences Breda, as well as my interest in media and business. However, the conduction of this research would not have been possible without the help of many people, whom I would like to thank.

Firstly, I would like to thank my supervisor at the Erasmus University Rotterdam, Dr. Nicoleta Bălău. I could always reach out to her if I was in need of any feedback or suggestions and always received a swift and valuable response. Her critical but realistic feedback on my drafts and questions gave me new insights and inspirations, which ultimately helped me finish this study. I perceived our collaboration as both pleasant and professional.

Secondly, I would like to thank the parents who filled out the experimental survey for this research. I appreciate the time they reserved in their busy schedule for taking the survey. Their shared expertise on the notion of their sharing behavior gave me interesting new insights which made my research stronger and more reliable.

Finally, I would like to mention that this study shows where my interests lie in the field of media and business. As I am currently working for a Dutch children television program myself, the insights of this study will help me decide which Instagram content to use on behalf of the program. The research process gave me insights in how theoretical knowledge and practical research may be combined to reach a conclusion. I enjoyed investigating parental sharing behavior on Instagram, which initially was a notion quite unfamiliar to me. I believe that thanks to this research project, I have expanded my knowledge on the effect of Instagram content on parental sharing behavior, which I can use for practical purposes in the future.

Rotterdam, June 2018

Vincent Mosmans

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1. Introduction: Sharing behavior of Instagram content

1.1 Topic introduction

The age at which children begin to use social media is lowering considerably: every new born child is currently being referred to as a *digital native* as everyone nowadays grows up with almost solely internet-driven devices such as tablets and smart phones. This digital transition has resulted in a shift from traditional media consumption towards online media consumption (Strasburger et al., 2013). Despite the fact that television is still the predominant source for children to access media products, new technologies have risen in popularity (Strasburger et al., 2013). Almost a quarter of 8-year-old Dutch children indicate that they use social media. This increases to almost half of Dutch 10-year-olds, and almost all Dutch 13-year-olds state that they are active on one or more social networking sites (RTL Nieuws, 2016). On Instagram, however, users must have a minimum age of 13 (Instagram, 2017). Children below this age might not have access to Instagram content unless parents share it with them; young children between the ages of 6 and 12, for instance, are thus highly dependent on their parents when it comes to accessing Instagram content (Strasburger et al., 2013). In this situation, parents may be considered important gatekeepers to Instagram content.

Currently, Instagram is the fastest growing and most visual social networking site in the Netherlands (Nu, 2017) and is extremely popular among the young target group: 66 percent of the Instagram users is below the age of 19 (Van der Veer, Boekee, & Peters, 2017). As media consumption of Dutch children increasingly shifts to this online environment (Strasburger et al., 2013), television channels targeting children adapt their strategy by taking their content to social networking sites as well. In the Netherlands, the most appreciated and best viewed television channels among children, such as NPO Zapp (Kriek, 2016), consider children between the ages of 6 and 12 as their target group (NPO, 2017). As aforementioned, this target group is highly dependent on their parents with regard to accessing Instagram content, making the sharing behavior of parents a considerable bridge that must be taken into consideration by these media outlets. In this study, parental sharing behavior is referred to as the tendency of parents to share Instagram content with their children. Only when children television channels produce Instagram content that appeals to the parents in their gatekeeper role, parents will promote such channels to their children by sharing the content with them. In other words, only when the Instagram content positively affects parental sharing behavior, will children television channels be able to reach and engage children online and, ultimately, survive in this modern digital age.

Social media engagement can be defined as the degree to which people are willing to contribute in online conversations on social networking sites (Oliveira, Huertas, & Lin, 2016). Wang,

Kim, Xiao and Jung (2016) claim that sharing behavior is merely part of this larger concept of social media engagement. Up to this point, a variety of studies have been carried out into the notion of sharing behavior on Instagram, providing the academic field with valuable outcomes (John, 2013; Oliveira et al., 2016; Wang et al., 2016). John (2013) argues that sharing online content can be considered the constitutive activity in the modern digital age. According to John (2013), a lack of sharing possibilities would automatically result in a loss of the participatory culture, enabling online users to adopt no more than a passive role in society. The number of shares depict a real-time and two-way communication between the viewers and the source of the post (Wang et al., 2016). This paper looks at the concept of sharing behavior through the critical perspective provided by the affordance theory (Goel, Johnson, Junglas, & Ives, 2013), as the technological affordances incorporated by Instagram call for sharing.

Strikingly, in contrast with the studies into the notion of sharing, little is known about the relationship between specific Instagram content and the sharing behavior of Instagram users. Stieglitz and Dang-Xuan (2013) focused on emotional content and information diffusion on social media and found that emotionally charged social media messages tend to be shared more often compared to neutral messages. Furthermore, De Vries, Gensler and Leeflang (2012) found that vividly colored images tend to be more popular among social media users and acquire more shares. However, these studies focused on social media users in general and there is little understanding of parental sharing behavior towards their young children who do not meet the age requirements to have an Instagram account. Hence, this research aims to find out whether these existing findings can be generalized to the sharing behavior of parents as well. In other words, this paper aims to examine, via an online experiment, the impact of emotional and colored Instagram content on the sharing behavior of parents towards their children.

1.2 Research problem

For a Dutch children television program to engage their target group on Instagram, it is vital to produce Instagram content that triggers parents to share it (Strasburger et al., 2013). After all, if the Instagram content does not trigger the parents to share it with their children, the target group of the Dutch television programs will never be reached on the platform. It can thus be stated that parents have an important gatekeeping role and are therefore the ones that should be studied in terms of their sharing behavior. However, even though several studies have been carried out into the notion of sharing behavior and social media engagement (John, 2013; Stieglitz & Dang-Xuan, 2013; Yang et al., 2014), companies that used to operate on traditional media outlets do not have sufficient insights

in creating appealing content that affects the sharing behavior of parents. Hence, more insights need to be acquired in creating Instagram content that positively affects parental sharing behavior.

For this study, the following research question is formulated: *“To what extent do emotions and colors on Instagram affect the sharing behavior of parents towards their children between the ages of 6 and 12?”*

In order to effectively answer this research question, some sub questions are formulated as well:

1. To what extent does positive or negative emotional Instagram content affect the sharing behavior of parents of children between the ages of 6 and 12?
2. To what extent does colored or black and white Instagram content affect the sharing behavior of parents of children between the ages of 6 and 12?

1.3 Scientific relevance

Besides the studies that have been carried out into the broad notion of sharing behavior (Wang et al., 2016; Calder, 2008; John, 2013), several studies examined the impact of emotional presence (Stieglitz & Dang-Xuan, 2013; Yang et al., 2014) and colors (Hochman & Schwartz, 2012; De Vries et al., 2012; Ferwerda, Schedl, & Tkalcic, 2016) on social networking sites. However, the already existing studies do not link emotions and colors to one another, let alone do they examine their cooperative effect on parental sharing behavior. Hence, this line of research will be extended by this experimental study, as it aims to find the (cooperative) effect of emotions and colors on parental sharing behavior towards children between the ages of 6 and 12. Furthermore, as the existing literature solely focuses on sharing behavior between mature target groups (Ferwerda et al., 2016; Stieglitz & Dan-Xuan, 2013; Yang et al., 2014; Hochman & Schwartz, 2012), there is little understanding of the notion of sharing behavior towards children. Furthermore, existing literature on online sharing behavior predominantly focused on social media as a whole and lacked specific details of sharing behavior on the social media platforms separately (Calder, 2008; De Vries et al., 2012; John, 2013). As this study focuses on sharing behavior on Instagram specifically, a better understanding of the sharing behavior of parents on Instagram will be acquired. Additionally, this study addresses the limitations of prior studies that question the generalizability of their findings. In short, this study approaches the notion of sharing behavior from a different perspective than the already existing literature does, rendering this study a contribution to the academic field of communication. Moreover, this research may serve as a foundation for further studies into the notion of parental sharing and may contribute to map the concept of parental sharing on Instagram throughout the Netherlands.

1.4 Social relevance

In terms of social relevance from a communication dimension, this paper will contribute to the field of communication as new insights in parental sharing behavior on Instagram will be provided.

Whereas parents used to communicate with their children solely on an offline level, communication nowadays takes place online, on social media. As this paper examines which specific emotional and colored Instagram content parents are willing to share with their children, this study will enhance and provide insights into the understanding of online communication between parents and their children. Moreover, with the insights of this paper, a better understanding of which specific Instagram content tends to be shared by parents will be acquired. In this way, new insights in parent-children interaction will arise which will benefit society on a communication level.

Next to the communication dimension, this study contributes to the business perspective as well. It is extremely important for children television programs who used to solely operate on the traditional media channels to adapt their strategy to the digital transitions and reach their young target group on social media in general and on Instagram in particular. As mentioned, parents may be seen as important gatekeepers for children to reach Instagram content. Hence, it is paramount for these media outlets to gain insights into the different types of Instagram content in order to positively affect parental sharing behavior. Hence, the insights of this paper will enable children television programs to reach their young target group by producing effective and engaging Instagram content that positively affect parental sharing behavior.

1.5 Thesis outline

This study focuses on parental sharing behavior of Instagram content, affected by emotions and colors of the Instagram message. In the upcoming chapter of this paper, one can expect an extensive literature review elaborating on several related aspects of parental sharing behavior. First, the characteristics of the digital age will be discussed, along with the transition from the traditional stage of Web 1.0 to the interactive age of Web 2.0. Then, the paragraph on parental sharing behavior will familiarize the reader with the main topic of the study and it will become clear why parents feel the need to share information with their children. In light of the two sub questions, the subsequent paragraphs will be about emotion and color use on Instagram. Finally, a potential connection between the two variables will be drawn, and a description will be provided of their cooperative effect on parental sharing behavior. This will all be done with the critical affordance perspective in mind. Apart from the literature, the second chapter contains the hypotheses for this study as well.

Additionally, the methods section discusses the methodology used to operationalize the study and test the previously proposed hypotheses. In this section, the reader can expect an explanation of the experimental research design and the practical details of how the experiment was conducted. Furthermore, the sampling strategy will be profoundly discussed, which gives insights in how the respondents of this research have been gathered. Afterwards, the procedure of the experiment will be explained, and it will become clear how the concepts of this research were operationalized in the survey. Finally, it will be explained how the data was collected and analyzed, and it will be discussed how the validity and reliability of this research were preserved.

The results section explains the findings of the experimental study and tests the proposed hypotheses. Firstly, a sample description will be provided by the means of merely descriptive data of the sample and correlation tests. Then, it will be checked whether the participants saw the emotions the way the research intended by the means of a factor analysis and several independent sample t-tests. Moreover, the hypotheses will be tested by independent sample t-tests and two-way ANOVA tests. Lastly, the interaction effect between emotions and color will be further explored.

Finally, the conclusion further explains the rejected hypotheses. In this section, potential explanations for the findings on parental sharing behavior will be drawn and an explanation on why the findings may contradict the theoretical framework of the study will be provided. Ultimately, the research questions will be answered in the conclusion section. In this way, the chapter becomes of value to the Dutch children television programs. Additionally, the strengths and limitations of the study, as well as the managerial implications and suggestions for future research will be presented.

2. Theoretical framework

In this section, relevant concepts to the topic of research will be examined in order to provide the reader with a structured overview of the already existing and relevant empirical evidences available. Firstly, the notion of sharing will be explained in the context of Web 2.0. Subsequently, the framework will elaborate on the notion of sharing behavior and will discuss studies examining the presence of emotions in Instagram content. Then, the depiction of colors on Instagram will be explained. Finally, the three concepts will be outlined in relation to one another, after which three corresponding hypotheses will be formulated. This theoretical framework used scientific literature by accessing online documents found on Google Scholar or on the online library of the Erasmus University Rotterdam.

2.1 A shift in media consumption: from “being exposed to” to “sharing”

The internet used to be a rather static and provider-generated platform where traditional mass media channels prevailed and where users were only able to consume content while solely taking a passive role. This stage can be defined as Web 1.0 (Ritzer & Jurgenson, 2010). However, online environments developed and transformed from this static platform to an interactive and dynamic user-generated environment, which allows content to be created by everyone and encourages the creation of (online) communities and collaborations. This stage, in which modern society currently finds itself, can be referred to as the established digital phase of Web 2.0 (John, 2013; Cooke & Buckley, 2008). In contrast with the Web 1.0 stage in which traditional mass media channels prevailed, Web 2.0 may be characterized by a participatory culture in which two-way communication is entrenched (John, 2013). No longer are media consumers simply exposed to media products, now they are given a voice in the interactive environments of Web 2.0 and are able to communicate with the content producers. This new Web 2.0 environment brings new perspectives for all business fields, such as personalization and online interactivity (Musser & O’Reilly, 2006). Additionally, Web 2.0 allows network effects: databases obtain more data and get more complex; new social media platforms allow people to constantly connect with each other; marketing becomes led by user experiences and applications become increasingly smarter (Musser & O’Reilly, 2006). O’Reilly (2005) acknowledges this shift as well, referring to this stage as an ‘architecture of participation’, where Web 2.0 allows people to engage and participate.

