

UNIVERSITY OF TWENTE.
MASTER THESIS

IN-STORE ADVERTISING USING
AUGMENTED REALITY

THE EFFECTIVENESS OF
BRAND ENGAGEMENT THROUGH
VISUAL ATTENTION

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MASTER THESIS

In-store advertising using augmented reality:

The effectiveness of brand engagement through visual attention

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Preface

Before you lies the thesis “In-store advertising using augmented reality: The effectiveness of brand engagement through visual attention”, the basis of which is an eye-tracking experiment enriched with two short questionnaires conducted among supermarket customers. This research is the final proof of competence for obtaining my Master of Science (MSc) degree in Communication Studies, with a specialization in Marketing Communication & Design at the University of Twente (UT). I was engaged in researching and writing this thesis from September 2019 through April 2020.

This research was commissioned by Grolsch, where I also did an internship as a member of their own content agency: The Content Brewery. My boyfriend's brother-in-law allowed me to do this fun project. Although the topic was fun, this project was difficult to carry out because the experiment took place in the field. This resulted in many things that I had to manage and take into account, which really put my assertiveness to the test. This came in handy, because this was also a goal that I had set during my internship. Fortunately, my supervisor at Grolsch, Mirjam Fischer, was always available and willing to help throughout the process. Therefore, I would like to thank her sincerely for her support.

Furthermore, I would like to express my gratitude to my supervisors at UT, dr. Mirjam Galetzka and dr. Joyce Karreman, for their guidance and support during this process. I would also like to thank my family and boyfriend. There were many times that I wanted to give up, but they kept me motivated. Additionally, I wish to thank my two colleagues from Grolsch and my best friend for helping to recruit respondents from the supermarket in the small village in Gelderland, which had to be done by driving three hours a day and approaching customers randomly. A final thanks goes out to the respondents, without their cooperation this research would never have been accomplished.

I hope you enjoy your reading.

Jill Wychgel

Hengelo, April 2020

Abstract

Aim – Especially in offline retailing, an advertising tool must have a so-called ‘stopping power’: the ability to make people stop and take notice. This study investigated three types of communication methods that vary in technology richness (i.e., static display using pictorial communication, LCD-screen using video communication, Hypebox using augmented reality), in how they influence customers’ brand experience when shopping for specialty beer in a supermarket. The purpose of this research is to investigate to what extent the medium richness of an advertising tool is effective on creating brand engagement (i.e., visual attention) to enhance brand awareness and purchase intention of supermarket customers.

Method – This study combined two quantitative methods, conducted among supermarket customers ($N = 45$). The main research method was the eye-tracking experiment, which measured customers’ visual attention towards the three communication methods. For this, every respondent wore mobile eye-glasses (Tobii Pro Glasses 2) and was exposed to only one communication method. The eye-tracking experiment was supported by two short questionnaires taken digitally via an electronic tablet: one before the experiment and one immediately after. The questionnaires measured customers’ brand awareness and purchase intention.

Results – Analysis of the results indicated that there is no statistical difference between the static display, LCD-screen and Hypebox. Therefore, we cannot confirm or deny whether a high-rich medium is more effective than medium-rich medium, or whether a medium-rich medium is more effective than low-rich medium, to enhance brand awareness or purchase intention. Nonetheless, results showed that not many customers noticed the communication methods. Consequently, this raises the question whether placing a rich communication method on a supermarket shelf, on its own, is enough to attract attention and convey a message. Moreover, findings indicated that time to first fixation correlated positively with purchase intention. Hence, the first fixation itself possibly does not influence preference for a brand, but influences the engagement with a brand by gate-keeping the alternative products that entered the consideration set.

Conclusions – This research emphasizes the importance of brand engagement. As such, it can be suggested that MRT should be reconsidered to include a dimension of engagement to facilitate the communication method, rather than relying on communication method its ability. Moreover, findings indicate that catching the first gaze of the consumer might be unnecessary, suggesting that retaining customers’ attention is possibly more important than making customers stop and take notice.

