

“How you say it, matters.”

A study of the relationship between message complexity,
message emotionality, and online social media customer engagement

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Date: 05-06-2021

Word count: 11173

Master Thesis
dhr. M. Pluymaekers
Master Business Administration: Marketing

Abstract

Nowadays, customer engagement is the key performance indicator for social media. However, for marketers it is still unclear what content works best. Earlier research points to linguistic styles as a means to evoke greater customer engagement. Two important linguistic styles that have been mainly overlooked in this context are message emotionality and message complexity. Earlier academic work by Deng et al. (2020) has already studied the impact of these linguistic styles on customer engagement. However, the interaction between message complexity and positive message emotionality has not yet been examined. Yet there is reason to assume that such an interaction effect exists, as a certain degree of message emotionality might help to process a more complex message. Therefore, this paper adds to prior research by examining the effect of message complexity on customer engagement with special attention to the moderating role of message emotionality. These effects are studied in the context of Instagram since it is an important branding platform for marketers. To research this topic, an online 2x2 between-subjects factorial experimental design was performed. In total 156 participants took part in the experiment. Results indicate that there is no direct effect of message complexity on customer engagement. However, message complexity does have a negative indirect effect on customer engagement via the attitude towards the message. Additionally, emotionality was shown to have a direct effect on both advertisement attitude and customer engagement. The proposed moderating effect of message emotionality on the relationship between message complexity and customer engagement was not found. This knowledge could help marketers to implement certain levels of message complexity and message emotionality in their brand posts in a way that gains customer engagement.

Keywords: linguistic styles, message complexity, message emotionality, customer engagement, attitude, involvement, social media brand post, Instagram, marketing

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1. Introduction

Customer engagement is the key performance indicator for social media (Ratcliff, 2014). Aiming for customer engagement on social media is a growingly important promotional strategy for firms. Sequentially, customer engagement is considered a commonly used brand performance indicator (Chahal et al., 2019). However, creating content for brand posts on social media that enhances customer engagement is challenging (Chung et al., 2014; Kumar, 2015). Nowadays, marketers are struggling with designing brand posts that evoke customer engagement. This is because marketers have little guidance on how certain message strategies will impact engagement, simply because little is known about how to create branded social content that maximizes engagement (Ashley & Tuten, 2015). Although academic studies suggest that marketers could improve customer engagement with strategically designed brand posts, it is uncertain what content works better and in what way (Lee et al., 2018).

Fortunately, the use of specific language has been proven to positively affect online communication success (Leek et al., 2019). More specifically, Leek et al. (2019) state that the use of linguistic styles should be contemplated since it elicits greater customer engagement. A linguistic style can best be defined as “*the particular usage style of function words employed*” (Ludwig et al., 2013, p. 89). In other words, a linguistic style essentially is about the way we express certain words or sentences. Therefore, linguistic styles can be used to convey the same content in many different ways (Muir et al., 2016).

According to academic literature, a linguistic style that plays a role in mechanisms of customer engagement is message complexity (Deng et al., 2020). The complexity of a message refers to the effort required to read and understand a message (Arguello et al., 2006). Petty and Cacioppo (1981) state that perceivers of a post who are not able to process a message, will ignore it. This is also underlined by Deng et al. (2020) who found that the average sentence length and the usage of more hashtags contribute to a higher message complexity. In turn, this higher message complexity resulted in lower customer engagement (Deng et al., 2020).

Another linguistic style that affects the likelihood of customer engagement is message emotionality (Deng et al., 2020). Message emotionality refers to the emotion that is expressed in a brand post (Deng et al., 2020). Deng et al. (2020) found that negative message emotionality decreases the number of likes and thus has a negative effect on customer engagement. However, positive message emotionality has a positive effect on customer engagement since it increases the number of likes. This is also confirmed by Berger and Milkman (2012) whose results demonstrate that positive emotional content is more viral than negative emotional content. It

can be reasoned that the virality of a post can be linked to customer engagement since people have to be actively engaged to make a post go viral.

Remarkably, despite findings by Deng et al. (2020), both message complexity and message emotionality are often overlooked in most other current research. Additionally, although Deng et al. (2020) examined the effects of message complexity and message emotionality on customer engagement individually, they did not take the interaction effect of these linguistic characteristics into account. Yet there is reason to assume that such an interaction effect exists, as a certain degree of emotionality might help to process a more complex message. However, it remains unclear what effect a message would have on customer engagement when it is both emotional and complex. In their research, Deng et al. (2020) therefore recommend that future research could examine the interaction effects of these linguistic styles.

Although no academic research has been found that examines the combination of message complexity and message emotionality on customer engagement, there are strong clues that these variables influence each other. Kissler et al. (2007) state that emotional words can trigger more cognitive involvement than neutral words. This can be linked to the central route of the elaboration likelihood model (ELM) by Petty and Cacioppo (1981). Both Deng et al. (2020) and Kissler et al. (2007) indicate that when a message contains more emotional words, the reader might allocate more cognitive resources to process the message. Subsequently, in line with the ELM, more complex messages can be processed. This could indicate that the effect of positive message emotionality could reduce the negative effects of high message complexity on customer engagement. Because of the scarcity in academic literature about the relationship between message complexity and message emotionality on customer engagement, a more thorough understanding of this concept would enrich the academic research field.

Additionally, since marketers' knowledge about what works best in their brand content is limited, this research can help marketers to improve their marketing strategies (Lee et al., 2018). This is also understated by Leek et al. (2019) who state that a more thorough understanding of the differences in language between brand posts can help marketers in creating more engaging brand posts, which subsequently strengthens the brand's social media position. Marketers' desire to improve customer engagement is logical since it positively impacts the financial performance of a business (Yang et al., 2016). Examining the interaction between high message complexity and positive message emotionality, could help marketers to maintain a lucrative amount of customer engagement in their brand posts. More specifically, as complex

messages are sometimes necessary to convey a message, results could help marketers to pinpoint which circumstances could reduce the negative effect of complexity on engagement. In this way this paper not only contributes to the academic field, but also holds useful practical implications.

Finally, the medium that is examined in this study is Instagram. Nowadays marketers use Instagram as an important branding platform (Anagnostopoulos et al., 2018; Lavoie, 2015). However, a study that focuses on this platform while examining the effects of the linguistic styles message complexity and message emotionality on customer engagement has not been found. Deng et al. (2020) underline the scarcity of this type of research on Instagram, as they mention that it might be interesting to study linguistic styles on this platform. Conclusively, this would make it worthwhile to explore these linguistic styles in the context of Instagram.

Therefore, the purpose of this paper is to explore the effect of high message complexity and positive message emotionality on customer engagement. Specifically, it focuses on the possible interaction effect between these linguistic styles, and the effect on customer engagement on social media platform Instagram. This is done by answering the following main question: “To what extent is the negative effect of high message complexity on customer engagement attenuated by positive message emotionality?”

2. Theoretical foundation and research hypotheses

This paragraph will explain more thoroughly what is already known in academic literature about the influence of linguistic styles message complexity and message emotionality on customer engagement. It will end with formulating the hypotheses, based on the outcomes of previous studies and several relevant theories.

2.1 Brand communication via social media

Nowadays, marketers eagerly integrate social media in their digital marketing strategies (Voorveld, 2019). Here, brand communication is a central construct, which can be described as any brand-related communication that is dispersed via a social media platform and enables its users to have access to, share, engage with others, and co-create (Alhabash et al., 2017). According to Voorveld (2019), brand communications via social media platforms, like Instagram, take place via three different forms. One of these are ‘paid media’ brand posts which means that a brand pays for a displayed advertisement. In this case, brand owners do not post by themselves but outsource this to a third party. This can help to get the ball rolling since it is supposed to enlarge exposure. Contrastingly, brand owners control ‘owned media’ themselves.

It is about all the communication channels a brand owns, for instance a website, its social media channels, but also blog sites. Another form is ‘earned media’, which is mainly about word-of-mouth. Here, brand engagement opportunities for customer participation can arise. Examples of these are comments, shares, or mentions. This study focuses on paid media since it is about evoking customer engagement via branded Instagram advertisements.

2.2 Customer engagement

Cheung et al. (2011) have defined customer engagement on an online social media platform as “the level of a customer’s physical, cognitive, and emotional presence in connections with a particular online social platform” (p. 3). Important subdimensions of customer engagement in the context of social media are cognitive processing (cognitive), affection (emotional), and activation (behavioral) (Oliveira & Fernandes, 2020). Other academic literature agrees on this multidimensional concept (Hollebeek et al., 2014). In the context of this paper, the focus is mainly on the behavioral dimension of customer engagement. After all, marketers try to achieve a behavioral change in consumers with their persuasive messages. While both the cognitive and emotional dimensions are predecessors of behavior, the behavioral dimension directly influences desired marketing outcomes. This makes the behavioral dimension the most relevant dimension for this study. In practice, this behavioral dimension mostly manifests itself as the number of ‘likes’, ‘shares’, or ‘comments’ (Coelho et al., 2016; Solem & Pedersen, 2016).