In conjunction with the transition to Web 2.0, a shift in media consumption among children occurred as well. New born children currently grow up accustomed to internet-driven devices such as smart phones and tablets and are considered digital natives, resulting in a shift towards online media

consumption (Strasburger et al., 2013). In the Netherlands already 24% of 8-year-old children state that they use social media, and this percentage rises up to 49% at 10-year-olds, and to almost 100% at children over the age of 13 (RTL Nieuws, 2016). Moreover, even though television is still the predominant medium for children to access media products, new technologies become increasingly popular (Strasburger et al., 2013). With its daily use rising over 50 percent to 1.5 million Dutch citizens in 2016, Instagram may be considered the fastest growing network in the Netherlands (Nu, 2017). Besides, knowing that 66 percent of the Instagram users are below the age of 19 (Van der Veer et al., 2017), it may be argued that the platform is extremely popular among a young target group as well. However, the official minimum age to use Instagram is 13 (Instagram, 2017) and parents of children below this age may play the role of gatekeepers. On the other hand, it may be argued that, despite the official age requirements, many children have their own Instagram account which is monitored by their parents (Graber, 2014). In both instances, this means that these children are only able to access Instagram (content) if their parents are willing to allow this or to share content with them.

According to John (2013), sharing may be considered the fundamental and constitutive activity characterizing Web 2.0 and its abutting social networking sites. As the modern concept of sharing is rather untheorized, John (2013) generally describes sharing as participating in Web 2.0. After all, if social media users do not have the possibility to like, comment or share content on social media, they would only be able to take on a passive role; a lack of sharing possibilities would automatically result in a loss of the participatory culture of Web 2.0. The concept of sharing is explained by means of its three main features, knowing 1) fuzzy objects of sharing, 2) no object of sharing and 3) the new sharing (John, 2013). With the first feature, John (2013) refers to abstract terms such as 'share your life' or 'share your world' with no intend to share a concrete object. Secondly, the 'no object of sharing' feature can be explained in terms that do not provide any form of specification such as 'connect and share'. In this, the user is not told what to share and the word sharing contains some sort of density (John, 2013). The final feature, 'the new sharing', can be referred to as practices that existed before the age of Web 2.0 but that were not then called sharing, such as the possibility to invite friends to a certain event on social media (John, 2013). Parents sharing Instagram content with their children rather falls in this last category of 'the new sharing', as sharing social media content did not exist before the age of Web 2.0. Since sharing is strongly associated with positive social relations, John (2013) recognizes the intrinsic motivation of sharing as getting the feeling of belonging. As the popular phrase already expresses: 'sharing is caring'. Placing this in the context of this study, sharing Instagram content with children enhances a positive social relationship between the parent and the child.

To conclude, society currently finds itself in a user-generated digital stage, in which two-way communication is central and where everybody can create and share online content, referred to as Web 2.0 (John, 2013; Cooke & Buckley, 2008). Sharing can be considered the fundamental activity of this digital phase, as this enables people to participate in online environments (John, 2013). In Web 2.0, children are considered digital natives and increasingly use new online technologies to access media products (Strasburger et al., 2013). However, as the minimum age to use Instagram is 13 (Instagram, 2017), parents of children below this age act as gatekeepers, enabling young children to access Instagram content as well (Graber, 2014).

2.2 Social media engagement: parental sharing behavior

Placing this shift from 'being exposed to' to 'sharing' within the boundaries of a household, it can be argued that parents and children use technology to learn, connect and create together and that new digital media have become profoundly integrated in family life (Livingstone, Blum-Ross, & Pavlick, 2018). According to Marasli, Suhendan, Yilmazturk and Cok (2016), parents constitute a considerable part among social media users. Moreover, parents tend to become more active on social media as well, as they increasingly share their experiences on the online platforms. Literature sometimes refers to this phenomenon of parents sharing social media content as 'sharenting' (Marasli et al., 2016). Hence, digital communication within a family can nowadays not be considered extraordinary anymore. Rather, it has become a new standard in modern digital society (Livingstone et al., 2018). Next to online messaging, this digital communication consists of sharing online or social media content as well.

For this study, the notion of parental sharing will be approached in a twofold fashion. On the one hand, the sharing may occur in an online environment, as it is possible that parents share the Instagram content with their children on the platform itself (Marasli et al., 2016). As previously mentioned, this sharenting implies that children have an Instagram account themselves as well. On the other hand, for this research, parental sharing behavior may also involve parents showing the post to their children, by showing them the screen of their phone, tablet or desktop. In this way, the notion of parental sharing implies an offline component as well.

2.2.1 Reasons for parental sharing

Why are parents motivated to share social media content with their children? Studies (Livingstone et al., 2018; Krcmar & Cingel, 2016; Plowman, Stephen, & McPake, 2010; Uhls & Robb, 2018) showed that parental sharing behavior predominantly occurs for parenting reasons. In this digital age,

parents aim to utilize social media technologies as they are thought to contribute to the process of raising their child(ren), making children nowadays digital natives (Strasburger et al., 2013). However, according to existing literature (Livingstone et al., 2018; Krcmar & Cingel, 2016; Plowman et al., 2010; Uhls & Robb, 2018), this sharing behavior for nurturing reasons occurs from two different parental viewpoints.

Firstly, according to Livingstone et al. (2018) parents tend to share social media content with their children as they consider it important that their children grow up accompanied by modern new media channels. Therefore, parents teach their children about new technologies and make them familiar with social media environments by communicating via social media and sharing content of these platforms (Plowman et al., 2010). However, this process not only entails static learning, parents encourage their children to explore the online environment by themselves as well (Livingstone et al., 2018). Children between the ages of 5 and 12, largely corresponding with the target group of this study, are especially emboldened by their parents to delve into the digital world to not only experience the funny sides of the digital world, such as games, but also to become familiar with the dangers that the online world entails (Livingstone et al., 2018).

Findings from the study of Krcmar and Cingel (2016) on parents of European children of 10 to 12 years old, however, show that parents share content with their children for a completely different reason. In contrast with the findings of Livingstone et al. (2018), they found that Dutch parents generally are concerned about the potentially negative influence of social media on their children, and therefore aim to regulate or steer it (Krcmar & Cingel, 2016). This regulation does not solely consist of restrictive measures such as only allowing their children on social media for a certain amount of time per day, or even prohibiting children to have a social media account. Additionally, parents sometimes decide which social media content the children are exposed to and only show their children appropriate social media content in order to steer the social media behavior of their children even more (Krcmar & Cingel, 2016). These findings are echoed by the findings of Uhls and Robb (2018), who claim that parents mediate children's media consumption out of fear for negative impacts on the child's cognitive development. Together with their children, parents co-use the social media accounts, meaning that the parent is present and monitors the child while it is being active on social media platforms in order to become a mediator between the child and social media content (Krcmar & Cingel, 2016).

Whether parents share social media content with their children out of the viewpoint of importance or concern, existing literature (Livingstone et al., 2018; Krcmar & Cingel, 2016; Plowman et al., 2010; Uhls & Robb, 2018) agrees that parental sharing is predominantly for nurturing reasons. Social media content and Instagram content particularly is shared to either encourage the child to be on social media or to protect the child from being exposed to inappropriate social media content.

2.2.2 Social media engagement on Instagram

Social media engagement can be defined as the degree to which people are willing to contribute in online conversations on social networking sites (Oliveira et al., 2016). In other words, the level of social media engagement is determined by the level of involvement and connectedness between the producer and the consumer of the content (Calder, 2008; Higgins, 2006). Wang et al. (2016) argue that the number of likes, the number of shares, and the character's likability in each post are proper and measurable features to represent social media engagement, as these functions also depict a real-time and two-way communication between the viewers and the source of the post. However, how one relates to the content that is shared on social media is equally important (Higgins, 2006). Hence, before parents are willing to share Instagram content, they must, to some extent, be engaged with the content they are exposed to (Wang et al., 2016).

In the light of the (technological) affordances of social media, multiple factors may explain the relationship between the viewer and the post (Ren, Kraut, & Kiesler, 2007). For instance, in their study into the notion of social media engagement on Instagram, Bakhshi, Shamma and Gilbert (2014) found that the presence of faces in Instagram pictures is positively correlated with the number of likes, comments and shares on the post. Compared with Instagram posts without the depiction of faces, posts with facial depictions tend to receive 38% more likes and 32% more comments (Bakhshi et al., 2014). Interestingly, the number of depicted faces did not have a significant effect on these percentages, meaning that the depiction of a single face on Instagram generates the same effect as the depiction of multiple faces. Building on this body of literature, displayed human emotions and even colors on Instagram represent an interesting line of research when it comes to a better understanding of parental sharing behavior. Therefore, in the upcoming chapters, this study aims to examine the relationship between specific Instagram content, particularly focusing on the use of emotions and colors on Instagram and parental sharing behavior.

2.3 Emotions on Instagram and parental sharing behavior

Apart from the information that is being shared on social networking sites, social media posts often convey information about the emotional state of the content producer, the author's evaluation or judgement of a certain topic or person, or the intended emotional communication as well (Stieglitz & Dang-Xuan, 2013). This emotional aspect is very important for social media users, as it facilitates the understanding of the intrinsic meanings of a message (Yang et al., 2014).

In their research, Stieglitz and Dang-Xuan (2013) focused on emotional content and information diffusion on social media. They found that emotionally charged social media messages

tend to be shared more often compared to neutral messages, meaning that emotionally charged messages will usually be more disseminated. Interestingly, in this, they argue that it does not matter whether the messages consist of positive emotional stimuli or negative emotional signs. Positive emotional stimuli can for example be depictions of happy people, a text conveying a positive message or a positively framed message. Sad or angry people, negative texts or negatively framed messages can, on the other hand, be considered negative emotional stimuli. Furthermore, Stieglitz and Dang-Xuan (2013) found that emotionally charged social media messages do not solely have the tendency to be shared more often: this sharing process occurs more rapidly compared to the sharing process of neutral messages as well. Hence, the authors claim that emotional social media content increased both the attention and arousal of the user (Stieglitz & Dang-Xuan, 2013). The concept of the negativity bias, claiming that people tend to spread negative messages more often and at a faster pace than positive messages, is refuted in their study, as the researchers did not find any proof to support this notion (Stieglitz & Dang-Xuan, 2013). Furthermore, Stieglitz and Dang-Xuan (2013) acknowledge that their sample posted relatively many positive social media messages, which may have resulted in refuting this negativity bias. Studies prior to the existence of social media already showed that people tend to be more eager to share information with an emotional load than sharing neutral information pieces (Heath, 1996; Luminet, Bouts, Delie, Manstead, & Rimé, 2000). With their findings, Stieglitz & Dang-Xuan (2013) claim to prove that the impact of emotion expression on human information sharing behavior shown in other fields applies to the social media context as well. Finally, to increase social media engagement, Stieglitz & Dang-Xuan (2013) recommend publishing social media posts that are both positive and negative emotionally charged.

In addition to the study of Stieglitz and Dang-Xuan (2013), Yang et al. (2014) examined how social media users disclose emotions from images shared on social media. They express their findings in terms of saturation, referred to as the degree of color difference from the grey, and contrast, defined as the relative difference between light and dark areas of a print or negative. They argue that social media images convey the emotion of happiness when utilizing a high saturation and a high bright contrast (Yang et al., 2014). This will bring out a sense of peace and joy on the user side. On the other hand, when a picture has a lower saturation and saturation contrast, the audience tends to categorize the image as sad, as they will find themselves having a sense of dullness and obscurity (Yang et al., 2014). Furthermore, sad images tend to have low textual complexity as well, resulting in a feeling of pithiness and coherence. Different from the findings of Stieglitz and Dang-Xuan (2013), Yang et al. (2014) found that images charged with positivity attract more response compared to negatively charged images on social media. This finding is echoed by De Vries et al. (2012), who studied the popularity of differently framed Instagram images on brand fan pages. They found that positivity in a social media post is positively related to the number of shares, comments and likes

among brand fans. Moreover, as sad social media images result in a more uniform distribution, it is argued that positively charged social media images have more influence on the user (De Vries et al., 2012).