Keywords – Augmented reality, brand engagement, eye-tracking, in-store advertising, media richness theory, technology richness, visual attention.

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1. Introduction

In a rapidly changing business and technology environment, companies have to be innovative when it comes to positively influencing customers to buy their product. Especially in situations where branding of the product is more important than the product itself, for example in the tobacco or beer industry. In these industries, marketers must choose to differentiate their product because there is only a small functional difference between the products.

Researchers have agreed that advertising is a major contributor in influencing the perceptions of a brand, which in turn contributes to the meaning or value that a brand adds to the consumer, i.e., brand equity (Cobb-Walgreen, Ruble, & Donthu, 1995). Additionally, advertising can create brand awareness, increase the probability of being included as a brand to the consumer's consideration set, and build customer engagement.

Creating a better engagement between the customer and the brand can be done in various ways, from different types of tools to different types of content, all of which are meant to differentiate a brand from other brands and inform and persuade the customer. A concept more specific to branding is 'consumer brand engagement' (CBE), which entails the brand perception of the consumer (Hollebeek, Glynn, & Brodie, 2014).

Furthermore, the evolution of multimedia technologies has created new perspectives for branding, both online and in-store. This is why since the early 2000s, there has been an increase in the adoption of advanced technologies by brands, to enhance the brand experience in shops. The technologies that are used the most are so-called 'consumer-facing' technologies; technologies and devices with which the consumers communicate directly in the physical or online store, such as interactive screens and digital signage (Bonetti, Warnaby, & Quinn, 2017). Considering the highly realistic and interactive interfaces and entertaining scenarios of smart technologies (Pantano & Timmermans, 2014), Poncin, Garnier, Mimoun, and Leclercq (2017) state that smart technologies are able to enhance emotional engagement. Hence, to create engagement between brand and customer one can implement such technologies, for example smart in-store technologies with Virtual Reality (VR) or Augmented Reality (AR). These fast emerging practices have great potential for marketing for companies, due to the ability to shape and influence the attention, behavior and attitudes of customers (Hsu & Chen, 2018; Zichermann & Linder, 2010), which may eventually lead to an increase of customer experience (Pantano, 2010).

Especially in offline retailing, an advertising tool must have a so-called 'stopping power'. This expression refers to the ability of an advertisement or other marketing communication to make people stop and take notice. To create stopping power, the advertising tool needs to possess notable elements

that attract the visual attention of customers. For example, the aforementioned AR. AR brings an interactive experience but aims to supplement the real world, rather than creating an entirely artificial environment (like VR).

A technology tool that uses AR, for example, is the Hypebox. The Hypebox combines the real physical product inside with AR, which generates a ‘wow’-effect. The technology tool, as represented in Figure 1, can be seen as a high-end transparent shop window, that tells a story about the tangible product by displaying digital content. With Hypebox, the brand awareness and customer engagement can be increased in an interactive way. This great potential to create more brand interaction caught the attention of Royal Grolsch N.V. Particularly, Grolsch has indicated its interest in what the impact of a Hypebox on a supermarket shelf would be on the attitude of customers towards Grolsch as a brand.



Figure 1. Hypebox

Since AR is a new technology, academic evidence of the impact of the visual characteristics of AR on consumer behavior and marketing is still lacking. However, there are notable exceptions that showed the effect of similar technologies in retail contexts, for instance Poncin and Mimoun (2014), Pantano and Servidio (2012) and Pantano (2016). Poncin and Mimoun (2014), showed that a magic mirror with AR offers strong positive benefits in terms of satisfaction and patronage intentions and that the use of an in-store AR technology “effectively reduces the boundaries between classical in-store atmospherics and e-atmospherics” (p. 856).

Moreover, researchers state that there is limited practical evidence on how AR works in a retail context (Bonetti, Warnaby, & Quinn, 2017; Scholz & Smith, 2016). Nonetheless, Baker, Parasuraman, Grewal, and Voss (2002) note that customers respond positively to well-designed innovations regarding atmosphere and design in the store. Furthermore, Javornik (2016) states that the uniqueness of AR has not yet been investigated in detail in marketing theory and that AR-related studies should investigate the consumer experience as a whole, and not just the consumer’s response.