How customer engagement may arise can be explained by the uses and gratifications (U&G) theory. This is because the U&G theory focuses on explaining people’s psychological reasons and motivations to use certain media and in what way that gratification fulfills their needs (Ko et al., 2005; Roy, 2009; Rubin, 1994; Shao, 2009). Users of certain media are seen as active and goal oriented (Sangwan, 2005) and will therefore be motivated to select the medium that best fulfills their needs (Luo et al., 2011; Sangwan, 2005). This is also confirmed by Kaye and Johnson (2002) who stress that the gratifications received are a good predictor of (recurring) media use. Further, in social media contexts, psychological needs and gratifications are important determinants for social media usage (Lee & Ma, 2012; Lu et al., 2010). The most common needs and gratifications sought on social media are social interaction, information seeking, and passing time (Whiting & Williams, 2013). In a way, customer engagement seems to be a kind of social interaction between customer and brand. As Hollebeek et al. (2014) state, customer engagement can be evoked in the process of specific social interactions between a consumer and a brand. Therefore, one could argue that one of the more commonly sought gratifications for social media is engagement.

For firms it is important to engage with customers since it can result in several positive consequences. For instance, it can help in building brand loyalty, -trust, -satisfaction, -involvement, and enhance purchase intentions (Barger et al., 2016; Dijkmans et al., 2015; Harrigan et al., 2017). Customer engagement is thus directly linked to improved customer relationships (Ma et al., 2015) and sales (Manchanda et al., 2015).

2.3 Linguistic styles

Leek et al. (2019) stress that marketers should consider linguistic styles when creating online brand posts, since it is proven to evoke greater customer engagement. Linguistic styles do not refer to what you say, but how you say it (Muir et al., 2016). The same information (message content) can be transferred in different ways since we all use linguistic styles in our own way (Muir et al., 2016). Therefore, linguistic styles are used to convey meaning beyond the simple meaning of words. There are many different linguistic styles like linguistic intensity, pronoun use, prepositions, conjunctions and emojis (Blankenship & Craig, 2011; McShane et al., 2021; Newman et al., 2003). The focus of this paper will be on message complexity and message emotionality, since these two linguistic styles are both important linguistic styles in the context of brand communications (Deng et al., 2020). These styles will be elaborated on in the next paragraphs.

2.4 Message complexity and customer engagement (main effect)

One of the linguistic styles is message complexity. The complexity of a message refers to the effort required to read and understand a message (Arguello et al., 2006). In the context of computer-mediated communication, abbreviations and specific features for social media like the @-mentions, hashtags, and emojis are more and more used in brand-to-consumer communication (Gretry et al., 2016). However, in academic literature there is a discrepancy in whether these features are important determinants in creating customer engagement or not. On the one hand, @-mentions help in stimulating the attractiveness of a post and initiating responses and conversations (Vega et al., 2010; Yang & Counts, 2010). Hashtags can help in breaking through the structure of social networks (Rossi & Magnani, 2012) and the use of emojis can provoke attention from receivers and thus realize a higher engagement in social interactions (Kriplean et al., 2012). On the other hand, the increase of these features in brand-to-consumer communication enlarges the complexity of brand messages and makes them more difficult to understand (Davenport & DeLine, 2014; Temnikova et al., 2015). This is underlined by Ge and Gretzel (2017) who state that high complex messages, with complex text elements

such as hashtags, emojis and brackets, can create an information overload. This means that the attention that is needed for the information exceeds the ability of that individual to process it.

Besides, social media users spend little time reading and proceeding brand posts (Lee & Ma, 2012). This is also underlined by Gidlöf et al. (2012) who state that online advertisements are often disliked which results in consumers spending less cognitive resources to process a message (Deng et al., 2020). Therefore, consumers will rather rely on the contextual cues of a message when assessing them than actually reading them thoroughly (Petty & Cacioppo, 1981). When social media users experience difficulties in reading a social media brand post, it can be reasoned that the leverage of engagement will be decreased. This is also confirmed by Petty and Cacioppo (1981) who state that perceivers of an advertisement message who are not able to process the message, will ignore it.

Remarkably, research that focuses on studying the effect of message complexity on customer engagement within the specific context of Instagram is scarce. However, Deng et al. (2020) did study the effect of message complexity in the context of Facebook. Deng et al. (2020) used Linguistic Inquiry and Word Count (LIWC) to capture message complexity via message post features, like the average sentence length (the average number of words per sentence). They found that high message complexity has a negative impact on customer engagement. Basically, if consumers consider a message too complex, they will attribute less cognitive resources to process the message, which makes them less likely to like or share. The average length of a sentence negatively impacts the number of likes, shares and comments, whereas the usage of more hashtags only negatively influences the number of likes and shares. Combining the insights from the research and theories described in this paragraph, the following hypothesis can be derived:

H1 “In brand posts on Instagram, high message complexity has a negative impact on customer engagement.”

2.5 Message emotionality and customer engagement (main effect)

Another linguistic style is message emotionality (Deng et al., 2020). As mentioned before, message emotionality refers to the emotion that is being expressed by a brand post (Deng et al., 2020). These emotional expressions are often observed in computer-mediated communication contexts, from blogs to social media network sites (Vendemia, 2017). Message emotionality can be expressed in multiple ways. First of all, message emotionality in text-based computer-mediated communications can be transmitted through the use of repeated or nonstandard

punctuation (e.g. “???” or “!!!”), words with repeating letters (e.g., “noooo”), and capitalized words (e.g. “HELLO!”) (Riordan et al., 2014; Vandergriff, 2013). Next, receivers of a message can also recognize a sender’s emotion via verbal cues, like emotion words (e.g. “happy” or “scared”) (Harris & Paradice, 2007). A distinction that can be made within emotion words, is the difference between positive and negative emotions (Roberts et al., 2012). Here, words as “happy” or “excited” express a positive emotion, whereas words as “cried” and “scared” express a negative emotion (Marian & Kaushanskaya, 2008). Hence, “how people say it” seems to matter (Vendemia, 2017).

Computer-mediated communication has been proven to be effective in transporting emotion-related information (Harris & Paradice, 2007). It can influence the receiver’s process and how a message is interpreted (Walther & D’Addario, 2001). This is because emotion words can evoke extensive cognitive processes (Bayer et al., 2012; Kissler et al., 2007; Smith & Petty, 1996). These extensive cognitive processes refer to a higher level of cognitive involvement which subsequently will increase the likelihood of a behavioral response, for instance information sharing (Luminet et al., 2000; Peters et al., 2009; Rimé, 2009). Also, a higher level physiological arousal (anger, anxiety, awe, amusement) might be triggered which is shown to be a driver of information sharing too (Berger, 2011; Berger & Milkman, 2012). As information sharing is an essential part of the behavioral dimension of customer engagement it can be reasoned that emotional-related information stimulates engagement.

According to academic research, the use of emotional appeals in brand posts can enhance customer engagement by increasing the number of likes, shares, and comments (Lee et al., 2018). Deng et al. (2020) found that positive message emotionality on Facebook increases the number of likes whereas negative message emotionality on Facebook decreases the number of likes. Emotionality on Twitter provides a larger retweet quantity (Dang-Xuan et al., 2013). As no specific research has been done in the context of Instagram, we expect these results to be similar for Instagram. Therefore, the following hypothesis can be derived:

H2 “In brand posts on Instagram, positive message emotionality has a positive impact on customer engagement.”

2.6 Message complexity, -emotionality and customer engagement (interaction effect)

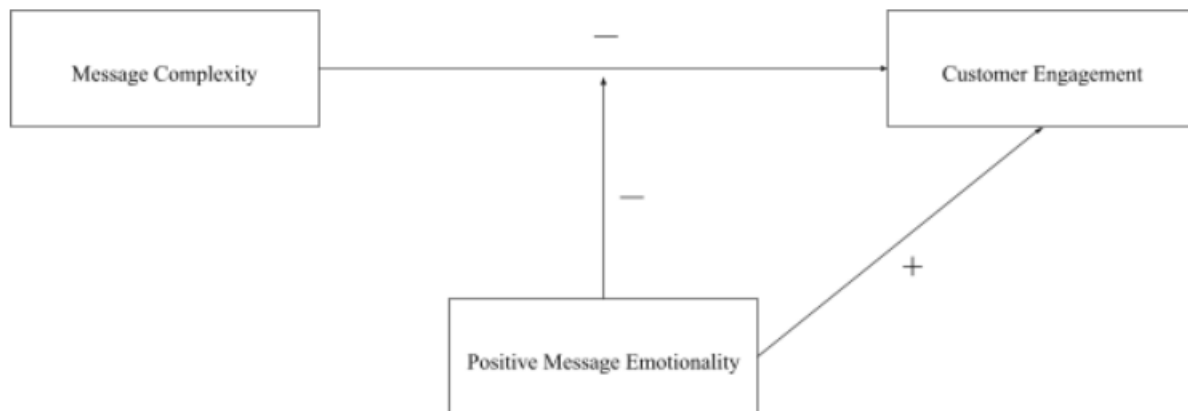
As mentioned in the previous paragraphs, high message complexity is likely to have a negative impact on customer engagement (Deng et al., 2020). Additionally, Kissler et al. (2007) measured brain activity and showed that emotional words can trigger more cognitive

involvement than neutral words. According to them, emotional stimuli are prioritised in the brain when processing information. Reading emotional words also triggers this preferential type of processing that is present with other types of emotional stimuli (Kissler et al., 2007). Based on these findings it can be reasoned that positive emotional words may stimulate the reader to allocate more cognitive resources to process a message. This idea is supported by several other authors, who mention that emotion words can evoke extensive cognitive processes (Bayer et al., 2012; Kissler et al., 2007; Smith & Petty, 1996). These extensive cognitive processes refer to a higher level of cognitive involvement. Subsequently, this will increase the likelihood of a behavioral response, meaning consumers pay more attention (Bayer et al., 2012; Kissler et al., 2007; Smith & Petty, 1996). Thus, seeing emotion words triggers more cognitive capacity to process the message, which enables the reader to understand and process more complex messages.