To conclude, the study of Stieglitz and Dang-Xuan (2013) alone argues that it does not matter whether Instagram content contains positive or negative emotions in attracting response. On the other hand, both the studies of Yang et al. (2014) and De Vries et al. (2012) claim that positive emotions on Instagram do tend to attract more response compared to negatively charged posts. Hence, drawing the parallel to parental sharing behavior, the first hypothesis of this study can be formulated as the following:

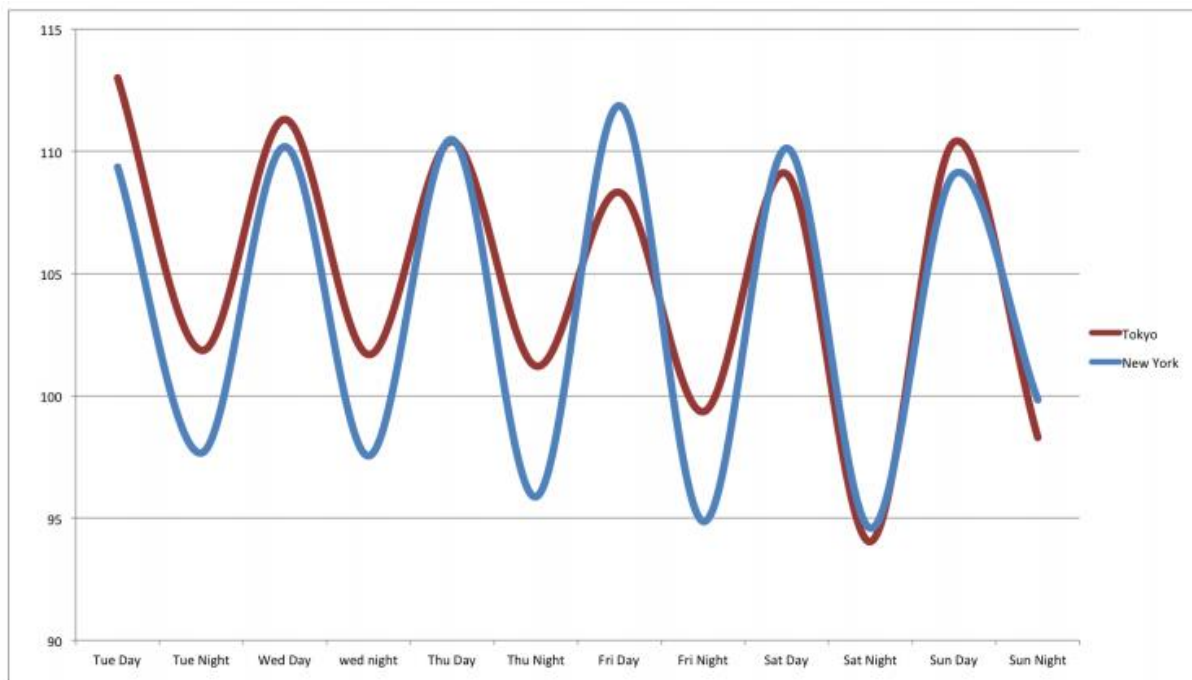
H1: Parents are more likely to share positively charged Instagram posts than negatively charged Instagram posts with their children between the ages of 6 and 12

2.4 Colors on Instagram and parental sharing behavior

Instagram can be considered the most visual social networking site available. It provides users with a direct way to share and capture their life events through a series of videos and images (Hochman & Schwartz, 2012). In contrast with Facebook and Snapchat, for example, where users are able to share textual messages alone, Instagram only enables users to share visual content that may be accompanied with textual features (Ferwerda et al., 2016). To underline the importance of visuals on the platform, Instagram encourages users to apply filters and modify the color appearances of the images (Ferwerda et al., 2016). Hence, it can be stated that colors are an extremely important feature in Instagram posts.

In their study, Hochman and Schwartz (2012) aimed to trace visual rhythms that occur on Instagram in New York City and Tokyo: they found returning patterns, referred to as 'beats', computed by the three main characteristics, knowing visual weight, local color and day intensity. Tokyo's Instagram use is predominantly characterized by red and yellow colors, while blue and grey colors mainly popped up in New York City. In terms of day intensity, namely the amount of brightness, hue and saturation used during a certain day, Hochman and Schwartz (2012) identified a reoccurring spatiotemporal visual pattern, indicating that Instagram users tend to use different colors during the day compared to the colors used at night. Compared to the image colors at night, image colors during the day appear to have a lighter hue, seem to be brighter and tend to have a higher saturation (Hochman & Schwartz, 2012). Figure 2.1 visualizes this day intensity for New York City and Tokyo.

Figure 2.1: Daily Brightness Shifts: NYC (blue), Tokyo (red) (Hochman & Schwartz, 2012)



In examining the popularity of different Instagram images on brand fan pages, De Vries et al. (2012) found that vivid images tend to increase the salience of an Instagram post and that vivid Instagram posts tend to be more popular among fans of a brand. Vividness can be achieved by using contrasting colors and dynamic images. Early research prior to the emergence of social networking sites already showed that vivid images are positively related to the user's intention to click (Cho, 1999). Research of De Vries et al. (2012) confirmed this by finding that the vividness of a social media image is positively correlated with the number of likes and comments. Besides, De Vries et al. (2012) argue that the use of vivid colors appears to be most effective at enhancing attitudes towards a specific brand. Based on these findings, De Vries et al. (2012) suggest that brands should use more vivid brand posts to create more positive attitudes towards the brands and eventually pursue followers of the brand to like, comment on or share the post. Relating the study of De Vries et al. (2012) to this research, the Instagram account of a television program can be considered a brand fan page as well, making the study of De Vries et al. (2012) extremely relevant for this paper. However, as De Vries et al. (2012) did not take potential fan gatekeepers into account, it can be questioned whether these findings are relevant for the parents as well.

Other studies argue that Instagram image features can predict one's personality traits. In their study, Ferwerda et al. (2016) examined how people used colors and Instagram filters to achieve a certain expression, rather than achieving this expression by the means of the image content. They measured the personality traits according to the big five personality dimensions: openness to

experience, conscientiousness, extraversion, agreeableness and neuroticism. It was found that people who are open to experience tend to use more vivid colors, such as green, while conscient people mix saturated and unsaturated colors. Besides, extrovert people tend to use vivid colors such as green and blue as well, while mixing saturation in their Instagram content (Ferwerda et al., 2016). Additionally, agreeable people use fewer dark and bright areas, whereas people in the dimension of neuroticism tend to have brighter images (Ferwerda et al., 2016). However, Ferwerda et al. (2016) acknowledged that a pattern of Instagram image features was harder to find for introvert and more closed people. Besides the finding that introvert people tend to use images that are relatively bright, the variances on other features were too high to make strong statements. The findings of Ferwerda et al. (2016) on relationships between personality traits and picture properties are visualized in figure 2.2. For this study, it will be interesting to examine whether personality indeed affects parental sharing behavior of different social media content. Important to note is that other studies sometimes refer to the openness to experience dimension as the intellect or imagination dimension (Donnellan, Oswald, Baird, & Lucas, 2006). However, despite this change of name, academics consider this personality dimension as completely equivalent.

Figure 2.2: Correlations between personality traits and picture properties (Ferwerda et al., 2016)

Personality	Picture properties
Openness to experience	More green tones, lower in brightness, higher in saturation, more cold colors, fewer faces and people
Conscientiousness	Mix of saturated and unsaturated colors
Extraversion	More green and blue tones, lower in brightness, mix of saturated and unsaturated colors
Agreeableness	Fewer dark and bright areas
Neuroticism	Higher in brightness

Placing the existing literature on Instagram in perspective of Gibson's affordance theory (Goel et al., 2013), some relevant insights can be derived on how this virtual world is constructed. The affordance theory states that an environment is merely perceived in terms of objects and spatial relationships, as well as in possibilities for actions, called affordances (Goel et al., 2013). These affordances, such as the possibility to like an image, comment, or interact with other Instagram users, are incorporated by the social networking site as a call for action. More importantly for this research, a share button can be considered an affordance as well. As previously mentioned, Wang et al. (2016) state that social media engagement can be measured by the means of likes, shares or comments; all these are Instagram affordances and can be considered an opportunity for traditional media outlets to create social media engagement. Additionally, De Vries et al. (2012) found that vivid pictures with contrasting colors are more popular compared to non-colored pictures. Despite the fact

that this popularity has only been measured in terms of likes, it can be predicted that this popularity translates in a higher tendency to share vivid pictures with regard to parental sharing behavior. Therefore, the second hypothesis of this study is formulated as the following:

H2: Parents are more likely to share colored images than black and white images with their children between the ages of 6 and 12

2.5 Emotions and colors on Instagram and parental sharing behavior

As shown in the previous sections, the relationship between emotions and colors on Instagram and parental sharing behavior is worth investigating: even more so since the findings presented from the previous literature are echoed by studies prior to the existence of social media channels as well (Valdez & Mehrabian, 1994; Terwogt & Hoeksma, 1995). A potential interaction effect might occur in the online environment as well and research should therefore pay the same amount of attention to investigating how emotions and colors on Instagram affect parental sharing behavior.

Several studies agree that negative emotions are related to some color features. Yang et al. (2014) for example found that Instagram images with lowly saturated colors and low contrast lead to a disclosure of sadness. These findings are confirmed by earlier research of Valdez and Mehrabian (1994), claiming that lowly saturated colors are least arousing for the audience, proving that the relationship between emotions and color does not only exist on social networking sites. Additionally, Hemphill (1996) found that dark colors, such as brown, black and grey mainly elicited negative emotional associations. Grey was associated with negative emotions the most, as the color is often associated with negative moments such as rainy days. In the experiment, 63% of Hemphill's respondents indicated having negative emotional associations while being exposed to these dark colors, while only 21% respondents indicated having positive emotional associations (Hemphill, 1996).

Despite the proven connectedness between low saturation or contrast and negative emotions, the relationship between the two variables seems to be strongest with vivid and highly saturated colors and the emotion of happiness (Yang et al., 2014). According to Yang et al. (2014) people tend to perceive a picture as happy when it consists of vivid colors such as yellow, blue, green, red or orange, with a high saturation. On the other hand, when people see a happy image, they tend to imagine this image in vivid colors. These findings are supported by the study of Valdez and Mehrabian (1994), arguing that bright colors with strong saturation and hues strongly connect with positive emotions such as pleasure, happiness and arousal (Valdez & Mehrabian, 1994).

Additionally, in his study, Hemphill (1996) found that bright colors such as purple, green, yellow, blue, red, pink and white predominantly generated positive emotional associations. As the color blue made the respondents think of positive things such as the ocean or a blue sky, blue was found to elicit positivity the most (Hemphill, 1996). 61% of his respondents indicated having positive emotional associations while being exposed to these dark colors, while only 25% respondents indicated having negative emotional associations (Hemphill, 1996).

Building on this body of literature, it is worthwhile to investigate whether there is an interaction effect between emotions and colors on Instagram. In other words, are emotions and colors dependent on each other in affecting parental sharing behavior? More specifically, as the relationship between bright colors and happiness seems to be strongest, one may hypothesize that Instagram images charged with positive emotions may result in more parental sharing when being displayed in color compared to black and white. Hence, the third hypothesis for this study can be formulated as the following:

H3: When images display positive emotions such as happiness on Instagram, colored images result in more parental sharing than black and white images

Overall, it can be argued that society currently finds itself in the interactive stage of Web 2.0, characterized by a participatory culture with two-way communication flows. In this digital age, children increasingly explore, use, and are exposed to the online environment, and sharing can be considered the fundamental and constitutive activity. Parents sharing information with their children, also referred to as parental sharing behavior, predominantly comes about for parenting reasons. Instagram content is (selectively) shared to encourage the child to be on social media while also protecting the child from, for instance, being exposed to inappropriate social media content. It is the parent who has an essential role in this process. Placing this shift from “being exposed to” to “sharing” within the boundaries of a household, parents and children use technology to learn, connect and create together and new digital media has thus become profoundly integrated in family life.

Linking emotions to parental sharing behavior, it can be argued that emotionally charging an Instagram post results in more and more rapid shares. Additionally, several studies argue that positive emotions in Instagram posts attract more response than negative emotions on Instagram. A closer look at the existing literature on color reveals that the vividness of a social media post is positively related with the number of likes and comments and tends to be shared more often. Furthermore, vivid colors appear to be most effective at enhancing positive attitudes towards a

specific brand. Relating the two variables, existing literature shows that dark colors, such as brown, black and grey mainly elicited negative emotional associations, whereas the use of bright colors such as purple, green, yellow, blue, red and pink predominantly generated positive emotional associations. The three hypotheses of this study are formulated based on the existing academic literature and will be tested by this experimental research.

3. Method

In order to test the proposed hypotheses, a quantitative research has been conducted via an online experiment. This chapter will give insights in this experimental research by explaining the research design, the sampling strategy and the procedures of the research. Furthermore, this section will explain how the concepts of this research are operationalized and discuss the measurements for each scale. Finally, some information regarding the data collection and analysis will be provided, as well as an explanation of how the validity and reliability of this research are guaranteed.

3.1 Research design

This study adopted a quantitative experimental approach, with a 2(Emotions on Instagram: positive vs. negative) x 2(Colors on Instagram: images in color vs. images in black & white) experimental design. As it was the aim of this study to measure whether the different treatments resulted in significant differences when it comes to parental sharing behavior, an experimental research design can be considered most suitable (David Gefen, 2002, Babbie, 2014). After all, experiments focus on examining the effect of manipulated variables and determine causation (Babbie, 2014). Besides, Babbie (2014) argues that an experimental design is considered extremely appropriate for studies involving relatively well-defined and limited concepts and propositions, such as in this research. After the participants were randomly assigned to each of the four manipulated conditions, the groups answered identical online survey questions allowing for the eventual outcomes to be compared and to find potential casual relationships (Shadish, Cook, & Campbell, 2002).

The researcher used a top-down approach, as the study had a deductive nature with the aim to test clearly formulated hypotheses against the already existing findings and theories about sharing behavior regarding social media content; this testing enabled obtaining specific observations for a sample of parents of children between the ages of 6 and 12. Besides, this research had a cross sectional design, since the researcher obtained much data at one single point in time (Bryman, 2012). As current research is embodied in an area where a lot of research has already been conducted, it may be said that this research has been executed with an explanatory mindset.

During the online survey, the four experimental groups were all shown an Instagram picture depicting three persons looking directly in the camera. Although the Instagram picture used was of an actual Dutch children television program called *De Adriaans*, and depicted the three presenters of the program, all identifying names and information had been blurred. Bakhshi et al. (2014) found that faces in Instagram posts have a positive effect on the engagement of the audience (i.e. number of likes and comments) and for this reason this approach with the Instagram picture has been

adopted. The persons in the Instagram picture had an exotic appearance, wearing a sombrero and summer Hawaii shirts. Besides, the persons held a paintball gun. In the background, the set on which the Dutch children television program always is staged was visible. The image has been presented as an Instagram post on a mobile phone, posted by the official Instagram account of De Adriaans. Furthermore, the Instagram picture was accompanied by some text, indicating that the next episode of the program would be broadcasted later that afternoon. Potential respondents of the study could participate by filling out the survey on a laptop, desktop, tablet or smartphone.