The present study focuses on the benefits of AR for in-store branding. By investigating the effect of the Hypebox, customized to Grolsch, academic and practical evidence of the impact of AR on CBE can be provided. Due to the interactive nature of AR, CBE is central to this research. In this study, CBE is defined in terms of visual attention.

As mentioned earlier, CBE involves consumer's brand perceptions during the interaction between the consumer and the brand. Moreover, it can be argued that the longer customers look at a tool that advertises a product, the more involved and subsequently the more engaged they are with the brand that uses this advertising tool. Therefore, visual attention is likely to be an indication or antecedent of brand engagement. Additionally, due to the novelty of AR for in-store branding, it can be argued that the advertising tool must be noticed first. Visual attention is therefore defined as noticing the advertising tool.

Furthermore, this study proposes that using the Hypebox as an advertising tool positively influences the brand awareness and purchase intention of customers. Previous research on similar technologies confirm that the richness of an advertising tool contributes to a more positive brand attitude and consequently stronger purchase intentions (Jin, 2009; Li & Meshkova, 2013). Additionally, Kim, Fiore, and Lee (2007) observed that richer technology leads to higher enjoyment.

To add to this discussion on technology richness, this research adds two more advertising tools (i.e., static display, LCD-screen) in which the technology richness differs from the Hypebox. This way, the variance in technology richness can be compared.

Hence, the current study is relevant in that it provides both academic and practical evidence of the visual aspects and the potential brand engagement of the use of AR in advertising. With regard to the technology richness of an advertising tool, this leads to the following research question:

“To what extent is the medium-richness of an advertising tool effective on creating brand engagement (i.e., visual attention) to enhance brand awareness and purchase intention of supermarket customers?”

The current research will use a combination of two quantitative methods to answer this question. The main research method is an eye-tracking experiment, which will be conducted among supermarket customers. This experiment will be enriched with two short questionnaires. In the next chapter, Chapter 2, the theoretical background of this study is provided. The hypotheses and research model contributing to answering the research question are also presented within this chapter. Next, Chapter 3 explains the chosen methods in more detail. The results of the study are then presented in Chapter 4, followed by the discussion in Chapter 5 and the conclusion in Chapter 6. Lastly, the references and appendices are given.

2. Theoretical framework

In-store advertising can be challenging due to the limited amount of space in offline retailing. Therefore, a company has to offer something extraordinary to distinguish their brand from the competition. AR has emerged as a new interactive way to fulfill this gap. This chapter provides the theoretical concepts that are considered significant in current research on AR. First, paragraph 2.1. explains the concept of brand engagement in the context of in-store advertising. In this study, brand engagement is defined in terms of visual attention. Then, paragraph 2.2. will evaluate the types of in-store advertising based on Media Richness Theory. Here, the three communication methods that will be used in the experiment will be discussed. Subsequently, paragraph 2.3. describes the possible effects of in-store advertising. Finally, paragraph 2.4. discusses the role of moderating factors that may have an impact, followed by paragraph 2.5. which presents the research model.

2.1. Creating engagement by in-store advertising

With advertising, the ultimate goal is to create a better engagement between the customer and the brand. Customer engagement (CE) can be defined as all the interactive experiences between the customer and the brand (Brodie, Ilic, Juric, & Hollebeek, 2013; Vivek, Beatty, & Morgan, 2012). The interest in the latter concept has demonstrated its development and significance over the past decade by the increase of the number of webinars, seminars and conferences on the topic (Brodie, Ilic, Juric, & Hollebeek, 2011). Moreover, it has been viewed as a strategic imperative that predicts and explains consumer behavior.