This reasoning is supported by the ELM of Petty and Cacioppo (1981). The ELM states that a belief can arise via two routes: the central route and peripheral route. The central route requires cognitive elaboration for a message, whereas the peripheral route becomes activated when the presence of cognitive elaboration for a message is lacking. The processing of information differs per person, depending on the degree of involvement. Based on this it can be concluded that receivers who are not involved with the message, process it via the peripheral route. After all, they are less involved, which indicates that the message is processed with less attention. In contrast, receivers who are highly involved, process the message via the central route. Here, more attention is paid to processing the message.

Combining the results of Deng et al. (2020) and Kissler et al. (2007) with the ELM theory leads to the conclusion that the negative effect of high message complexity on customer engagement could be reduced by the effects of positive message emotionality. This is simply because more cognitive resources will be allocated to more positive messages. In other words, emotional messages lead consumers to pay more attention to the message. This should enable consumers to process more complex messages, reducing the negative effects of high message complexity. Therefore, the following hypothesis can be found below. All expected relationships are summarized in Figure 1.

H3 “In brand posts on Instagram, positive message emotionality can reduce the negative impact of high message complexity on customer engagement.”

Figure 1*Conceptual model*

3. Methods

In this paragraph the method of this study will be set out. Respectively the research design, the choice of platform, development of the stimulus material, and pilot test will be outlined. Thereafter, the sample and its representativeness, procedure, research ethics and measurement instrument will be elaborated. In the last section of this paragraph the analysis procedure will be discussed.

3.1 Research design

In current research an experimental design was used to examine the effects of message complexity and message emotionality on customer engagement. However, most research has used LIWC to examine linguistic styles (Bell et al., 2012; Deng et al., 2020; Labrecque et al., 2020; Newman et al., 2003). A limitation of this method is that it cannot control for other factors that could impact customer engagement. With an experimental design on the other hand, it is possible to compare Instagram posts that are almost the same, but where only linguistic features have been manipulated. This assures the possibility to examine the effects of message complexity and message emotionality on customer engagement while all other factors are kept constant. This is also underlined by Boeije et al. (2009) and Wester et al. (2006) who stress that experiments can help in drawing meaningful statements about causal and moderating relationships. In the experimental design, message complexity and message emotionality were included as independent variables and customer engagement as the dependent variable. The individual effect of these independent variables on customer engagement was checked. Also, message emotionality was included as a moderator, in order to examine the interaction effect of message complexity and message emotionality on customer engagement.

A 2x2 between-subjects factorial experimental design was used to examine the conceptual model. Here, the four conditions were: “high message complexity X positive message emotionality”, “high message complexity X neutral message emotionality,” and “low message complexity X positive message emotionality”, “low message complexity X neutral message emotionality”. This design was applied through an online experiment.

3.2 Instagram

Most research that examines the role of brand communication on social media has focused on Facebook (Voorveld, 2019). Remarkable here is that Instagram, which is a very popular media platform among consumers and marketers, is rarely studied individually (Voorveld, 2019). The popularity of this platform is stressed by Oosterveer (2020) who states that Instagram has grown extensively with 71.000 new users in comparison to 2019. This is the biggest growth the platform has ever been through. In total, 5,6 million people in the Netherlands are using Instagram which is 14 percent more than last year. More than half of these users even use Instagram on a daily basis. A number that has grown by 29 percent (770.000 users). Not solely consumers' interest in Instagram is growing, also the interest of marketers is expanding. More and more, marketers are using Instagram as an important branding platform (Anagnostopoulos et al., 2018; Lavoie, 2015). Both the scarcity in academic literature and the popularity of Instagram drove the motivation for this research to examine brand communication posts on Instagram. With regards to the experiment this means that faux Instagram posts were created, of which the text was manipulated.

3.3 Development of stimulus material

For developing the Instagram posts, an original Instagram post layout was used. This should make sure that the posts are as realistic as possible. First of all, two different options were made. These options were later tested with a pilot test. This was done to increase the chance that at least one of the created stimulus material was an adequate operationalisation of the manipulation. Additionally, this also helped to control whether the stimulus material was a good representation of a real Instagram post. Furthermore, an attempt was made to choose two product categories that are interesting for both women and men. Therefore, a travel agency and a food catering company were chosen since it can be reasoned that holidays and food are of general interest. The used pictures for the Instagram posts were found on Google. The amount of likes on the Instagram posts was kept constant in order to make sure that it could not influence the evaluation of the participants.

Deng et al. (2020) have measured message complexity on social media via LIWC by evaluating the post length (total number of words per post), average sentence length (average number of words per sentence), long words (percentage of words that are six or more characters), percentage of hashtags, and percentage of at-mentions. The message complexity scale of Deng et al. (2020) is based on prior research (Arguello et al., 2006; Lee et al., 2018). However, in this study, an online experiment was executed. Combining the five features of Deng et al. (2020) in the text under an Instagram post was not a good representation of a real Instagram post and therefore not feasible. More importantly, the post length should not vary since adding more sentences would in all probability change the style and content of the Instagram advertisements. Additionally, it could be reasoned that the length of the text relative to the photo could influence the degree of attention consumers pay to the text beneath the Instagram advertisement. Therefore, this study used parts of the operationalisation by Deng et al. (2020). More specifically, the average sentence length and the number of long words were used to operationalize message complexity. The high complexity condition consisted of long sentences and long words, whereas the low complexity condition only used short sentences and short words. This all while the post length was kept constant to avoid any disruptive effects.

For operationalising message emotionality, many researchers have used the percentage of positive and negative emotion words in posts (Berger & Milkman, 2012; Deng et al., 2020). However, this is often the case for text-analysis. In this study, an online experiment was executed. Therefore, the current study used four positive emotion words (“enthusiastic”, “happy”, “relaxed”, and “beloved”) in the positive condition (Marian & Kaushanskaya, 2008). Contrastingly, in the neutral condition these positive emotion words were omitted or substituted for neutral words, like “four days” or “Italian”. These were words that kept the meaning of the message similar, whilst not conveying positive emotions. Besides, an attempt was made to keep the length of the Instagram post equal for both the positive and neutral condition, as well as for both the complexity and emotionality conditions. This in order to avoid confounding. For examples of the stimulus material see Appendix A.

3.4 Pilot study

In order to check whether the stimulus material was well-designed and to choose which product category was most suitable, a pilot study was conducted on 41 participants (Appendix B). The pilot study contained two Instagram posts, one for a fictional travel agency and the other for a fictional food catering company. Both posts were based on one of the four conditions. After displaying the first Instagram advertisement, the participants were asked several questions, after

which they were shown the other Instagram advertisement. The condition used in the two Instagram advertisements was kept constant and the order of the category was randomized.

First, participants were asked to what degree they thought the Instagram advertisement was easy to read and expressed a positive emotion. This question was asked as a manipulation check for message complexity and message emotionality. With regards to message complexity, results for the travel agency posts indicated that participants in the low complexity condition ($M=2.30$, $SD=1.72$) indeed considered the message to be less complex than participants in the high complexity condition did ($M=3.47$, $SD=1.78$). This difference was significant ($F(1,39) = 4.63$, $p = .038$). For the food catering company the participants in the low complexity condition ($M=2.65$, $SD=1.50$) also considered the message to be less complex than the participants in the high complexity condition ($M=3.48$, $SD=1.78$). However, here the difference was not significant ($F(1,39) = 2.58$, $p = .116$). These results indicated that the travel agency posts seemed to be a better operationalisation for message complexity than the food catering company posts.

With regards to message emotionality, results for the travel agency posts indicated that participants in the neutral emotionality condition ($M=4.62$, $SD=1.53$) indeed considered the message to be less emotional than participants in the positive emotionality condition did ($M=6.20$, $SD=0.77$). This difference was significant ($F(1,39) = 17.17$, $p < .001$). For the food catering company, participants in the neutral emotionality condition ($M=4.95$, $SD=1.28$) also considered the message to be less emotional than participants in the positive emotionality condition ($M=5.95$, $SD=1.19$). This difference was also reported to be significant, yet less substantial than the travel agency category ($F(1,39) = 6.64$, $p = .014$). These results indicated that the travel agency posts seem to be a slightly better operationalization for message emotionality than the food catering company posts.