Emotions have been manipulated through the facial expression of the humans depicted in the image, as Yang et al. (2014) argue that this is a way for social media users to disclose emotions from a social media post. The humans were extremely happy in the images shown to experimental groups 1 and 2, while being extremely angry in the images shown to experimental groups 3 and 4 (Figure 3.1). Important to note is that human depiction has been a constant across all four experimental conditions.

Figure 3.1: Experimental design

	Colored images (IV)	
Emotions (IV)	Colored image	Black and white image
Image charged with positive emotions	<i>Group 1: Positive image with color</i>	<i>Group 2 Positive image in black and white</i>
Image charged with negative emotions	<i>Group 3: Negative image with color</i>	<i>Group 4: Negative image in black and white</i>

The choice for the between subject experiment can be supported. As the study had a 2 by 2 between subject factorial design rather than a pretest-posttest design, the data could be collected at one single point in time, which facilitated the research process. Legitimately, the researcher cannot ensure that the four groups under treatment were at an equal level at the beginning of the experiment. Nevertheless, the participants were randomly assigned to the four experimental groups. By comparing the sharing behavior among the four groups, it could be examined whether emotions and colors in the Instagram image affected parental willingness to share the picture and so answer the main research question of this study.

3.2 Sampling

Parents of children between the ages of 6 and 12 could be considered the research units for this study. The units of this research had some selection criteria to be met. First, as this research is relevant for the social media content displayed by Dutch television programs, the participants of this study had to be Dutch as well. Besides, there is a large probability that people from other countries have different perceptions, as there are some considerable intercultural differences in the way people communicate (Hofstede, 2001). This also required the participants to be Dutch only. Secondly, the participants had to have one or more children between the age range of 6 and 12, as this range corresponds with the ages that the most popular Dutch children television channels see as their target group (Ster, 2018). Additionally, children in this age group are considered to be in the same psychological life stage of school age children, which makes findings to be more generalizable (Child Development Info, 2011). If one of the potential participants was not a Dutch citizen or indicated not having children between the appropriate age range, he or she was automatically redirected to the end of the survey, which is further explained in the operationalization section. According to Bryman (2012), the specific research criteria of the participants in this study narrowed down the probability of a too large variety in the acquired findings, which made the research less superficial. However, such a precise target group made it tougher to generalize the findings to other participant groups (Bryman, 2012). A gender specification was deliberately omitted, as this increased the representativeness for the Dutch society and facilitated the process of generalizing the findings to the population.

As one of the manipulation variables was color, it was important that the participants were able to distinguish the colored image from the black and white version. Hence, the condition of color blindness might have been problematic for this research. In the Netherlands, about 2,7% of the population has a moderate or advanced condition of color blindness (Accessibility, 2018). Since this is a considerable segment of the total population, participants indicating in the survey to have a condition of color blindness were redirected to a tailored end of the survey as well, in order to retain the validity of the outcomes. Again, this will be further explained in the operationalization section.

With regard to sampling, a convenient sampling strategy was used, as this facilitated the process of acquiring sufficient responses from the relatively specific target group in a short period of time (Brennen, 2013). Admittedly, the choice for a convenient sampling strategy violated the assumption of a randomly selected sample and may have harmed the generalizability of the findings (Babbie, 2014). However, as it was hard to obtain sufficient data from an extremely specific target group with a random sampling strategy, a convenient sampling strategy could still be considered suitable for this study (Babbie, 2014). The link to the survey was distributed via several social media

channels, knowing Facebook and Instagram. Besides, the personal network of the researcher was informed about the research as well. After eleven days of collecting data, from April 26th to May 6, a total of 234 respondents managed to complete the survey. However, as 21 respondents indicated not having children between the ages of 6 and 12, they were deleted from the data set. Furthermore, 1 respondent indicated to have a form of color blindness and was excluded from the data set as well. After excluding these invalid responses, 211 respondents were left in the data set and could be considered the sample of this research ($N = 211$). Of these 211 valid responses, 56 participants saw the Instagram post with positive emotions in color and 53 participants were exposed to the Instagram post with positive emotions in black and white. Furthermore, 52 participants were exposed to the Instagram post charged with negative emotions in color and 50 respondents saw the Instagram post with negative emotions in black and white, shown in figure 3.2.

Figure 3.2: Respondents per condition

Emotions	Color	Black and white	Total
Positive emotions	56	53	109
Negative emotions	52	50	102
Total	108	103	211

Of the sample 29 participants, or 13.7%, were men and 182 respondents, or 86.3%, were women. The respondents of the survey all were between the ages of 22 and 51, with an average age of 38.42. Furthermore, in terms of education, 9% of the respondents indicated that their highest achieved educational type was high school, 39.3% participated in a vocational education at highest, 38.9% participated in a university of applied science, 3.8% answered to have completed a bachelor at a university and 9% indicated to have achieved a university master's degree.

3.3 Procedure

In order to collect the appropriate data, the respondents were asked to fill in a short online survey via Qualtrics. Important to note is that the survey was completely Dutch, as this study aimed to find patterns in the sharing behavior of Dutch parents, who all have Dutch as their native language. After being briefly introduced to the study, the respondents were asked to answer some questions regarding their demographics. After that, the social media usage of the respondents and of their children was monitored. Furthermore, some questions were asked to determine the personality of the respondents as well.

After this rather general part of the survey, the four groups were presented with the Instagram image, manipulated by the two independent variables of this study, emotion and color, explained and visualized in the research design section. However, before being exposed to the picture, the respondents were briefly informed about the procedure. The respondents were informed that they would see an Instagram image and that they had to closely look at the post. Besides, the respondents were informed that the button to move to the next page appeared after 20 seconds, which ensured the researcher that the respondents would have enough time to inspect the Instagram post closely. The name of the Dutch television program to which the Instagram post belongs, *De Adriaans*, was deliberately left out of the Instagram post as this may have caused some biased or socially desired answers. Besides, presenting the post in a rather general way may have increased the generalizability of the findings. It was decided to frame the Instagram post in a smartphone interface, as Walker (2018) argues that Instagram was originally intended to be a smartphone app instead of a desktop website and has substantially more users on smart devices compared to desktops. For this reason, Instagram users have much more opportunities on the smartphone app compared to the desktop version, where Instagram users are solely allowed to passively watch Instagram content (Walker, 2018). Again, each group got to see a different manipulated Instagram image.

After being exposed to this Instagram image, manipulation check questions on the independent variable of emotion addressed potential variations in the independent variable that may have caused differences in the outcomes of the dependent variable. Manipulation check questions on the independent variable of color were unnecessary, as colors may be considered intrinsic features (O'Keefe, 2003). After all, there is not much space for interpretation on the question whether the color of an object is indeed that color, especially since color blind people were already filtered out in the sampling stage. On the other hand, people may have interpreted the conveyed emotions by the depicted humans differently. After these manipulation check questions, the survey asked about the sharing behavior of the parents, the dependent variable of the study.

If the respondents at any point of the survey decided to proceed to the next page without answering one or more questions, they were reminded of that fact. With this response request, it was the hope of the researcher to get the most complete dataset possible. The request simply was a reminder, meaning that it was completely up to the respondent to decide to answer the question. Respondents were never forced into answering questions, as Baker (2012) argues that the process of forcing respondents into answering a question is rather unethical. Besides, Stieger, Reips and Voracek (2016) found that forced response in online surveys considerably increases an early dropout of respondents and may thus even lead to a less complete dataset.

Before the actual survey was distributed among the potential respondents, a pretest had been carried out with 10 respondents, who were asked to indicate whether they thought some improvements of the survey could be made. If the 10 respondents found considerable struggles during the survey, the survey could be adapted in order to make the actual survey as user-friendly as possible. Overall, the 10 respondents found the survey appropriate and user-friendly. However, some respondents indicated that the questions regarding their personality could have been spread over more pages, as they lost a clear view on the test on one single page. This will be further explained in the operationalization section.

3.4 Operationalization

In order to visualize all questions and scales described in this section, the complete survey is attached as appendix 1. After being introduced to the study and the survey, demographic data was obtained by questions related to the respondent's gender, age and level of education. Additionally, it was asked whether the respondent suffered from any form of color blindness, as it was extremely important that the respondents were able to distinguish colored from black and white Instagram images. If the respondent indicated having a form of color blindness, he or she was automatically redirected to a tailored end of the survey and excluded from the research, to ensure the color manipulation.

After these demographic questions, the respondents were asked to indicate on which social media platforms they are active. The social media channels chosen for this question were WhatsApp, Facebook, YouTube, LinkedIn, Instagram, Pinterest, Twitter, Snapchat, Tumblr, WeChat and Foursquare, as Oosterveer (2018) argues that these are the most used social media platforms in the Netherlands in 2018. The respondents were to indicate how active they are on these social media platforms on a 7-point ordinal scale, with answering options varying from more than five times a week (7) to never (1). These questions gave insights in the social media behavior of the respondents.

The respondents were asked to answer some questions regarding their children in the second part of the survey. At first, it was asked how many children the respondent has in the age category of 6 to 12 years old. The average number of children in a Dutch household is 1.7 and less than 1% of Dutch parents have six or more children (Centraal Bureau voor de Statistiek, 2017). However, these percentages are not modified for the age category of 6 and 12, meaning that within this age category, the percentages are supposedly even considerably lower. Therefore, it was decided to give the respondents the option to choose from zero to six children within the age category, as having more than six children within the age category of 6 and 12 years old can be considered extremely unlikely. Then, for every child, the respondents were asked to indicate both

the gender and the age. Besides, they were to indicate if their children have an Instagram account, to find out if it is possible for them to share the Instagram content with their child(ren) on the platform itself.

The third part of the survey elaborated on the big five personality dimensions used in the study of Ferwerda et al. (2016), in order to find out whether there is a connection between the sharing behavior and the personality of the participants. In their study, Ferwerda et al. (2016) made use of a 44-item personality questionnaire with a 5-point Likert scale. However, as it was the intention to keep the questionnaire rather short and as personality was only a sub variable in this study, the concept of personality was operationalized by a 20-item mini IPIP personality scale with a 5-point Likert scale as proposed by Donnellan et al. (2006), visualized in appendix 2. This scale included 4 items per big five trait and has proven to be consistent and acceptable throughout several studies (Donnellan et al., 2006). It was decided to keep working with the 5-point Likert scale to measure the personality trade, as both Ferwerda et al. (2016) and Donnellan et al. (2006) worked with a 5-point Likert scale in their personality studies as well. Besides, Adelson and McCoach (2010) argue that a 5-point Likert scale still ensures the reliability and indicates strong patterns of coefficients. The 20-item mini IPIP personality scale was spread over 4 pages, as respondents of the pretest indicated that they found it difficult to keep an overview with all the 20 questions on one page. As expected, the big five personality dimensions surfaced; extraversion (Cronbach's $\alpha = .728$, agreeableness (Cronbach's $\alpha = .750$); conscientiousness (Cronbach's $\alpha = .746$); neuroticism (Cronbach's $\alpha = .728$); imagination (Cronbach's $\alpha = .605$), further visualized in appendix 3.

Additionally, the respondents were exposed to their manipulated Instagram image. Directly after that, manipulation check questions were asked. It was asked to what extent the respondents believed that the Instagram post displayed certain emotions, knowing liking, angry, joyful, mad, happy, pissed off, satisfying and rage. In the study of Harmon-Jones et al. (2016) liking, joyfulness, happiness and satisfying were found to be the most important parameters to predict happiness, while madness, rage, pissed off and anger were found to be the main predictors for anger. For this question, the same 7-point Likert scale as used in the study of Harmon-Jones et al. (2016) was used. As mentioned, manipulation check question for were obvious and unnecessary (O'Keefe, 2003).

Questions about parental sharing behavior were asked in the final part of survey. As existing literature lacks the development of a scale to measure sharing behavior, the concept was operationalized by the measurement tools of Wang et al. (2016): the likelihood to like, comment or share the Instagram image. Additionally, it became clear in which way the parents intend to share the content with their children, online or offline. Again, in line with the study of Adelson and McCoach (2010), these variable levels were measured on a 5-point Likert scale (see appendix 4).

After the measurements for the dependent variable, the respondents were asked to what extent they felt the earlier mentioned emotions of Harmon-Jones et al. (2016) themselves while looking at the Instagram post. Again, for this question the 7-point Likert scale of Harmon-Jones et al. (2016) was used. It could be expected that the answers to these questions are highly correlated with the first manipulation check questions for emotions.

Additionally, it was important to know whether the respondents are familiar with De Adriaans, as this may have affected the provided answers. Therefore, on the last page of the survey, the respondents were asked if they know to which Dutch television program the Instagram post belonged. In this question, the respondents were to indicate whether they believed the Instagram post belonged to Spangas, Brugklas, Checkpoint, De Adriaans, Zaplive or Het Klokhuis. These programs were chosen as answering options for this question, as they all have the same target group as De Adriaans, knowing children in the age category from 6 to 12 years old (Ster, 2018). If the respondents knew that the Instagram post is one of De Adriaans, they were asked whether they have ever seen an episode of the Adriaans. If they did, they were asked to indicate whether they like the program on a 7-point Likert scale. Finally, the respondents were asked to indicate whether they know the people in the Instagram picture personally. In this way, it became clear to what extent the respondents are engaged to the program, which may have affected the provided data.