As previously mentioned in the first chapter, the concept of CBE is more specific to branding and has therefore been adopted for this research. CBE has been viewed to represent a new key metric for determining brand performance (Bowden 2009; Marketing Science Institute, 2010). Hollebeek et al. (2014) define CBE as “a consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions” (p. 154). The proposed CBE dimensions correspond to the generic cognitive, emotional and behavioral nature of ‘engagement’, and can be defined as followed (Hollebeek et al., 2014, p. 154):

- Cognitive processing (CP): “a consumer's level of brand-related thought processing and elaboration in a particular consumer/brand interaction”;
- Affection (AF): “a consumer's degree of positive brand-related affect in a particular consumer/brand interaction”;
- Activation (AC): “a consumer's level of energy, effort and time spent on a brand in a particular consumer/brand interaction”.

To summarize, CBE equals the sum of all points of contact with the brand. Furthermore, findings suggest that involvement and participation act as CBE antecedents (Hollebeek et al., 2014; Leckie,

Nyadzayo, & Johnson, 2016). Consequently, it can be argued that the longer customers look at a tool that advertises a product, the more involved and subsequently the more engaged they are with the brand that uses this advertising tool. Therefore, visual attention is likely to be an indication or antecedent of brand engagement. This is further explained in the next subsection.

2.1.1. Visual attention

Notably, marketing practitioners and academics state that consumers' attention and in-store brand choice are closely related (Behe, Bae, Huddleston, & Sage, 2015; Chandon, Hutchinson, Bradlow, & Young, 2009; Clement, Kristensen, & Grønhaug, 2013; Ju & Johnson, 2010). It can therefore be assumed that for a better brand performance, customers must first notice the advertisement tool enforced by the brand. Therefore, current research focuses on an individuals' first point of contact with Grolsch, i.e., noticing the advertising tool. The reason why using AR in advertising can be useful to create engagement is because of the effect of AR, which is about the impressiveness of the technology and the associated response, the so-called 'wow-effect' (Bulearca & Tamarjan, 2010; O'Shea & Elliott, 2016). Various terms are used to describe this concept, for example memorability, engagingness and immersiveness. Hence, by using an advertising tool that enables immersive interaction, one can captivate individuals' attention.

Klopfer and Squire (2008) define AR broadly as "a situation in which a real world context is dynamically overlaid with coherent location or context sensitive virtual information" (p. 205). Notably, according to previous research, visual elements are appreciated and positively affect information absorption (Felder & Silverman, 1988; Shi et al., 2017). Furthermore, Scholz and Smith (2016) state that AR has strong potential to generate value for customers, but stress that marketers must focus on customer engagement and the dimensions that stimulate this, such as sociability and entertainment. Hence, when designing an immersive tool, the dimensions that drive customer engagement should also be taken into account.

Obviously, the three advertising tools that will be used in this study differ in visual attention due to their technological richness. This will be discussed further in the next section.

2.2. Types of in-store advertising

With advertising, product information can be provided to customers using various formats. For example, using text, image, audio or video. Additionally, the medium used can be effective in how the customer receives and perceives the given information. According to Information Richness Theory (IRT), the more information an advertising tool can carry, the more effective the advertising tool is in customers' understanding. This theory is also known as Media Richness Theory (MRT), introduced by Daft & Lengel in 1986 as an extension of IRT. MRT explains that richer, personal communication is generally more effective for communicating equivocal issues as opposed to leaner,

less rich media. Conversely, researchers that investigated MRT argue that performance does not improve when richer media are used for equivocal tasks (Dennis & Kinney, 1998; Kinney & Watson, 1992; Valacich et al., 1994). Despite the contradicting results, and to contribute to this discussion, this research will investigate whether the addition of technology elements (technology richness) results in more ‘effectiveness’ for communicating the brand message. In this research, ‘effectiveness’ covers the factors that establish customers’ brand engagement in terms of visual attention, which in turn enhance brand awareness and purchase intention.