Besides the message complexity and message emotionality, the brand credibility of the self-conceived brands Retrip (travel agency) and Tastable (food catering company) was measured. This was done by the measurement scale by Erdem and Swait (2004) which consists of six items, answerable on a 7-point likert scale (1=strongly disagree, 7=strongly agree). The participants were asked to what degree they agree on statements like “This brand reminds me of someone who is competent and knows what he or she is doing”, “This brand seems to deliver what it promises” and “This brand does not pretend to be any different than it is”. Both Retrip ($M=5.05$, $SD=0.96$) and Tastable ($M=5.57$, $SD=0.80$) scored satisfactory on this scale, indicating that both the conceived brands were believable.

Next, product involvement was measured using the scale of Zaichkowsky (1994). Assessing how involved participants were with a product category was done because it was expected that involvement influences how participants perceive the Instagram brand post. Additionally, this helped to determine whether male and female participants were more or less equally involved with the products in the advertisement. No significant differences in involvement between men and women were found for the travel category ($F(1,39) = 0.25, p = .620$), nor for the food category ($F(1,39) = 0.93, p = .342$). This assessment of product involvement was also done in the definitive online experiment, therefore the measurement of the scale will be explained later in this paragraph.

Thereafter, the perceived advertisement realism of the post was also checked to assess whether the Instagram post was realistic or not. This was done by the perceived advertisement realism scale of Tiggemann et al. (2013), which will also be discussed later in this paragraph. In the current sample, all conditions for all product categories scored above 5 on a 7-point likert scale and no significant differences were found between the conditions. This indicates that all conditions for all product categories were sufficiently realistic to be used.

Conclusively, results indicate all brands and conditions were sufficiently believable and realistic and no large differences in involvement were found between participants. However, with regards to the food category, the operationalisation of message complexity was not successful. Additionally, the differences between message emotionality levels for the food category were also less apparent than for the travel category. Therefore, the decision was made to include the travel agency conditions into the final experiment and leave the food catering company conditions out. The results of the stimulus material from the pilot study served as the basis for the Instagram posts in the final online experiment (Appendix C).

3.5 Participants

For this study a sample was drawn of Dutch consumers, aged 18 to 39. This target group was selected, as it contains the most frequent Instagram users (Vader, 2020). Participants from this target audience were recruited by means of a select sample. Participants were approached via WhatsApp, Facebook, LinkedIn and personal contact through the researcher's network. Wester et al. (2006) refer to this as a convenience sample. In addition, participants were asked to further disseminate the online experiment, which is known as snowball sampling (Noy, 2008). Also, SurveySwap was used to stimulate the dispersion of this online experiment. This was not solely done to collect more participants, but also to increase the diversity of the sample and thus the generalizability of the operationalisation. Although, Hair et al. (2018) state that the desired

number of participants for an experiment varies between 15 to 20 for each experimental condition, an attempt was made to have thirty participants per condition. This in order to increase the power of the dataset. In total 156 participants have filled out the online experiment, but fourteen of them did not finish the entire experiment and one participant has not agreed to the requirements. Consequently, a total of 141 participants remained who filled in the questionnaire up to the demographic questions. Of these participants, 60 were men, 79 were women, and 2 participants did not indicate their gender. The age of the participants ranged from 18 to 38 years old, with an average age of 24 years old. The educational level of the participants varied from secondary education to university.

3.6 Representativeness

To control for the representativeness of these 139 participants on gender, age, and education, the data were compared with the most recent population data from CBS (2020a; 2020b). This was done by examining the means of a chi-square test. The results showed that the sample was representative for the population of 18 to 39 year olds in the Netherlands in terms of gender ($X^2(1, N=139)= 3.07; p =.080$), see Table 1. However, the sample was not representative for age ($X^2(3, N=137)= 151.51; p <.001$). In the current study an overrepresentation of 18 to 25 year olds (78,4% in the sample versus 31,8% in the population) was found, while the other age groups were underrepresented. Therefore, the sample turned out not to be a good reflection of the population in terms of age, see Table 2. A chi-square test was also performed to check the representativeness for educational attainment ($X^2(3, N=139)= 234.56; p <.001$). The education level of the participants does not appear to correspond with the distribution of the population. In the current study an overrepresentation of university (73.4% in the sample versus 21,3% in the population) was found, while the other educational attainments were underrepresented, see Table 3.

Table 1

Representativeness of the sample by gender

Age	Sample	Population
Men	43,2%	50,6%
Woman	56,8%	49,4%
N	139	4.819.493

Note: $X^2(1, N=139)=3,074; p=.080$

Table 2*Representativeness of the sample by age*

Age	Sample	Population
18 to 25	78,4 %	31,8 %
25 to 30	15,8 %	23,6 %
30 to 35	3,6 %	22,9 %
35 to 40	0,7 %	21,7 %
N	139	4.819.493

Note: $X^2(3, N=137)=151,513; p=<.001$ **Table 3***Representativeness of the sample by educational attainment*

Educational attainment	Sample	Population
Secondary education	2,2 %	16,1 %
MBO	2,2 %	30,5 %
HBO	22,3 %	32,1 %
University	73,4 %	21,3 %
N	139	4.819.493

Note: $X^2(3, N=139)=234,556; p=<.001$

3.7 Procedure

The online distribution of the experiment resulted in a total of 141 participants who finished the online experiment. The online experiment was conducted using Qualtrics, between 2 May 2021 and 15 May 2021. The participants were randomly assigned to one of the four conditions. The online experiment started off with an introduction about the research. Here it was only mentioned that this research was about Instagram advertisements. The words message complexity, message emotionality, customer engagement, and other substantive information about the study were not mentioned. This in order to not influence the participants prior to the online experiment. Then, first of all, the participants were told that an Instagram post would be shown. The participants were asked to watch and read the Instagram post carefully. After displaying the Instagram post, participants filled out a questionnaire, which will be elaborately discussed later in this paragraph. Next to this paper's Instagram post and questionnaire, participants also saw an Instagram post and questionnaire from a different research. On average,

participants took about 5 minutes to complete the experiment and took 1,5 minute to examine the Instagram post.

3.8 Research ethics

This study has paid attention to research ethics. In the introduction of the experiment, it was mentioned that participation in the online experiment was fully voluntary. Also, the possibility to stop at any time was mentioned and no incentives were offered. Besides, it was mentioned that participants could contact the researchers. Subsequently, the participants were asked whether they agreed with the information above and whether their age was between 18 and 39. When participants did not agree with the information or did not meet the age requirement they were directed to the end of the online experiment. At the end of the experiment, a debriefing was given about the purpose of the experiment: “This research aimed to investigate the relationship between linguistic styles in Instagram advertisements and online customer engagement through social media.” And again, it was mentioned that the data was saved and processed anonymously. An overview of the ethical debriefing can be found in Appendix C.

3.9 Measurement instrument

In the following sections, the measurement scales are discussed in the order of how they were presented in the online experiment.

3.9.1 Customer engagement

Customer engagement was measured with the scale of Solem and Pedersen (2016). This scale measures the multidimensional concept: the emotional engagement (“This brand post evoked my feelings”) the cognitive engagement (“This brand post evoked my interest”), and the behavioral engagement (“I would like to comment on this post”, “I would like to share this post with others”, and “I would like this post”) (Hollebeek et al., 2014; Solem & Pedersen, 2016). These five items were measured on a 7-point likert item scale (1=strongly disagree, 7=strongly agree). For measuring each customer engagement dimension average scores were calculated. To test the reliability of this scale, a reliability analysis was conducted. The Cronbach’s alpha was .779, which is fairly high (Taber, 2017). Therefore, all five items were jointly used to measure customer engagement.

3.9.2 Advertisement attitude

The attitude towards the displayed Instagram advertisement was measured and included as covariate in the model. This was done since the attitude towards an advertisement might influence how participants perceive the Instagram advertisement (Sanne & Wiese, 2018). The attitude towards the displayed Instagram advertisement was measured by the scale of Spears

and Singh (2004). In the online experiment the participants were asked about their attitude towards the Instagram advertisement. On a 7-point likert scale (1=strongly disagree, 7=strongly agree) the participants could fill in to what extent the Instagram advertisement was unappealing - appealing, bad - good, unpleasant - pleasant, unfavorable - favorable and unlikable - likable. To test the reliability of this scale, a reliability analysis was conducted. The Cronbach Alpha was .921, which is strong (Taber, 2017). Therefore, all five items were jointly used to measure advertisement attitude.