Finally, in the final slide of the survey, the respondents were being informed again that the collected data is treated confidentially and anonymously. Additionally, if the respondents had any questions, it was clarified that they may e-mail them to the researcher.

3.5 Data collection and analysis

The instrument of data collection for this research was an online survey via Qualtrics, the leading research and experience software (Qualtrics, 2018). Before distributing the survey to the potential respondents, the researcher pretested the survey. The survey was completely voluntary and anonymous. Besides, as the researcher solely used aggregate data, no individual response could be tracked. In total, 211 valid responses were recorded. ($N = 211$)

In terms of data analysis, the collected Qualtrics data was imported in SPSS, a statistic computer software for the social sciences (IBM, 2018). Within SPSS, the data could easily be visualized and analyzed. The researcher predominantly made use of two-way between-subjects ANOVA tests to determine whether the outcomes of the different experimental groups significantly vary (Privitera, 2015), while taking potential interaction effects into consideration. The two-way between-subjects ANOVA test may be considered a legitimate test to compute, as it can be monitored whether the dependent variables of this study are normally distributed by looking at the

skewness and kurtosis, as the sample was randomly selected, as each measured outcome in a study was independent or equal and the variance in each population was equal to that of the others (Privitera, 2015). After the ANOVA tests, independent sample t-tests provided a closer look into the group differences. Again, these independent sample t-tests could be validated as normality, random sampling, independence and equal variances can either be assumed or tested (Privitera, 2015). Besides, some reliability analyses may potentially be of value for this study as well, especially to determine the personality of the respondents from the mini IPIP personality test. After the analyses, the researcher will present an extensive report elaborating on the outcomes of this study.

3.6 Validity and reliability

Assessing the quality of the measurement procedures, the internal validity of this study was enhanced as the survey contained several well-established scales to measure different variables, such as the mini IPIP personality scale, in order to make sure that this study measured what the researcher intended to measure (Bryman, 2012). Besides, a 2x2 experimental design could be considered the appropriate approach for testing the impact of emotions and colors on Instagram on parental sharing behavior, which minimized the chance of facing systematic errors of biases (Babbie, 2014). Furthermore, the external validity was enhanced by the specific target group of this study. As a specific target group resulted in a smaller population size, it can be argued that the findings of this study are highly generalizable. Besides, Bryman (2012) argues that the specific research criteria of the participants in a study narrow down the probability of a too large variety in the acquired findings. Additionally, the reliability of this research was preserved by a transparent and extensive description of the research design. This did not only make the research understandable for the audience, the replicability became enhanced as well.

4. Results

This study aimed to provide a better understanding of the effect of emotions and colors on parental sharing behavior of Instagram content. This section will discuss the results of the experimental research. At first, an extensive description of the sample will be provided. Thereafter, the earlier proposed hypotheses will be tested. Finally, some additional performed analyses will be explained.

4.1 Sample description

A total number of 211 participants ($N = 211$) were included in this research. Of the sample 29 participants ($N = 29$), or 13.7%, were men and 182 respondents ($N = 182$), or 86.3%, were women. The respondents of the all survey were between the ages of 22 and 51, with an average age of 38.42 ($M = 38.42$, $SD = 5.91$). Furthermore, in terms of education, 9% of the respondents indicated that their highest achieved educational type was high school, 39.3% participated in a vocational education at highest, 38.9% participated in a university of applied science, 3.8% answered to have completed a bachelor at a university and 9% indicated to have achieved a university master's degree. The respondents were equally divided over the four experimental groups, such that group 1, 2, 3 and 4 consisted of 56, 53, 52 and 50 respondents, respectively.

Most respondents indicated to have one child in the age range of 6 and 12 years old ($N = 120$), while 79 participants ($N = 79$) have two and 11 ($N = 11$) respondents have three children in that age range. Furthermore, only 1 respondent ($N = 1$) indicated to have six children between 6 and 12 years old, corresponding with the claims of the Centraal Bureau voor de Statistiek (2017) that less than 1% of Dutch parents have six or more children. On average, the participants of this study have 1.5 children ($M = 2.50$, $SD = .67$). Interestingly, of all the 317 children, parents indicated that 130 children, or 41.0%, have a social media account, while parents indicated that 187, or 59%, did not have a social media account.

In terms of social media behavior, the participants of this research are most active on WhatsApp, with 82.5% of the respondents indicating to use WhatsApp more than five times per day and only 1.4% indicating not to use WhatsApp at all. Besides, 50.2% of the respondents indicated to use Facebook over five times per day, while 32.2% of the respondents answered to use Facebook between one and two times a day. YouTube was considerably less used among the participants, as most respondents, 24.6%, indicated to use YouTube about once a week, while 24.2% indicated to be active on YouTube less than weekly. Furthermore, 53.6% of the respondents indicated not to use LinkedIn at all, while only 1.4% indicated to use LinkedIn more than five times per day. In terms of Instagram activeness, 40.3% of the respondents indicated not to use Instagram, while 14.2% of the

respondents said to use Instagram more than five times a day. Pinterest, Twitter, Snapchat, Tumblr, WeChat and Foursquare were considerably less popular among the sample, with respectively 52.1%, 73.0%, 73.0%, 97.2%, 98.6% and 97.2% of the respondents indicating not to use the social networking platform at all.

Finally, please find the descriptive and correlation statistics of the variables age, the five personality traits and online and offline sharing as table 4.1.

Table 4.1: Descriptive statistics

Variable	N	M (SD)	1	2	3	4	5	6	7	8
1. Age	211	38.42 (5.91)	1.00							
2. Extraversion	210	3.60 (.85)	-.06	1.00						
3. Agreeableness	210	4.21 (.76)	-.10	.06	1.00					
4. Conscientiousness	210	3.62 (.88)	-.03	.10	.05	1.00				
5. Neuroticism	210	2.65 (.82)	-.14*	-.18*	.16*	-.28**	1.00			
6. Imagination	210	3.55 (.67)	-.04	.15*	.13	-.14*	.08	1.00		
7. Sharing online	211	1.35 (.86)	.21**	.08	-.31**	.05	-.16*	-.19**	1.00	
8. Sharing offline	211	1.57 (1.14)	.24**	.06	-.27**	.02	-.16*	-.17*	.772**	1.00

* $p < .05$, ** $p < .01$

4.2 Manipulation check

In order to check whether the manipulation of emotion worked, manipulation check questions were formulated asking the respondents to what extent they perceived the Instagram post as liking, angry, joyful, mad, happy, pissed off, satisfying and rage on a 7-point Likert scale (Harmon-Jones et al., 2016). All positive emotions (i.e., liking, joyful, happy and satisfying) indicated a high reliability ($\alpha = .908$) and an index for perceived happiness was created; all negative emotions (i.e., angry, mad, pissed off and rage) indicated a high reliability as well ($\alpha = .923$) and an index for perceived anger was created (results of the factor analyses are shown in appendix 5).

A one-way ANOVA was conducted in order to find out whether there is a significant difference in the perceived emotions between the different experimental groups. It was found that respondents who were exposed to an Instagram post charged with positive emotions, or experimental groups 1 and 2, indeed perceived the Instagram post significantly more happy ($M = 4.12$, $SD = 1.53$) than respondents who were exposed to an Instagram post with a negative emotional load, or experimental groups 3 and 4, ($M = 2.94$, $SD = 1.47$), $F(210) = 33.00$, $p < .001$. Besides, it was found that respondents who were exposed to an Instagram post charged with negative emotions, or experimental groups 3 and 4, perceived the Instagram post significantly angrier ($M = 3.56$, $SD = 1.67$)

than respondents who were exposed to an Instagram with a positive emotional load, or experimental groups 1 and 2, ($M = 2.42$, $SD = 1.31$), $F(210) = 30.08$, $p < .001$. Overall, based on the p values, results showed that the manipulation of emotions in the Instagram post has been successful. However, the results should be considered with caution as the Levene's test showed that the homogeneity of variance is violated for the perceived anger variable, $p = .010$. For perceived happiness, this is not the case, $p = .569$. As mentioned, a manipulation check for the independent variable of color is unnecessary (O'Keefe, 2003).

4.3 Hypotheses testing

Proceeding to parental sharing behavior, the scales proposed in the method section were used to test the hypotheses stated in the theoretical framework, of which the results will be presented in this section. After validating the impact of the manipulation of emotions, the effect of emotions on parental sharing behavior was measured in order to test the first hypothesis. Additionally, for the second hypothesis, the effect of color on parental sharing behavior was examined. Finally, for the third hypothesis, it was measured whether emotions and color interact with each other in affecting parental sharing behavior.

As one may expect that respondents who are personally connected with one or more depicted persons in the Instagram image tend to share the images more often, all hypotheses were tested with a sample of solely respondents who were not personally connected with the depicted persons ($N = 189$) as well. In this way, biased outcomes will be omitted. On all analyses, however, both samples showed similar results. It is therefore decided to not report all details of the analyses with the smaller sample ($N = 189$) and continue to work with the complete sample ($N = 211$) of this study.

4.3.1 H1: Emotions

As the manipulation check for the manipulation of emotions showed that the respondents were manipulated the way the researcher intended, the first hypothesis of the study can be examined. For this purpose, two independent-samples t-tests were conducted in order to test H1 for both the offline and online sharing. The first independent-samples t-test showed that respondents who were exposed to an Instagram post charged with positive emotions did not score significantly higher on the parental online sharing scale ($M = 1.40$, $SD = .92$) compared with respondents who were exposed to an Instagram post with a negative emotional load ($M = 1.29$, $SD = .78$), $t(206,751) = 9.33$, $p = .352$. A second independent-samples t-test showed that respondents who were exposed to an Instagram

post charged with positive emotions did not score significantly higher on the parental offline sharing scale ($M = 1.62, SD = 1.19$) compared with respondents who were exposed to an Instagram post with a negative emotional load ($M = 1.52, SD = 1.10$), $t(209) = .66, p = .509$. Please find the independent-samples t-tests in appendix 4. Hence, for both offline and online parental sharing behavior, positive emotions on Instagram do not significantly increase the likeliness of parents sharing this Instagram content with their children. H1 can thus be refuted. Parents are not more likely to share positively charged Instagram posts than negatively charged Instagram posts with their children between the ages of 6 and 12.

4.3.2 H2: Color

In order to test the second hypothesis of this study, two independent-samples t-tests were conducted to test H1 for both the offline and online sharing as well. The first independent-samples t-test showed that respondents who were exposed to a colored Instagram post did not score significantly higher on the parental online sharing scale ($M = 1.38, SD = .92$) compared with respondents who were exposed to an Instagram in black and white ($M = 1.32, SD = .78$), $t(206.114) = .50, p = .615$. Additionally, the second independent-samples t-test showed that respondents who were exposed to a colored Instagram post did not score significantly higher on the parental offline sharing scale ($M = 1.59, SD = 1.20$) compared with respondents who were exposed to an Instagram in black and white either ($M = 1.55, SD = 1.08$), $t(209) = .25, p = .804$. Please find the independent-samples t-tests in appendix 5. Hence, for both offline and online parental sharing behavior, colors on Instagram do not significantly increase the likeliness of parents sharing this Instagram content with their children. H2 can thus be refuted. Parents are not more likely to share colored Instagram images than black and white Instagram images with their children between the ages of 6 and 12.

4.3.3 H3: Interaction

In order to test the third hypothesis of this study, An ANOVA examining emotions and colors on the online parental sharing behavior did not reveal a main significant effect of emotions on online parental sharing behavior, $F(1, 207) = .96, p = .329$, partial $\eta^2 = .01$. Besides, a significant main effect of color on online parental sharing behavior did not surface either, $F(1, 207) = .32, p = .571$, partial $\eta^2 = .00$. The ANOVA did reveal a significant interaction effect between the two variables on the online parental sharing behavior, $F(1, 207) = 4.03, p = .046$, partial $\eta^2 = .02$. In light of H3, an independent-samples t-test showed that respondents who were exposed to an emotionally positive Instagram image in color did not differ in their online parental sharing behavior ($M = 1.32, SD = .83$) from

respondents who saw an emotionally positive Instagram image in black and white ($M = 1.49$, $SD = 1.01$), $t(100.894) = .95$, $p = .345$. Computing the same ANOVA for the offline parental sharing behavior, no significant main effect of emotions on the offline parental sharing behavior was found, $F(1, 207) = .48$, $p = .488$, partial $\eta^2 = .00$. Additionally, a significant main effect of color on offline parental sharing behavior was not revealed either, $F(1, 207) = .09$, $p = .769$, partial $\eta^2 = .00$. A significant interaction effect between the two variables on the offline parental sharing behavior did not surface either, $F(1, 207) = 2.09$, $p = .150$, partial $\eta^2 = .01$. Please find all relevant tests in appendix 6. Hence, for both offline and online parental sharing behavior, Instagram images that display positive emotions such as happiness do not result in more parental sharing when they are colored, compared to the same images in black and white. No support was found for H3, which can thus be refuted.