3.9.3 Product involvement

Product involvement was measured and also included as covariate in the model. This was done since involvement might influence how participants perceive the Instagram advertisement (Brodie et al., 2011). Product involvement was measured by the scale of Zaichkowsky (1994). In order to not overload the cognitive capacities of the participants, a shortened version of this measuring instrument was chosen. In the online experiment the participants were asked about their relationship in general with the product displayed in the Instagram advertisement. The scale was measured on a 7-point likert scale (1=strongly disagree, 7=strongly agree) and the participants could fill in to what extent the Instagram advertisement was unimportant - important, uninteresting - interesting, irrelevant - relevant, not stimulating - stimulating, not meaningful - meaningful, unattractive - attractive, boring - fascinating, worthless - valuable and unnecessary - necessary. These contrasting words were put at the end of the scales. The negative words were on the left side and the positive words on the right side. To test the reliability of this scale, a reliability analysis was conducted. The Cronbach Alpha was .927, which is strong (Taber, 2017). Therefore, all nine items were jointly used to measure product involvement.

3.9.4 Advertisement realism

Advertisement realism was measured using the scale of Tiggemann et al. (2013). This realism scale consisted of two items: “The Instagram advertisement was realistic” and “The Instagram advertisement looked like it would in real life”. The participants could answer on a 7-point likert scale (1=strongly disagree, 7=strongly agree). To test the reliability of this scale, a reliability analysis was conducted. The Cronbach Alpha was .822, which is robust (Taber, 2017). Therefore, both items were jointly used to measure advertisement realism.

3.9.5 Linguistic styles

For assessing the linguistic styles, two questions about message complexity and message emotionality were formed. The question about the linguistic style message complexity stated: “The text in the Instagram advertisement was easy to read” and the question about the linguistic

style message emotionality stated: “The text in the Instagram advertisement expressed a positive emotion”. Participants could answer on a 7-point likert scale (1=strongly disagree, 7=strongly agree).

3.9.6 Media use

In order to gain more insights into the online social media behavior of the respondents, media use was measured by the scale of Andersen et al. (2016). This scale consists of two questions. The first question was “Which of the following social media platforms have you used in the past week?”. The participants could choose multiple answers between WhatsApp, Facebook, Snapchat, Instagram, YouTube and none of these. The second question is about Instagram in particular: “How many days in the past week have you used Instagram in the past week?”. Based on these questions the general media use and the use of Instagram in particular have been examined. The scale ranged from 0 to 7, each indicating the number of days that the participants have used Instagram.

3.9.7 Demographics

Last but not least, some demographic questions were asked. First, the age of the respondents was asked followed by gender. Subsequently, the current or highest level of education was asked. These were the final questions of the questionnaire.

3.10 Procedure of analysis

The results of the online experiment were analyzed using the SPSS program (version 26.0). First, a manipulation check for message complexity and message emotionality was conducted. Next, to examine the conceptual model, model 1 of PROCESS was a logical choice (Hayes, 2012). After inspecting the results of this test, an additional analysis was performed and a slightly altered conceptual model was tested. To examine the updated conceptual model, model 8 of PROCESS was used (Hayes, 2012). A broader explanation of these decisions will be given in the next chapter.

4. Results

In this paragraph, the results of the performed analysis will be set out. First of all, the manipulation check will be discussed, followed by the assumption checks and all hypotheses respectively. In the last part of this paragraph an additional analysis will be executed to further explore the results.

4.1 Manipulation check

To control for the manipulation of message complexity the differences between the high and low complexity conditions were checked with a Factorial Anova. The participants in the low complexity group ($M=2.49$, $SD=1.25$) indicated the Instagram advertisement as less complex than the participants in the high complexity group ($M=2.89$, $SD=1.70$). However, in contrast to the pilot test, the difference between the low complexity and high complexity group was not significant ($F(1,39) = 2.57$, $p = .111$). The absence of a significance effect indicated that the low complexity group did not significantly differ from the high complexity group in how they perceived the message complexity of the text in the Instagram advertisement.

Additionally, to control for the manipulation of message emotionality the differences between the neutral and positive condition were checked with a Factorial Anova. The participants in the positive emotion group ($M=5.64$, $SD=1.34$) considered the Instagram advertisement to be more positively emotional than the participants in the neutral emotion group ($M=5.25$, $SD=1.42$). However, in contrast to the pilot test, the difference between the neutral emotionality and positive emotionality group was not significant ($F(1,39) = 2.66$, $p = .105$). The absence of a significant effect indicated that the neutral emotionality group did not significantly differ from the positive emotionality group in how they perceived the message emotionality in the Instagram advertisement.

Based on the absence of significant effects between the high and low complex condition and the positive and neutral condition, no meaningful conclusions could be drawn upon these groups. Therefore, it was decided to not use the categorical variables which indicated the complexity and emotionality condition groups. Instead, the computed scores of the manipulation check items were used to measure message complexity and positive message emotionality. These items were all measured on a 7-point likert scale, which means they could be included as continuous variables in the PROCESS model. Essentially, the current model uses the degree of perceived message complexity (hereafter: perceived complexity) and perceived positive message emotionality (hereafter: perceived positive emotionality), instead of fixed categorical groups.

4.2 Assumptions check

Before conducting the regression analysis in PROCESS several assumptions were assessed. The linearity, equality of variance, independence, and normality were tested (Hair et al., 2018). To test these assumptions, normal probability plots, scatterplots, and histograms were requested for perceived complexity, perceived positive emotionality, and engagement (Hair et al., 2018).

The scatterplot of residuals showed that the assumption of linearity was met. Additionally, the same scatterplot showed a constant variance of residuals (Durbin-Watson statistic = 1.92). Therefore, the homoscedasticity of this plot indicated that the assumption of equality of variance was met (Hair et al., 2018). Subsequently, the assumption of independence was tested by checking the residuals. No consistent pattern was found between the residuals. This indicated that there were no carryover effects from one observation to another. Therefore, the assumption of independence was met. Lastly, the assumption of normality was assessed. The normal plot and histogram both indicated a normal distribution. The assumption of normality was therefore sufficient. Conclusively, all assumptions for conducting the regression analysis were appropriately checked, meaning model 1 in PROCESS could be performed. Within the model, all variables have been mean-centered, as advised by Hayes (2012).

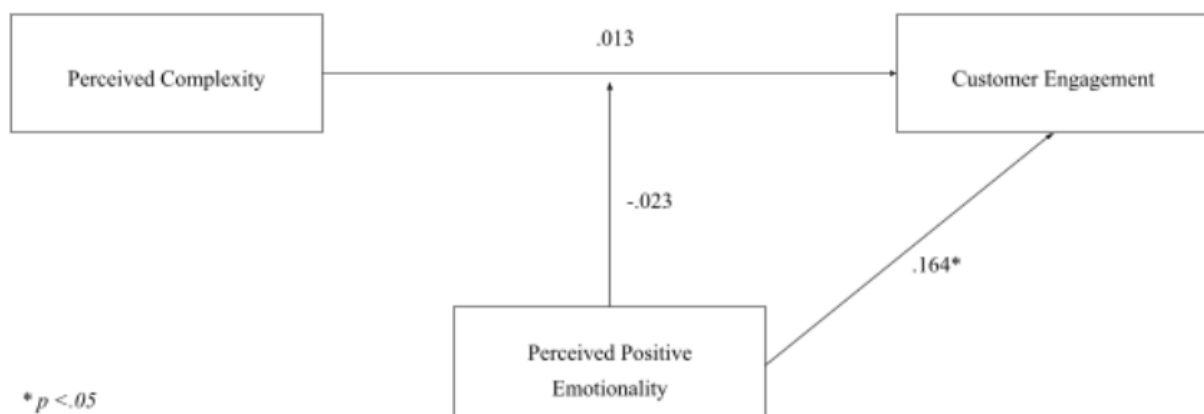
4.3 Hypothesis 1

First, the statistical significance of the model was assessed. Results indicated that the updated model (Figure 2) explained a considerable portion of the variance in engagement ($R^2 = .374$; $F(5,135) = 16.13$; $p < .001$). This means that 37,4% of variance in engagement was explained by the model, which is substantial according to Cohen (1988).

As for the hypotheses, hypothesis 1 stated that high message complexity has a negative impact on customer engagement in brand posts on Instagram. Contrary to the expectations, the results of the analysis showed that the negative effect of perceived complexity on customer engagement was not significant ($B = 0.013$; $t(135) = 0.21$; $p = .831$). Therefore, hypothesis 1 was rejected. The degree of perceived complexity (low or high) does not seem to have any effect, thus also no negative effect, on customer engagement.

Figure 2

Updated conceptual model with coefficients and significance values (PROCESS model 1)



4.4 Hypothesis 2

Hypothesis 2 stated that positive message emotionality has a positive impact on customer engagement in brand posts on Instagram. In line with the expectations, the results of the analysis showed that the positive effect of perceived positive emotionality on customer engagement was significant ($B = .164$; $t(135) = 2.31$; $p = .022$). Therefore, hypothesis 2 was accepted. The degree of perceived positive emotionality seems to positively affect customer engagement.

4.5 Hypothesis 3

Hypothesis 3 stated that positive message emotionality can reduce the negative impact of high message complexity on customer engagement in brand posts on Instagram. Contrary to the expectations, the results of the analysis showed that the effect of perceived positive emotionality cannot reduce the negative impact of perceived complexity on customer engagement, as the results indicated that the interaction effect was not significant ($B = -.023$; $t(135) = -0.81$; $p = .420$). Therefore, hypothesis 3 was rejected. The degree of perceived positive emotionality (neutral or positive) does not seem to influence the effect of perceived complexity on customer engagement. Noteworthy, both control variables advertisement attitude ($B = 0.297$; $t(135) = 3.092$; $p = .002$) and involvement ($B = 0.285$; $t(135) = 2.939$; $p = .004$) showed a strong positive significant effect. An overview of the effects can be found in Table 4.

Table 4

PROCESS regression - coefficients

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	0.695	0.452	1.537	.127
Perceived Complexity (COMP)	0.013	0.063	0.214	.831
Perceived Positive Emotionality (EMO)	0.164	0.071	2.313	.022
Interaction EMO x COMP	-0.023	0.029	-0.808	.420
Advertisement Attitude	0.297	0.096	3.092	.002
Product Involvement	0.285	0.097	2.939	.004

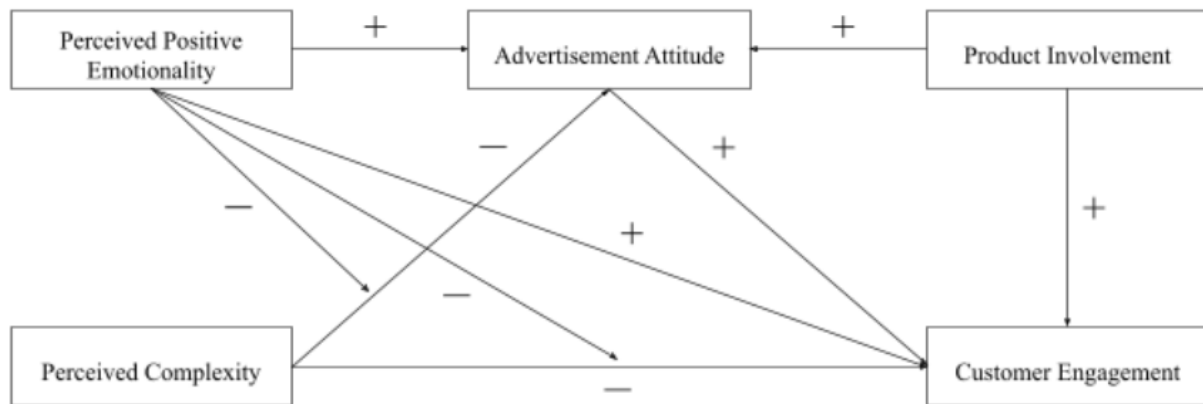
Note: dependent variable: Engagement

4.6 Further analysis

Interestingly the results of the analyses showed that the main negative effect of perceived complexity on customer engagement has not been found and that the proven significant effect of perceived positive emotionality has no influence on this effect. The absence of significant effects for perceived complexity and the interaction effect on customer engagement might have been due to a less than optimal model. An explanation for this could be that consumers' attitude towards the advertisement, which was included as covariate, might have played a bigger role than expected at first.

Firstly, the theory of planned behavior (TPB) provided a useful framework. It proposes that attitude determines the intention of actually performing certain behavior (Ajzen, 1991). As engagement, as measured in this study, is largely a behavioral construct, it was reasoned that attitude plays a mediating role in the conceptual model, between perceived complexity and engagement. In this case perceived complexity would first affect consumers' attitude towards the advertisement, which in turn would influence customer engagement, meaning attitude would act as a mediator. That perceived complexity can influence advertisement attitude is also supported by academic literature. Several papers indicate that consumers respond more favorably towards web pages and advertisements that are not - or only slightly - complex (Geissler et al., 2006; Jae, 2011). This implies that higher perceived complexity could negatively influence advertisement attitude. Conclusively, it seemed likely that consumer advertisement attitude mediates the relationship between perceived complexity and customer engagement. In that case perceived positive emotionality could still act as moderator, yet now for the relationship between perceived complexity and advertisement attitude. Lastly, there was also reason to assume that perceived positive emotionality has a direct effect on advertisement attitude. Eckler and Bolls (2013) found that a pleasant emotional tone creates a more positive attitude toward the advertisement and message.

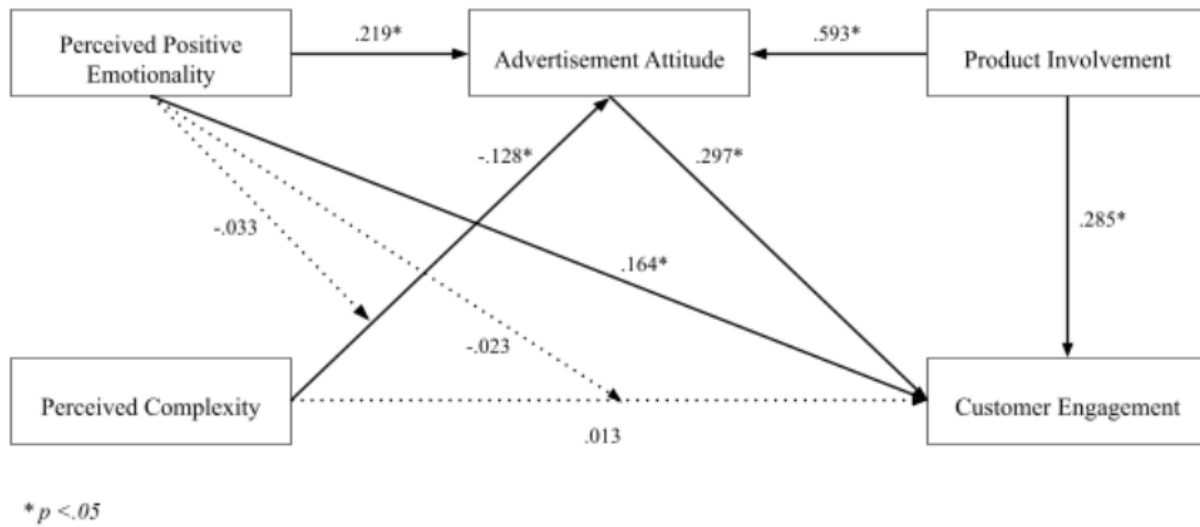
The new insights led to a new conceptual model. In this model perceived complexity was an independent variable with a main effect on customer engagement. Advertisement attitude was a variable mediating this relationship. The perceived positive emotionality moderated the proposed effects of perceived complexity. To test this new moderated mediation model, model 8 of PROCESS was performed. First, the assumptions of linearity, equality of variance, independence, and normality were assessed again, which were all satisfactory (Hair et al., 2018). Subsequently, model 8 of PROCESS was executed. An overview of the new model can be found in Figure 3.

Figure 3*New conceptual model*

Firstly, the new conceptual model still explained 37,4% of variance in engagement ($R^2 = .374$; $F(5,135) = 16.13$; $p < .001$). An overview of the new model, including coefficients and significance values, can be found in Figure 4. As we can see from the new conceptual model, there was still no significant main effect of perceived complexity on customer engagement. However, the proposed indirect effect of perceived complexity on customer engagement via advertisement attitude did seem to exist. This means that perceived complexity seems to affect customer engagement through the customers' attitude towards the Instagram advertisement. It seems that a less complex message indeed leads to a more positive attitude towards the Instagram advertisement. In turn, a more positive advertisement attitude results in evoking more customer engagement. Next, with regards to the interaction effects, still no significant results could be found. While perceived positive emotionality had a positive effect on advertisement attitude and customer engagement, it did not seem to influence the effect of perceived complexity on advertisement attitude or customer engagement. However, results did indicate that a more positive message leads to a more positive attitude towards the advertisement, which is in line with earlier research by Eckler and Bolls (2013). With regards to perceived complexity, results thus indicated there is full mediation through advertisement attitude. For perceived positive emotionality, there seemed to be partial mediation via advertisement attitude.

Figure 4

New conceptual model with coefficients and significance values (PROCESS model 8)



5. Conclusion and discussion

Based on the findings described in the previous chapter, the next chapter will provide an answer to the main question and summarize the findings of this study which will be linked to relevant theories and literature. Thereafter, the managerial implications will be set out, followed by some limitations and indications for future research. This study will end with some positive remarks.

5.1 Conclusion and discussion

The central question underlying this study was: “To what extent is the negative effect of high message complexity on customer engagement attenuated by positive message emotionality?” First of all, contrary to expectations, the direct negative effect of perceived complexity on customer engagement has not been found. However, in the post-hoc analysis, perceived complexity was found to affect customer engagement through the consumers’ attitude towards the advertisement. A less complex message thus leads to a more positive attitude towards an Instagram advertisement, which positively affects customer engagement. Thereby results partially support findings by Deng et al. (2020), who found that high message complexity has a negative impact on customer engagement. The mediating role of the consumer’s attitude towards an advertisement is something Deng et al. (2020) did not take into account. However, it is not unthinkable that including an attitude towards the advertisement would have increased the predictive power of their study. This can be explained by the TPB as it proposes that attitude determines the intention of actually performing certain behavior (Ajzen, 1991). The importance

of attitude towards the advertisement as a mediating factor in the relationship between perceived complexity and engagement is one of the key theoretical contributions of this paper.