Computing the remaining comparisons for the significant interaction effect of colors and emotions on the online parental sharing behavior with independent-samples t-tests, a first independent-samples t-test showed that respondents who were exposed to an emotionally negative Instagram image in color did score significantly higher on the parental online sharing scale ($M = 1.44$, $SD = 1.02$) compared with respondents who saw an emotionally negative Instagram image in black and white ($M = 1.14$, $SD = .35$), $t(63.335) = 2.02$, $p = .048$. Secondly, an independent-samples t-test showed that respondents who were exposed to a colored image charged with positive emotions did not score significantly higher on the parental online sharing scale ($M = 1.32$, $SD = .83$) compared with respondents who saw a colored image charged with negative emotions, ($M = 1.44$, $SD = 1.02$), $t(98.782) = .67$, $p = .503$. Finally, the last independent-samples t-test showed that respondents who were exposed to a black and white image charged with positive emotions did score significantly higher on the parental online sharing scale ($M = 1.49$, $SD = 1.01$) compared with respondents who saw a black and white image charged with negative emotions, ($M = 1.14$, $SD = .35$), $t(64.953) = 2.38$, $p = .020$. Hence, it can be argued that the interaction effect occurred between positive emotions and black and white, as well as between negative emotions and colors. Again, important to note is that all these effects need to be interpreted with caution because a Levene's test showed that the homogeneity of variance is violated for the perceived anger variable, $p = .010$.

Finally, it was tested whether age, gender, educational level and personality dimensions could be used as covariates in the analyses; the correlations with the dependent variables were tested, the independence with the independent variables was tested and the homogeneity of the regression slopes was examined. Results showed that none of the variables could be used as covariates in this study, making further analyses unnecessary.

5. Conclusion

The final chapter of this study provides an overview of the key findings and answers both the sub questions and the main research question of this study. Next to that, the findings of the experiment will be compared with the findings of previous relevant academic literature and will provide, where necessary, an explanation for surfaced contradicting findings. Furthermore, the limitations of this study will be discussed, as well as managerial implications and suggestions for future research directions.

5.1 Discussion of main findings

Along with the rise of the internet and social media, children between the ages of 6 and 12 increasingly use the online environments to learn, create and communicate and can nowadays be referred to as digital natives (Strasburger et al., 2013; John, 2013). However, with the age restriction of 13 years old on Instagram (Instagram, 2017), Instagram content can only reach children if their parents are willing to share it with them, either online via the platform itself or offline by physically showing the content to their children. Hence, parental sharing behavior, or sharenting, must be considered an important aspect in reaching this young target group on Instagram (Livingstone et al., 2018; Marasli et al., 2016). Understanding parental sharing behavior and creating content that positively affects the process of sharenting could therefore be beneficial for a broad variety of companies that are aiming to reach a young target group on Instagram.

Considering this, this quantitative experimental study strived to further explore parental sharing behavior by assessing the relationship between the independent variables of *emotions* and *color* on Instagram and the dependent variable of *parental sharing behavior*. In this, the dependent variable of this study was divided in the willingness to share Instagram content with children in both an online and an offline environment; online and offline parental sharing behavior. Accordingly, this research aimed to answer the following research question: *To what extent do emotions and colors on Instagram affect the sharing behavior of parents towards their children between the ages of 6 and 12?*

The first part of the study examined the effect of emotions on parental sharing behavior, aiming to answer H1 and the first sub question of this research: *To what extent does positive or negative emotional Instagram content affect the sharing behavior of parents of children between the ages of 6 and 12?* On both online and offline parental sharing behavior, no significant effect was found. In other words, positive or negative emotional Instagram content does not have an effect on the sharing behavior of parents towards their children between the ages of 6 and 12. Secondly, this study assessed the effect of color on parental sharing behavior in order to test H2, according to the

second sub question: *To what extent does colored or black and white Instagram content affect the sharing behavior of parents of children between the ages of 6 and 12?* Again, both online and offline parental sharing behavior showed no significant effect. Colored or black and white Instagram content does not affect the sharing behavior of parents towards their children between the ages of 6 and 12. Thirdly, an interaction effect between the two independent variables was explored in order to test the third hypothesis of this study. Despite the fact that a significant interaction effect was found, the interaction effect did not surface the way H3 expected. When Instagram images display positive emotions such as happiness, colored images do not result in more parental sharing than black and white images.

Relating back to the main research question of this study, it may be argued that emotions and colors on Instagram did not affect the sharing behavior of parents towards their children between the ages of 6 and 12 to a large extent in both an online and an offline environment. Despite the findings that Instagram images charged with positive emotions tended to be shared slightly more than images that incorporated negative emotions, and that colored images tended to be shared slightly more than images in black and white, these differences were too small to make hard statements about the relationship between the variables. It can thus be stated that there is no causal relationship between emotions, colors and parental sharing behavior on Instagram.

5.2 Theoretical and managerial implications

When yielded results contradict the theory that was used to formulate the hypotheses, alternative explanations are needed to clarify what could have induced the obtained results. As all hypotheses proposed in this research were refuted, it can be argued that the results presented have implications for the theory they are based upon and that alternative explanations are necessary.

First, H1 predicted that parents are more likely to share positively charged Instagram posts than negatively charged Instagram posts. Analyses showed that the results slightly leaned towards this prediction in both online and offline parental sharing. However, the differences were too small to consider it as supporting evidence for H1, which therefore had to be rejected. These findings confirm the findings of Stieglitz and Dang-Xuan (2013), arguing that it does not matter whether Instagram content contains positive or negative emotions in attracting response. On the other hand, the findings contradict the findings of Yang et al. (2014) and De Vries et al. (2012) on which the hypothesis was based, claiming that positive emotions on Instagram tend to attract more response compared to negatively charged posts. A possible explanation for the findings could be that both studies of Yang et al. (2014) and De Vries et al. (2012) were, in contrast with this study, conducted with a global perspective, so that cultural differences may account for the contrasting results

(Hofstede, 2001). As sharing can be considered a collectivistic act, the relatively high individualistic score of the Netherlands may explain the lower tendency of Dutch parents to share positively charged Instagram content with others (Hofstede, 1983). Besides, as the Netherlands may be seen as a relatively feminine country and is characterized by modesty (Hofstede, 1983), this may account for the lower tendency of Dutch parents to share positivity as well. Hence, one may assume that the sharing of positive emotions is less entrenched in the Dutch culture. Additionally, as the study of Yang et al. (2014) solely focused on Flickr activity, a possible explanation for the contrasting result may be the transition of this study to the Instagram environment. Cha, Mislove, Adams and Gummadi (2008) claim that Flickr can be characterized by sharing content, whereas Jang, Han, Shih and Lee (2015) argue that Instagram is mainly characterized by liking and commenting. In other words, affordances to share content are more entrenched on Flickr than on Instagram (Goel et al., 2013), which may explain the divergent findings of this study. Finally, De Vries et al. (2012) based their findings on social media activity of fans of a certain brand and found that brand fans are eager to spread a positive brand image. In contrast with the study of De Vries et al. (2012), this study focused on parents and Instagram content of Dutch children programs, in which the parents cannot be considered fans of the program or brand. Hence, the tendency to spread a positive image of the children television programs might be lower in this target group, which may account for the contrasting findings of this study as well.

Secondly, H2 predicted that parents are more likely to share colored images compared to black and white images. Again, the results leaned towards that prediction, but the differences were too small to support H2, which therefore had to be rejected. H2 was predominantly based on the study of De Vries et al. (2012), claiming that colored images tend to be shared more often than images in black and white. As mentioned, De Vries et al. (2012) conducted a global study, resulting in potential cultural differences accounting for the contradicting findings (Hofstede, 1983). This is echoed by Hochman and Schwartz (2012), who found substantial differences in color usage on Instagram across different cultures. Besides, the study of De Vries et al. (2012) based their findings on brand fans, who are eager to spread a positive brand image on social media. They argue that vivid and colored images are strongly related to happiness, which account for the eagerness of brand fans to share colored images more often than images in black and white (De Vries et al., 2012). However, as parents cannot be considered fans of Dutch television programs, they may be less inclined to share the colored images and spread a positive image of the program, which may explain the contradicting findings of this study.

Finally, H3 predicted an interaction effect between emotions and color, such that positive images tend to be shared more often when they are depicted in color. No support for H3 was found, which thus was rejected. A possible explanation for these contradicting findings is that H3 was mainly

based upon literature relating emotions to color prior to the stage of Web 2.0 conducting offline experiments in which the researchers were present (Valdez & Mehrabian, 1994; Hemphill, 1996). In this way, Valdez and Mehrabian (1994) and Hemphill (1996) could somewhat control the emotional state of the respondents in their experiments, whereas this was impossible for the online experiment of this study, which may account for the contrasting findings. Besides, in the studies of Valdez and Mehrabian (1994) and Hemphill (1996), the respondents got to see the images on a tangible piece of paper, whereas participants of this study saw the images online. In their study, Gountas and Gountas (2007) found that people tend to experience more emotions when exposed to tangible assets compared to intangible ones, which may explain the lack of the predicted interaction effect in this study. However, significant interaction effects did surface for positive emotions and black and white, and for negative emotions and colors, completely opposed to H3. A possible explanation for these contradicting findings is hard to provide. Potentially, as a Levene's test showed no homogeneity of variance on the emotion variable, this may have caused the divergent results.

When it comes to managerial implications, the findings provided by this study do not only contribute to the academic field, the insights can be brought into practice by marketing managers of Dutch children media channels as well, as this research provides insights in how to trigger parental sharing behavior on Instagram and thus reach a young target group on the online platform. Hence, the statistical results of this study can be used in existing social media campaigns to promote media content for children on Instagram. As both emotions and colors did not significantly impact online and offline parental sharing behavior, it can be argued that Instagram campaigns to reach a young target group can be best adapted by combining Instagram content with positive and negative emotions, as well as combining Instagram content in color and black and white. Furthermore, the interesting outcomes of the interaction effect show that parental sharing behavior is triggered most effectively by making the decision to combine colored Instagram content with negative emotions, and black and white Instagram content with positive emotions. Besides, as 41% of the parents' children have a social media account, it can be interesting for marketing managers to see whether these children can be reached directly on social media as well. In this way, parents do not have to share the content before it reaches the children which will make communication between program and audience more direct and efficient.

Besides the value for marketing managers who aim to reach children on social media, the findings of this study may be valuable for companies that have parents as their target group as well. Wang et al. (2016) argue that sharing is an important element of social media engagement, meaning that the findings of this study to some extent provide insights in the effect of emotions and colors on the social media engagement of Dutch parents as well. Hence, engaging parents on Instagram can be

done best by combining Instagram content with positive and negative emotions, as well as combining Instagram content in color and black and white.

5.3 Limitations and strengths

In defiance to the fact that it was the aim of this research to come up with findings that are generalizable to the complete population, several limitations must be acknowledged. First, as the sample of this study consisted only for 13.7% of male participants, it can be argued that men are largely underrepresented in this study, which causes some constraints for both the academic and the practical contribution of this research. From a practical perspective, the findings of this study predominantly account for female parental sharing behavior and may not be considered the absolute truth for male parental sharing behavior as a result of the underrepresentation of male participants. From an academic dimension, a limitation must be acknowledged as well, as a small male sample may have harmed the statistical significance of testing the hypotheses.

The second limitation concerns the outcomes of the both dependent variables of this study: *online parental sharing* and *offline parental sharing*. Low mean averages indicate that participants are not that likely to share any of the shown Instagram images. A possible explanation for this is that the people depicted in the Instagram images carry paintball guns. These guns can easily be related to violence, which is not something that parents are likely to share with their children. However, the guns were a constant in all four experimental groups, negatively impacting all parental sharing means. Hence, it can be argued that the guns did not harm the relationship between the variables of this study.

The third limitation involves the independent variable of *perceived anger*. A Levene's test showed that within this variable, no homogeneity of variance was found. Despite the fact that this outcome did not critically harm the research and its outcomes, it forced the researcher to interpret all findings involving this variable with due caution.

Additionally, a limitation can be acknowledged related to the language of the survey. As it was the aim of this study to further explore parental sharing behavior of Dutch parents, it was decided to execute the survey in Dutch as well. In this way, the respondents could participate in the study in their native language, which made the experiment more accessible. However, as the paper is written in English, the findings of the experiment had to be translated by the researcher. Translating the findings will leave room for interpretation and could therefore harm the validity of this study.

Next, a limitation of the chosen sampling strategy must be acknowledged as well. In order to acquire sufficient participants, a convenient sampling strategy was performed, mainly focusing on the social network of the researcher. Furthermore, respondents were found via different social

media channels, such as Instagram and Facebook. Despite the fact that a convenient sampling strategy is relatively cheap and effective, the method may not provide a representative sample of the population (Brennen, 2013; Fricker, 2008). Besides, convenient sampling violates the assumption of random sampling of this research. On the other hand, as the target group of this research was relatively specific, parents with children between the ages of 6 and 12, it can be argued that a convenient sampling strategy was necessary to find sufficient participants for this study.

Finally, the participants of this research had to conduct an online experiment. This setting can cause a limitation as the researcher has no control of the environment in which the participants fulfill the experiment (Reips, 2000). In this way, the researcher can never control whether the participants were distracted while filling out the survey or ensure that the participants were fully focused on the experiment. On the other hand, participants were exposed to an Instagram image on their desktop, tablet or Smartphone, which is how they would normally see Instagram content as well. Hence, this online experiment did ensure that the participants conduct the experiment in a natural setting, which can be considered an advantage as it may increase the external validity of the study (Reips, 2000).