Secondly, in line with expectations, perceived positive emotionality has a positive direct effect on customer engagement. A more positive message thus leads to more customer engagement. Additionally, in the post-hoc analysis, perceived positive emotionality was found to also directly affect the consumers' attitude towards the advertisement. The effect of perceived positive emotionality on customer engagement is partially mediated by the consumers' attitude towards the advertisement. A more positive message is thus likely to increase both attitude towards the advertisement and customer engagement. Again, these results support findings by Deng et al. (2020) who found that positive message emotionality on Facebook increases the number of likes. Additionally, results are also in line with research by Dang-Xuan et al. (2013), who found that emotionality on Twitter provides a larger retweet quantity. As retweeting messages is a way of sharing, it is also a form of customer engagement (Coelho et al., 2016; Solem & Pedersen, 2016). In doing so, results from this paper indicate that the effects of perceived positive emotionality on advertisement attitude and customer engagement can be extended to the context of Instagram. Results thus show that these effects can be observed across multiple social media platforms, strengthening the academic basis for these effects.

With regards to the interaction effect, the degree of perceived positive emotionality does not seem to have any influence on the effect of perceived complexity on customer engagement. Perceived complexity does not have a significant effect on customer engagement, and perceived positive emotionality does not seem to change this. Regarding the post-hoc analysis, the degree of perceived positive emotionality does also not seem to have any influence on the effect of perceived complexity on the consumer's attitude towards the advertisement. This means it seems unlikely that including more positive emotion in a message would reduce the negative effects of a complex message. Expectations were that more cognitive resources would be allocated to process more positive messages (Deng et al., 2020; Kissler et al., 2007). This should have enabled consumers to process more complex messages. Based on the further analysis it was assumed that being able to better process a more complex message would increase the advertisement attitude. However, perhaps simply being able to process a message will not increase your attitude towards a message. Despite being able to process the message, consumers could still be aware of the fact that the message was complex. This could negatively influence their attitude towards a message, as consumers feel like it took them a lot of effort to process the message. This means an emotional message might have in fact led to more cognitive

capacity, however, this increased capacity might have not led to a more positive view towards complex messages. In other words, being able to process a message does not necessarily mean you feel more positive about a message. In conclusion, perhaps consumers dislike a message because they perceive it is complex, however, not necessarily because they have difficulties understanding or processing the message. This would explain why perceived complexity has a negative impact on consumers' attitude towards the message, but this relationship is not influenced by perceived positive emotionality. However, unfortunately very little is known in academic literature about this interaction effect in social media messages. Therefore, it is difficult to compare these presumptions to other relevant findings. It does however provide an interesting question for future studies.

Conclusively, results indicate that both perceived complexity and perceived positive emotionality influence customer engagement, in line with earlier research by Deng et al. (2020). As for their suggestion to examine the interaction between these linguistic styles, this paper did not find any empirical evidence that such an interaction exists in the Instagram context.

5.2 Managerial implication

As mentioned before, marketers' knowledge about the best way to evoke online customer engagement was lacking (Lee et al., 2018). However, this paper improves our understanding of the role of linguistic styles in brand communications on social media. It demonstrates that both message complexity and message emotionality are interesting concepts at play in evoking customer engagement. In fact, both models explain 37,4% of variance in engagement ($R^2 = .374$; $F(5,135) = 16.13$; $p < .001$) which is substantial (Cohen, 1988). In other words, the variables tested in this paper turn out to be very important factors in predicting customer engagement. Therefore, this study contributes to solving the existing knowledge gap about the use of linguistic styles in the Instagram context.

Subsequently, this study found a direct effect of perceived positive emotionality on customer engagement. Therefore, to improve customer engagement in brand posts on Instagram, marketers should consider using positive emotionality more frequently. This means that they could use more positive emotional adjectives in the description of their brand posts, like 'happy', 'cheerful', 'trusty', or 'relaxed'. This is because perceived positive message emotionality not only influences customer engagement positively via the advertisement attitude formed, but also directly.

Besides, marketers should be cautious with the use of highly complex brand posts on Instagram, which has earlier been underlined by Deng et al. (2020). This means marketers

should not go overboard with long words (words that are six or more characters). Also, marketers should try to keep the average sentence length relatively short. This is because highly complex messages negatively affect consumers' advertisement attitude which in turn leads to lower customer engagement.

Additionally, marketers should be aware of different levels of involvement. This study has proven that more involvement leads to a more positive advertisement attitude and also to more customer engagement. In doing so, a better understanding is created of what content works better and in what way, in the context of brand posts on Instagram (Lee et al., 2018). Applying this knowledge will in all probability result in an improvement of a firm's financial performance (Yang et al., 2016).

5.3 Limitations and future research

With regards to this paper's conclusions, some parts deserve some explanation and nuance. Firstly, it is important to keep in mind that intention is not actual behavior (Ajzen, 1991). Customer engagement was measured in five questions. Three of them are about "I would like, comment, or share this Instagram advertisement". However, this intention to like, comment or share is still not actual behavior. Therefore, it would be better if the online experiment gave the opportunity to actually like, comment or share the Instagram advertisement instead of filling out questions about the intentions of particular behavior. Perhaps future research could also measure customer engagement by providing an interactive environment in which participants could actually press a like or share button or where participants are given the opportunity to comment.

Next, the final conceptual model serves as a means to predict and hopefully influence customer engagement. However, in doing so, this study assumes that all customer engagement is desirable. However, Vargo (2016) states that social media engagement does not always have to be positive, as sharing and commenting for example could also be of a negative nature. The participants in this study were asked to what degree they would like, comment, or share the displayed Instagram advertisement. It could be the case that the participants wanted to like, comment, or share the Instagram post, but not for a positive reason. Therefore, future research could perhaps include questions as to why participants wanted to engage to understand their motivations. This would create a better picture of how linguistic styles can contribute to improving brand performance. Additionally, it could also help to get a grip on why the main effect of perceived complexity and the interaction effect on customer engagement have not been found.

Despite the carefulness of the way this study has been carried out, some remarks can also be made concerning the process of this research. First of all, a remark can be made on the interpretation and generalization of the results. Although the sample was representative for gender, the sample was found to be unrepresentative in terms of age and education. This means that the results from this study mainly relate to well-educated 18 to 25 year olds. This does not mean that the results do not apply to other demographic groups, however, it would be interesting to replicate this study with a more representative sample. In addition, this study used an online experiment with a questionnaire. It must therefore be taken into account that the data collection did not take place in an everyday setting. If the data collection had taken place in a daily setting, this could have increased the external validity. However, setting up such a setting was not within the logistical possibilities of this study. Perhaps this could be done in future research.

Subsequently, it should be mentioned that the initial manipulation did seem to affect participants, however, not to the desired extent. Although a pilot test was executed to test the stimulus material, the groups in the definitive online experiment did not significantly differ between the low and high complexity condition and the positive and neutral emotionality condition. For message complexity this may be due to a too narrow operationalisation. After all, Deng et al. (2020) described message complexity in terms of five linguistic features. To keep the different conditions as similar as possible and the advertisements as realistically as possible, only two of these features were chosen. The average sentence length and the amount of long words were manipulated, while the other features were kept constant. This led to very similar conditions that were all reported to be realistic, but it could have hampered the effects of the manipulation. Similar limitations could apply to message emotionality. For the manipulation of message emotionality, four emotion words were replaced by neutral words. Results indicate that this manipulation was noticed by the participants, however, it is not unthinkable that the amount of manipulation was too slight to have yielded significant differences between groups. Since the manipulation did not work out as expected, it is desirable that this study will be replicated. Perhaps with a more clearly operationalised manipulation, which could, for example, include all five message complexity features by Deng et al. (2020) to create more noticeable message complexity differences. The message could also include more emotion words, more use of repeated or nonstandard punctuation, more words with repeating letters, and more capitalized words (Riordan et al., 2014; Vandergriff, 2013).

On a more positive note, this paper shed light on the context of visual-based social media. Rietveld et al. (2020) state that visual-based social media is growing enormously and

has become an integral part of the strategy of brands. However, less is known about the visual message content and even less about the combination of visual- and text-based social media (Rietveld et al., 2020). Especially the Instagram context is underexamined and therefore remains highly relevant. Subsequently, this study has proven that textual effects still hold in visual-based social media contexts. Even when a message contains both visual and text, linguistic styles seems to influence customer engagement. Therefore, this paper enriches existing text-based social media knowledge about linguistic styles and customer engagement by implementing and researching it on a visual-based social media platform.

Additionally, several other constructs at play were measured besides the main constructs. More specifically, advertisement attitude and involvement were measured. This in order to gain more knowledge on what role advertisement attitude and involvement play in evoking more customer engagement. These measurements helped to create a more elaborate understanding of the concepts and mechanism at play. Furthermore, including these variables has made it possible to extend the initial analysis and further examine the updated conceptual model.

Lastly, instead of using LIWC to capture linguistic characteristics, this study executed an online experiment to explore the linguistic styles message complexity and message emotionality. This was done as using LIWC has some drawbacks in contrast to an experimental design. Deng et al. (2020) mention that LIWC makes no distinction between positive or negative contexts. This is also underlined by Tausczik and Pennebaker (2009) who state that LIWC ignores contexts, for example the word ‘mad’ is in LIWC coded as an anger word, but when the text is “He’s as mad as a hatter” the meaning is different than “being mad”. This makes it harder to investigate the emotional linguistic style. Besides, there are an unlimited number of dimensions that can be extracted from written text which makes it hard to extrapolate the sole effects of just one construct while keeping all other factors constant (Cohn et al., 2004). This is supported by Deng et al. (2020), who propose to use another sentiment or manual content analysis approach, in which it is possible to check for possible disturbing effects as can be done in an experimental design. Therefore, conducting an experimental design was innovative, as it is a different method for measuring these empirical effects.

Conclusively, this paper contributed to the understanding of how message complexity and message emotionality influence customer engagement and has shown how these linguistic styles influence the effectiveness of Instagram advertisements. Not only what you say, but also how you say it matters.

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Appendix A Pilot Test Stimulus Material

Table A1

Stimulus material text for the travel agency condition

Conditie	Omschrijving	Word count
High Complexity *	Een vierdaagse vakantie naar Positano (Amalfikust) stond	32
Neutral	misschien nog niet op jouw bucketlist, maar deze Italiaanse	
Emotionality	bestemming maakt je zeker nieuwsgierig en vele reizigers gingen je al voor, dus go go go.	
Low Complexity *	Een vierdaagse reis naar Positano (Amalfikust) stond	31
Neutral	misschien nog niet op jouw lijstje. Toch maakt deze	
Emotionality	Italiaanse plek je zeker nieuwsgierig. Vele mensen gingen je al voor. Dus, go go go.	
High Complexity *	Een ontspannen vakantie naar Positano (Amalfikust) stond	33
Positive	misschien nog niet op jouw bucketlist, maar deze geliefde	
Emotionality	bestemming maakt je zeker blij en vele enthousiaste reizigers gingen je al voor, dus go go go!	
Low Complexity *	Een ontspannen reis naar Positano (Amalfikust) stond	32
Positive	misschien nog niet op jouw lijstje. Toch maakt deze geliefde	
Emotionality	plek je zeker blij! Vele enthousiaste mensen gingen je al voor. Dus, go go go!	

Note: Complexity and Emotionality

High complexity X Positive Emotionality High Complexity X Neutral Emotionality



Low complexity X Positive Emotionality Low complexity X Neutral Emotionality



Geef aan in hoeverre je het eens bent met de stellingen over het **merk** in de Instagramadvertentie.

	Helemaal mee oneens	Mee oneens	Enigszins oneens	Neutraal	Enigszins eens	Mee eens	Helemaal mee eens
Dit merk doet me denken aan iemand die competent is en weet wat hij/zij doet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit merk lijkt het vermogen te hebben om te leveren wat het belooft.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit merk lijkt te leveren wat het belooft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De productclaims van dit merk zijn geloofwaardig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit merk lijkt een naam te hebben die je kunt vertrouwen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit merk doet zich niet anders voor dan het is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Het **product** in de Instagramadvertentie is voor mij:

Onbelangrijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Belangrijk
Oninteressant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Interessant
Niet relevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relevant
Niet prikkelend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prikkelend
Niet betekenisvol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Betekenisvol
Onaantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aantrekkelijk
Saai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fascinerend
Waardeloos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Waardevol
Onnodig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Nodig

Geef aan in hoeverre je het eens bent met de volgende stellingen.

	Helemaal mee oneens	Mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
De Instagramadvertentie was realistisch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De Instagramadvertentie zag eruit zoals het er in het echt ook uit zou zien	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Je krijgt op de volgende pagina's een aantal advertenties te zien. We willen je vragen de afbeelding en de tekst in de advertenties goed te bekijken. Na het bekijken van iedere advertentie zullen een aantal vragen worden gesteld.



Geef aan in hoeverre je het eens bent met de stellingen over het **merk** in de Instagramadvertentie.

[illegible]

Het **product** in de Instagramadvertentie is voor mij:

Onbelangrijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Belangrijk
Oninteressant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Interessant
Niet relevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relevant
Niet prikkelend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prikkelend
Niet betekenisvol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Betekenisvol
Onaantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aantrekkelijk
Saai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fascinerend
Waardeeloos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Waardevol
Onnodig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Nodig

Geef aan in hoeverre je het eens bent met de volgende stellingen.

	Helemaal mee oneens	Mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
De Instagramadvertentie was realistisch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De Instagramadvertentie zag eruit zoals het er in het echt ook uit zou zien	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hartelijk dank voor je deelname aan dit onderzoek! Je kunt nu deze pagina sluiten.

Appendix C Online Experiment

Beste deelnemer/deelneemster,

Leuk dat je mee wil doen aan dit onderzoek. Daarvoor allereerst hartelijk dank!

Wij zijn Judith de Jong en Joost Bressers en volgen momenteel beiden de Master Business Administration: Marketing aan de Radboud Universiteit in Nijmegen.

Voor onze masterthesis voeren wij beiden een onderzoek uit naar Instagramadvertenties. De minimale leeftijd voor deelname aan dit onderzoek is 18 jaar en je dient niet ouder te zijn dan 39 jaar. Deelname aan dit onderzoek duurt maximaal 5 minuutjes en is geheel vrijwillig.

De gegevens uit dit onderzoek zijn geheel anoniem en zullen uitsluitend voor ons onderzoek gebruikt worden. Probeer daarom ook zo eerlijk mogelijk de vragen te beantwoorden. Er zijn geen foute antwoorden mogelijk. Mocht je vragen hebben, schroom niet om contact met ons op te nemen via j1.dejong@student.ru.nl of j.bressers@student.ru.nl

Nogmaals heel hartelijk dank voor je deelname, je helpt ons enorm met de laatste loodjes van onze studie.

Judith de Jong

Joost Bressers

Door te klikken op de knop 'ik ga akkoord' geeft je aan dat je...

- bovenstaande informatie gelezen hebt en akkoord gaat;
- tussen de 18-39 jaar oud bent.

☐ Ik ga akkoord

☐ Ik ga niet akkoord

Op de volgende pagina krijg je een Instagramadvertentie te zien. Bekijk deze

Instagramadvertentie. Na het bekijken van deze Instagramadvertentie zullen een aantal vragen worden gesteld. Klik op het pijltje hieronder om naar de volgende pagina te gaan.

Kruis het hokje aan dat volgens jou het meest van toepassing is op je **relatie met de dienst in het algemeen**.

Onbelangrijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Belangrijk
Oninteressant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Interessant
Niet relevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relevant
Niet prikkelend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prikkelend
Niet betekenisvol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Betekenisvol
Onaantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aantrekkelijk
Saai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fascinerend
Waardeloos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Waardevol
Onnodig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Nodig

Geef aan in hoeverre je het eens bent met de volgende stellingen.

	Helemaal mee oneens	Mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
De Instagramadvertentie was realistisch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De Instagramadvertentie zag eruit zoals het er in het echt ook uit zou zien	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Geef aan in hoeverre je het eens bent met de stellingen over de **tekst** in de Instagramadvertentie.

	Helemaal mee oneens	Mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
De tekst in de Instagramadvertentie was makkelijk te lezen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De tekst in de Instagramadvertentie drukte een positieve emotie uit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Van welke van de volgende sociale mediaplatforms heb je de afgelopen week gebruik gemaakt?

- ☐ Whatsapp
- ☐ Facebook
- ☐ Snapchat
- ☐ Instagram
- ☐ YouTube
- ☐ Geen van deze

Hoeveel dagen in de afgelopen week heb je Instagram in de afgelopen week gebruikt?

	0 dagen	1 dag	2 dagen	3 dagen	4 dagen	5 dagen	6 dagen	7 dagen
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Wat is je leeftijd in jaren?

Met welk geslacht identificeer je je?

- ☐ Man
- ☐ Vrouw
- ☐ Anders

Wat is je huidige of hoogst genoten opleiding?

- ☐ Basisschool onderwijs
- ☐ Middelbaar onderwijs
- ☐ MBO
- ☐ HBO
- ☐ Universiteit

Heel hartelijk dank voor je deelname!

Dit onderzoek beoogde de relatie tussen linguïstische stijlen in Instagramadvertenties en online klantbetrokkenheid via sociale media te onderzoeken.

Uw gegevens zijn anoniem opgeslagen. Mocht u nog vragen of opmerkingen hebben, neem dan gerust contact met ons op via j1.dejong@student.ru.nl of j.bressers@student.ru.nl