Reflecting on the research design and execution, several strengths of this study can be addressed as well. The first strength is related to the novelty of the topic of this study. Existing literature on sharing has always considered sharing in the broadest sense possible; a specific way of sharing was not specified, and the studies did not include any extraordinary target groups. This study, on the other hand, specifically examined sharing with regard to a much younger target group, namely parental sharing behavior towards children between the ages of 6 and 12, which accentuates the uniqueness of this study. Additionally, as existing literature did not touch upon differences in sharing behavior on different social media platforms, the novelty of this study is emphasized once again, as this study investigated parental sharing behavior on Instagram specifically. This study into the sharing process towards children provides the academic field with new and unique findings, which underlines the novelty of the research topic and the scientific relevance of the study.

The second strength of this study is related to the specific profile of the participants, Dutch parents of children between the ages of 6 and 12. Next to the criteria related to the nationality and the age of the respondents' children, participants who suffered from any form of color blindness were excluded from the study as well, making the target group of this research relatively specific. A specific target group obviously decreases the size of the population, which results in a greater generalizability and thus external validity of the research and its findings. Besides, as a specific target group ensures the researcher to measure what is intended to measure and minimizes systematic errors or biases, it can be argued that the specific target group enhanced the internal validity of the

study as well. Furthermore, Bryman (2012) argues that the specific research criteria of the participants in this study narrowed down the probability of a too large variety in the acquired findings. Hence, the specific criteria that the participants had to meet can be considered a strength for this study.

The third strength involves the chosen research design for this study. The aim of this study was to find potential causal relationships between the use of emotions and colors on Instagram and parental sharing behavior of Instagram content of Dutch parents of towards their children between the ages of 6 and 12. In other words, the goal of this study was to measure whether different treatments resulted in significant differences when it comes to parental sharing behavior. In his book, Babbie (2014) claims that experiments perfectly allow for determining causation between different variables. Besides, Babbie (2014) argues that an experimental design is considered extremely appropriate for studies involving relatively well-defined and limited concepts and propositions, such as in this research. Hence, the choice for a quantitative research approach with an online experiment increases the internal validity and can be considered a strength of this study.

5.4 Future research directions

This study touched upon notions that have not been profoundly examined yet. Besides, as discussed in the previous chapter, the execution and outcomes of this study faced several limitations. Hence, it would be interesting for future research to further explore the concept of parental sharing in order to find new and more extensive insights in several directions.

First, relating a suggestion for future research directions to the first limitation of male underrepresentation in this study, future research into the concept of parental sharing behavior could aim for a male target group. Due to the male underrepresentation in this study, the findings regarding parental sharing behavior are mainly valid for females and may not be seen as the absolute truth for a male target group. Hence, it would be wise for future studies to examine whether the findings of this study hold for male parental sharing as well.

Furthermore, as this study predominantly examined the effect of happy and angry emotional traits, it may be interesting to elaborate on the variable of emotion even more by exploring whether other emotions, such as sadness, affect parental sharing behavior. Besides, it could be interesting to see whether parental sharing behavior can be affected by other variables as well. The depiction of violence was for instance a constant in this experiment and supposedly impacted the outcomes of dependent variable of parental sharing. More insights related to the relationship between violence and parental sharing behavior could potentially confirm these assumptions.

Next, an advice for future research directions is to perform similar studies on parental sharing behavior with a qualitative approach. In this way, it can be investigated whether emotions and colors have truly no effect on the sharing behavior of Dutch parents. Additionally, when performing a qualitative study into parental sharing behavior, further opinions and perceptions of Dutch parents could be uncovered and may clarify the reasons behind sharing specific Instagram content. Moreover, combining the studies of both quantitative and qualitative studies into the concept of parental sharing behavior allow misleading findings to be nuanced.

It can perhaps be interesting for future research to investigate whether it is effective to reach children on social media directly, without considering the parents as gatekeepers. Findings of this study show that 41% of Dutch children between the ages of 6 and 12 have an own social media account, despite the fact that the minimal age on Instagram officially is 13. If this target group indeed is that active on social media, it is worth investigating how this group can effectively be reached. In this way, the parents in their gatekeeper role will be bypassed and the communication between the program and the child can become more direct.

Additionally, taking a brief glimpse beyond the boundaries of this study, some academics argue that the web is currently developing beyond the interactive mechanisms of Web 2.0 in several ways, transiting to a new stage referred to as Web 3.0 (Barassi & Treré, 2012; Rudman & Bruwer, 2016). New applications and platforms allow users to co-create online data and search for information in an increasing intelligent way. Additionally, small mobile devices are constantly developing, and work as completely functional independent databases with virtual reality becoming an increasingly hot topic. In their study, Barassi and Treré (2012) argue that where 'user participation' was a key concept in Web 2.0, 'user cooperation' becomes the main notion in the stage of Web 3.0. As Web 3.0 continues to develop, it will potentially be of interest for future research to see whether and how this affects parental sharing behavior and the social media behavior of children.

All in all, despite the limitations and suggestions for future research, this study can be considered a legitimate contribution to the current academic literature on emotions and colors and their collaborative effect on parental sharing behavior in this rapid changing digital society. Performing experimental research on parental sharing behavior that directly examines the influence of emotion and color use has been innovative in the field of social media research and has been a unique way to acquire new and striking insights into parent-child communication on Instagram.

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7. Appendices

Appendix 1: experimental online survey

Vincent Mosmans - Master Thesis

Start of Block: Introductie

Intro Survey Beste respondent,

Ik ben Vincent Mosmans, een masterstudent Media & Business aan de Erasmus Universiteit te Rotterdam. Voor mijn afstudeerscriptie doe ik onderzoek naar de populariteit van Instagram onder Nederlandse ouders en hun kinderen. U zou mij enorm kunnen helpen bij mijn afstudeeronderzoek door de volgende enquête in te vullen. Deze duurt slechts vijf minuten.

Met het invullen van deze enquête geeft u automatisch toestemming mee te doen aan dit onderzoek. Deze enquête start met een paar vragen over uw demografie en zal daarna doorgaan met vragen over uw social mediagedrag. Daarna zullen er wat vragen worden gesteld over uw persoonlijkheid. Tot slot zal naar uw mening worden gevraagd over bepaalde Instagram berichten. Mocht u zich niet prettig voelen bij het beantwoorden van een bepaalde vraag of de gehele enquête, dan bent u altijd vrij om te stoppen.

In deze enquête staat uw mening centraal en er zijn dan ook geen goede of foute antwoorden. Daarnaast wil ik u vriendelijk verzoeken de vragen aandachtig te lezen. Uw data zal vertrouwelijk en anoniem worden verwerkt.

Succes met de enquête en bij voorbaat hartelijk dank!

End of Block: Introductie

Start of Block: Demographics

Intro demographics Voordat u doorgaat naar vragen over social media zou ik u eerst willen verzoeken de onderstaande vragen over uw demografische gegevens te beantwoorden.

Q1 Wat is uw geslacht?

- Man (1)
- Vrouw (2)
- Anders (3)

Q2 Wat is uw leeftijd?

Q3 Wat is uw hoogst genoten afgeronde opleidingsniveau?

- Geen (1)
 - Middelbare school (2)
 - MBO (3)
 - HBO (4)
 - Universiteit bachelor (5)
 - Universiteit master (6)
 - PhD (7)
-

Q4 Lijdt u aan enige vorm van kleurenblindheid?

- Ja (1)
- Nee (2)

End of Block: Demographics

Start of Block: The end Color blindness

End color blind **Wanneer u doorklikt naar de volgende pagina sluit u de enquête af en worden uw antwoorden opgeslagen.**

U heeft aangegeven enige vorm van kleurenblindheid te hebben. Voor dit onderzoek is het cruciaal dat de respondent kleuren volledig van elkaar kan onderscheiden. U valt hierdoor helaas niet in de doelgroep. Toch enorm bedankt voor uw deelname.

Als u verder nog vragen heeft over uw rechten als deelnemer, of als u ontevreden bent over dit

onderzoek, kunt u altijd contact met mij opnemen via 455181vm@student.eur.nl
Nogmaals bedankt!

End of Block: The end Color blindness

Start of Block: Intro en vragen deel 1: Social Media Behavior

Intro part 2 Deze enquête is verdeeld in vier delen. Welkom bij het eerste gedeelte van dit onderzoek. Hieronder vindt u vragen over uw social mediagedrag.

Q5 In hoeverre bent u actief op de volgende social mediakanalen?

	Meer dan 5 keer per dag (1)	Tussen 1 en 2 keer per dag (2)	Bijna dagelijks (4-6 keer per week) (3)	Een paar keer per week (2-4 dagen per week) (4)	Ongeveer eens per week (5)	Minder dan wekelijks (6)	Nooit (7)
WhatsApp (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LinkedIn (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pinterest (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snapchat (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tumblr (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WeChat (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foursquare (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Intro en vragen deel 1: Social Media Behavior

Start of Block: Intro en vragen deel 2: Hoeveel kinderen?

Intro part 2 Dit is het tweede deel van de enquête. Aangezien dit onderzoek gaat over de populariteit van Instagram onder ouders en kinderen, zou ik u ook graag wat algemene vragen stellen over uw kind(eren). Deze vragen vindt u hieronder.

Q6 Hoeveel kinderen heeft u in de leeftijd van 6 tot 12 jaar?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)

End of Block: Intro en vragen deel 2: Hoeveel kinderen?

Start of Block: The end no kids

End no kids **Wanneer u doorklikt naar de volgende pagina sluit u de enquête af en worden uw antwoorden opgeslagen.**

U heeft aangegeven geen kinderen te hebben in de leeftijd van 6 tot 12 jaar. Voor dit onderzoek is het cruciaal dat de u kinderen heeft in deze leeftijdscategorie. U valt hierdoor helaas niet in de doelgroep. Toch enorm bedankt voor uw deelname.

Als u verder nog vragen heeft over uw rechten als deelnemer, of als u ontevreden bent over dit onderzoek, kunt u altijd contact met mij opnemen via 455181vm@student.eur.nl
Nogmaals bedankt!

End of Block: The end no kids

Start of Block: Vragen deel 2: 1 kind

Q7 Wat is het geslacht van uw (eerste) kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q8 Wat is de leeftijd van uw (eerste) kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q9 Heeft uw (eerste) kind een social media account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 1 kind

Start of Block: Vragen deel 2: 2 kinderen

Q10 Wat is het geslacht van uw tweede kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q11 Wat is de leeftijd van uw tweede kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q12 Heeft uw tweede kind een social media account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 2 kinderen

Start of Block: Vragen deel 2: 3 kinderen

Q13 Wat is het geslacht van uw derde kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q14 Wat is de leeftijd van uw derde kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q15 Heeft uw derde kind een social media account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 3 kinderen

Start of Block: Vragen deel 2: 4 kinderen

Q16 Wat is het geslacht van uw vierde kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q17 Wat is de leeftijd van uw vierde kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q18 Heeft uw vierde kind een Instagram account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 4 kinderen

Start of Block: Vragen deel 2: 5 kinderen

Q19 Wat is het geslacht van uw vijfde kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q20 Wat is de leeftijd van uw vijfde kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q21 Heeft uw vijfde kind een Instagram account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 5 kinderen

Start of Block: Vragen deel 2: 6 kinderen

Q22 Wat is het geslacht van uw zesde kind?

- Jongen (1)
 - Meisje (2)
 - Anders (3)
-

Q23 Wat is de leeftijd van uw zesde kind?

- 6 jaar (1)
 - 7 jaar (2)
 - 8 jaar (3)
 - 9 jaar (4)
 - 10 jaar (5)
 - 11 jaar (6)
 - 12 jaar (7)
-

Q24 Heeft uw zesde kind een Instagram account?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Vragen deel 2: 6 kinderen

Start of Block: Intro en vragen deel 3: Personality 1

Intro deel 3 Welkom bij het derde gedeelte van deze enquête. De volgende vragen gaan over uw persoonlijkheid. Geef alstublieft aan in hoeverre u het eens bent met de onderstaande standpunten.

Q25 Persoonlijkheid

	Volledig oneens (1)	Lichtelijk oneens (2)	Neutraal (3)	Lichtelijk eens (4)	Volledig eens (5)
Ik breng enthousiasme en energie naar een feestje (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb begrip voor andermans gevoelens (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voer taken direct uit (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb vaak stemmingswisselingen (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb een levendige fantasie (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Intro en vragen deel 3: Personality 1

Start of Block: Vragen deel 3: Personality 2

Q26 Persoonlijkheid

	Volledig oneens (1)	Lichtelijk oneens (2)	Neutraal (3)	Lichtelijk eens (4)	Volledig eens (5)
Ik praat niet veel (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben niet geïnteresseerd in andermans problemen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik vergeet vaak dingen terug te zetten op de plek waar ze horen (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben vaak relaxt (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben niet geïnteresseerd in abstracte ideeën (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Vragen deel 3: Personality 2

Start of Block: Vragen deel 3: Personality 3

Q27 Persoonlijkheid

	Volledig oneens (1)	Lichtelijk oneens (2)	Neutraal (3)	Lichtelijk eens (4)	Volledig eens (5)
Ik praat met veel verschillende mensen op feestjes (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel de emoties van anderen aan (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik houd van orde (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben snel overstuur (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik vind het moeilijk abstracte ideeën te begrijpen (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Vragen deel 3: Personality 3

Start of Block: Vragen deel 4: Personality 4

Q28 Persoonlijkheid

	Volledig oneens (1)	Lichtelijk oneens (2)	Neutraal (3)	Lichtelijk eens (4)	Volledig eens (5)
Ik blijf graag op de achtergrond (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben niet echt geïnteresseerd in anderen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik maak vaak rommel (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me nooit teneergeslagen (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb geen goede verbeelding (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Vragen deel 4: Personality 4

Start of Block: Intro deel 4: Manipulation

Intro part 4 Welkom bij het vierde en laatste deel van dit onderzoek. Op de volgende pagina krijgt u een Instagram bericht te zien. Bekijk dit Instagram bericht goed. Na 20 seconden kunt u doorklikken naar de volgende pagina, waar er wat vragen worden gesteld.

End of Block: Intro deel 4: Manipulation

Start of Block: Manipulatie post 1: Happy - color

Timing man1 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Man1

account kinderprogramma



2.153 vind-ik-leuks

accountnaam VANAVOND is het zo ver! Dan barsten we los met elke dag pranks, challenges en stunts. Non-stop #chaosopdezender #primeur

#17 50

Home Search Add Heart Profile

End of Block: Manipulatie post 1: Happy - color

Start of Block: Manipulatie post 2: Happy - BW

Timing man2 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Man2

account kinderprogramma



2.153 vind-ik-leuks

accountnaam VANAVOND is het zo ver! Dan barsten we los met elke dag pranks, challenges en stunts. Non-stop #chaosopdezender #primeur



End of Block: Manipulatie post 2: Happy - BW

Start of Block: Manipulatie post 3: Angry - color

Timing man3 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Man3

account kinderprogramma



2.153 vind-ik-leuks

accountnaam VANAVOND is het zo ver! Dan barsten we los met elke dag pranks, challenges en stunts. Non-stop #chaosopdezender #primeur



End of Block: Manipulatie post 3: Angry - color

Start of Block: Manipulatie post 4: Angry - BW

Timing man4 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Man4

account kinderprogramma



2.153 vind-ik-leuks

accountnaam VANA VOND is het zo ver! Dan barsten we los met elke dag pranks, challenges en stunts. Non-stop #chaosopdezender #primeur



End of Block: Manipulatie post 4: Angry - BW

Start of Block: Manipulation check vragen

Q29 In hoeverre vindt u dat het Instagram bericht de volgende emoties overbracht?

	Helemaal oneens (1)	Oneens (2)	Een beetje oneens (3)	Niet eens, niet oneens (4)	Een beetje eens (5)	Eens (6)	Helemaal eens (7)
Leuk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boos (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vrolijk (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woedend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blij (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kwaad (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tevredenstellend (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Razend (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Manipulation check vragen

Start of Block: Parental sharing behavior vragen

Q30 Hoe waarschijnlijk is het dat u

	Volledig oneens (1)	Lichtelijk oneens (2)	Neutraal (3)	Lichtelijk eens (4)	Volledig eens (5)
Het Instagram bericht liket (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een reactie achterlaat onder het Instagram bericht (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het Instagram bericht met uw kind(eren) deelt op social media (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het Instagram bericht aan uw kind(eren) laat zien (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Parental sharing behavior vragen

Start of Block: Eigen emotie vragen

Q31 Toen ik naar het Instagram bericht keek ervoer ik de volgende emoties:

	Helemaal oneens (1)	Oneens (2)	Een beetje oneens (3)	Niet eens, niet oneens (4)	Een beetje eens (5)	Eens (6)	Helemaal eens (7)
Leuk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boos (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vrolijk (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woedend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blij (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kwaad (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tevredenstellend (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Razend (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Eigen emotie vragen

Start of Block: Kinderprogramma vragen

Q32 Ik denk dat het Instagram bericht bij de volgende Nederlandse televisieprogramma's hoorde:

	Ja (1)	Nee (2)
Spangas (1)	<input type="radio"/>	<input type="radio"/>
Brugklas (2)	<input type="radio"/>	<input type="radio"/>
Checkpoint (3)	<input type="radio"/>	<input type="radio"/>
De Adriaans (4)	<input type="radio"/>	<input type="radio"/>
Zaplive (5)	<input type="radio"/>	<input type="radio"/>
Het Klokhuis (6)	<input type="radio"/>	<input type="radio"/>

End of Block: Kinderprogramma vragen

Start of Block: Adriaans gezien?

Q33 Heeft u ooit een aflevering van De Adriaans gezien?

- Ja (1)
- Nee (2)
- Weet ik niet (3)

End of Block: Adriaans gezien?

Start of Block: Adriaans leuk?

Q34 Hoe zou u het kinderprogramma De Adriaans beoordelen?

	1 (1)	(2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Helemaal niet leuk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Heel erg leuk

End of Block: Adriaans leuk?

Start of Block: Social netwerk van Adriaans?

Q35 Kent u één of meer personen in het Instagram bericht **persoonlijk**? Oftewel, bent u onderdeel van het sociale netwerk van één of meer personen in het Instagram bericht?

Ja (1)

Nee (2)

End of Block: Social netwerk van Adriaans?

Start of Block: The actual end

Actual end **Wanneer u doorklikt naar de volgende pagina sluit u de enquête af en worden uw antwoorden opgeslagen.**

Heel erg bedankt voor uw deelname. Nogmaals, uw antwoorden zullen volledig vertrouwelijk en anoniem verwerkt worden. Ik gebruik de antwoorden uitsluitend voor academisch werk, zoals verder onderzoek, vergaderingen of publicaties.

Als u verder nog vragen heeft over uw rechten als deelnemer, of als u ontevreden bent over dit onderzoek, kunt u altijd contact met mij opnemen via 455181vm@student.eur.nl

Nogmaals bedankt!

End of Block: The actual end

Appendix 2: Mini IPIP personality scale

Appendix

20-Item Mini-IPIP

Item	Factor	Text	Original Item Number
1	E	Am the life of the party.	1
2	A	Sympathize with others' feelings	17
3	C	Get chores done right away.	23
4	N	Have frequent mood swings.	39
5	I	Have a vivid imagination.	15
6	E	Don't talk a lot. (R)	6
7	A	Am not interested in other people's problems. (R)	22
8	C	Often forget to put things back in their proper place. (R)	28
9	N	Am relaxed most of the time. (R)	9
10	I	Am not interested in abstract ideas. (R)	20
11	E	Talk to a lot of different people at parties.	31
12	A	Feel others' emotions.	42
13	C	Like order.	33
14	N	Get upset easily.	29
15	I	Have difficulty understanding abstract ideas. (R)	10
16	E	Keep in the background. (R)	16
17	A	Am not really interested in others. (R)	32
18	C	Make a mess of things. (R)	18
19	N	Seldom feel blue. (R)	19
20	I	Do not have a good imagination. (R)	30

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; I = Intellect/Imagination; (R) = Reverse Scored Item. Original 50-item IPIP-FFM available at <http://iPIP.ori.org/newQform50b5.htm>.

Appendix 3: Factor analysis on personality dimensions

Factor and reliability analyses for personality dimensions (N = 211)

Item	<i>Extraversion</i>	<i>Agreeableness</i>	<i>Conscientiousness</i>	<i>Neuroticism</i>	<i>Imagination</i>
Life of party	.740				
Don't talk a lot (R)	.679				
Talk to different people at parties	.760				
Keep in background (R)	.844				
Sympathize others' feelings		.800			
Not interested in others' problems (R)		.656			
Feel others' emotions		.736			
Not interested in others (R)		.787			
Get chores done right away			.479		
Forget put things back (R)			.762		
Like order			.781		
Make a mess of things (R)			.845		
Have frequent mood swings				.670	
Relaxed most of the time (R)				.759	
Get upset easily				.733	
Seldom feel blue (R)				.695	
Have a vivid imagination					.257
Not interested abstract idea (R)					.738
Difficult to understand abstract ideas (R)					.800
No good imagination (R)					.739
<i>R</i> ²	.12	.14	.09	.16	.08
Cronbach's α	.764	.750	.746	.728	.605

Appendix 4: Sharing behavior / social media engagement scale

Q: How likely is it that you

	Extremely unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Extremely likely
Like the post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comment on the image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share the image with your child(ren) on Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Show the picture to your child(ren)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 5: Factor analysis on manipulative emotions

Factor and reliability analyses for perceived emotions (N = 211)

Item	Perceived happiness	Perceived anger
Liking	.808	
Joyful	.849	
Happy	.850	
Satisfying	.820	
Angry		.757
Mad		.875
Pissed off		.875
Rage		.889
R^2	.66	.14
Cronbach's α	.908	.923

Appendix 6: Independent sample t-tests H1

Appendix 6a: online sharing

Group Statistics					
	ManuPosEmo	N	Mean	Std. Deviation	Std. Error Mean
OnlineSharing	Negative Emotions	102	1,29	,778	,077
	Positive Emotions	109	1,40	,924	,089

Independent samples test				
		Levene's Test for Equality of Variances		
		F	Sig.	
OnlineSharing	Equal variances assumed	2,802	,096	
	Equal variances not assumed			

Independent samples test								
		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
OnlineSharing	Equal variances assumed	-,928	209	,354	-,110	,118	-,342	,123
	Equal variances not assumed	-,933	206,751	,352	-,110	,117	-,341	,122

Appendix 6b: offline sharing

Group Statistics

	ManuPosEmo	N	Mean	Std. Deviation	Std. Error Mean
OfflineSharing	Negative Emotions	102	1,52	1,097	,109
	Positive Emotions	109	1,62	1,185	,113

Independent samples test

		Levene's Test for Equality of Variances	
		F	Sig.
OfflineSharing	Equal variances assumed	1,305	,255
	Equal variances not assumed		

Independent samples test

		t-test for Equality of Means						
		t	df	Sig. (2- tailed)	Mean Differen ce	Std. Error Differen ce	95% Confidence Interval of the Difference	
							Lower	Upper
OfflineSharing	Equal variances assumed	-,662	209	,509	-,104	,157	-,415	,206
	Equal variances not assumed	-,664	208,97 7	,508	-,104	,157	-,414	,205

Appendix 7: Independent sample t-tests H2

Appendix 7a: online sharing

Group Statistics					
	ManuColor	N	Mean	Std. Deviation	Std. Error Mean
OnlineSharing	Black&White	103	1,32	,782	,077
	Color	108	1,38	,924	,089

Independent samples test				
		Levene's Test for Equality of Variances		
		F	Sig.	
OnlineSharing	Equal variances assumed	1,735	,189	
	Equal variances not assumed			

Independent samples test								
		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
OnlineSharing	Equal variances assumed	-,501	209	,617	-,059	,118	-,292	,174
	Equal variances not assumed	-,503	206,114	,615	-,059	,118	-,291	,173

Appendix 7b: offline sharing

Group Statistics					
	ManuColor	N	Mean	Std. Deviation	Std. Error Mean
OfflineSharing	Black&White	103	1,55	1,082	,107
	Color	108	1,59	1,200	,115

Independent samples test				
		Levene's Test for Equality of Variances		
		F	Sig.	
OfflineSharing	Equal variances assumed	,625	,430	
	Equal variances not assumed			

Independent samples test								
		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
OfflineSharing	Equal variances assumed	-,249	209	,804	-,039	,158	-,350	,271
	Equal variances not assumed	-,249	208,357	,803	-,039	,157	-,349	,271

Appendix 8: ANOVA and independent sample tests H3

Appendix 8a: online sharing

Tests of Between-Subjects Effects

Dependent Variable: OnlineSharing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3,741 ^a	3	1,247	1,717	,165	,024
Intercept	383,098	1	383,098	527,597	,000	,718
ManuPosEmo	,695	1	,695	,957	,329	,005
ManuColor	,233	1	,233	,322	,571	,002
ManuPosEmo * ManuColor	2,926	1	2,926	4,030	,046	,019
Error	150,306	207	,726			
Total	539,000	211				
Corrected Total	154,047	210				

a. R Squared = ,024 (Adjusted R Squared = ,010)

Group Statistics

	ManuColor	N	Mean	Std. Deviation	Std. Error Mean
OnlineSharing	Black&White	53	1,49	1,012	,139
	Color	56	1,32	,834	,111

Independent samples test

		Levene's Test for Equality of Variances	
		F	Sig.
OnlineSharing	Equal variances assumed	2,040	,156
	Equal variances not assumed		

Independent samples test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
OnlineSharing	Equal variances assumed	,955	107	,342	,169	,177	-,182	,520
	Equal variances not assumed	,950	100,894	,345	,169	,178	-,184	,522

Appendix 8b: offline sharing

Tests of Between-Subjects Effects

Dependent Variable: OfflineSharing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3,379 ^a	3	1,126	,863	,461	,012
Intercept	520,310	1	520,310	398,561	,000	,658
ManuPosEmo	,631	1	,631	,483	,488	,002
ManuColor	,113	1	,113	,086	,769	,000
ManuPosEmo *	2,727	1	2,727	2,089	,150	,010
ManuColor						
Error	270,233	207	1,305			
Total	796,000	211				
Corrected Total	273,611	210				

a. R Squared = ,012 (Adjusted R Squared = -,002)