The communication methods or media that are part of the current study will be explained in more detail in the following sections. This will be discussed based on the level of technology richness, from low to high. The static display is considered a low-rich medium, the LCD-screen a medium-rich medium, and the Hypebox a high-rich medium. Based on MRT, this would mean that the Hypebox using AR would be most effective compared to a static display using pictorial communication or an LCD-screen using video communication.

2.2.1. Static display

In this study, the first communication method that is going to be tested is a static display. This reflects the current shelf layout of the supermarket. Generally, the visual part of an ad must attract the attention, communicate the message and be suitable to the style and values of the brand. Therefore, the static display will present an image or illustration with text. Previous research has reported that pictorial and textual features in advertisements capture consumers’ visual attention (Li, Huang, & Christianson, 2016, Percy & Rossiter, 1983, 1997; Pieters & Wedel, 2004). Furthermore, pictorial information can facilitate persuasion by increasing memorability of information or by evoking an emotion or desire (Jaeger & MacFie, 2001). However, it is possible that a communication method using solely pictorial communication, such as a static display, is not sufficiently enough to attract customers’ attention, especially when we are living in a generation where technology plays a massive role. It can therefore be suggested that tools that are rich in technology (i.e., LCD-screen, Hypebox) would be favorable.

2.2.2. LCD-screen

The second communication method that is going to be tested is an LCD-screen. On this device a video will be shown. By vividly presenting the brand message using dynamic and moving videos a marketer can attract attention to raise awareness (Xu, Chen, & Santhanam, 2015). The presence of vivid information may favor customers’ presence toward the communication method and can cause a reduction of feelings of uncertainty (Flavián, Gurrea, & Orús, 2017; Lim, O’Connor, & Remus, 2005). However, moving images can also distract or split attention, depending on the content (Tversky, Morrison, & Betrancourt, 2002). Thus, rich presentation formats could result in the

opposite of the desired effect (Xu et al., 2015). An even richer technology will be discussed in the next section.

2.2.3. Hypebox

As previously mentioned, the Hypebox contains AR. This is reflected by the combination of the digital content on the transparent screen and the physical product inside. The ‘wow-effect’ of this impressive combination augments user’s perception of an interaction with the real world. AR can be seen as experiential marketing because it focuses not only on a product but also the entire experience created for the customers (Yuang & Wu, 2008). Huang and Liao (2015) demonstrate that customers react positively to AR’s entertaining and experiential value, interactivity and perceived ease of use. Moreover, according to MRT, using AR to support communication would be most positively perceived compared to using a picture or video, providing that its interactive technology results in making the communication richer and therefore more effective.

To summarize, the use of AR has great potential to create visual attention and thereby achieve brand engagement, thereby improving the ability to shape and influence behaviors and attitudes. In addition, building on MRT, the Hypebox would be the most effective advertising tool in customers’ understanding compared to the LCD-screen and the static display. The potential effects are further described in section 2.3.

2.3. Effects of in-store advertising

Noticeably, customers can respond in various ways toward a marketing stimulus or product evaluation. In the previous definitions of paragraph 2.1., interactivity, participation and involvement of customers can be seen as antecedents of brand engagement, while value, trust, affective commitment, word-of-mouth, loyalty, and brand community involvement are potential consequences (Pansari & Kumar, 2017). In this research, the effects of brand engagement are customers’ brand awareness and their purchase intentions.

Brand awareness relates to the strength of brand’s presence in the customer’s mind (Aaker, 1996) and can be defined as the buyer’s ability to identify the brand in sufficient detail to make a purchase (Rossiter & Percy, 1987, 1997). Keller (2003) states that brand awareness refers to the extent and ease with which customers recall the brand and can recognize the products and services with which the brand is associated. In other words, brand awareness is the likelihood that customers recognize the existence and availability of a brand. In this study we argue that, by featuring a product of a brand within the Hypebox, the awareness of the brand increases. This effect is presumed to be greater than featuring a product of a brand within advertising tools with lower technology richness.

Brand awareness can be subdivided into brand recall and brand recognition. Brand recall is defined as a customer's ability to retrieve a brand name from their memory as a product category is mentioned (Keller, 2003). This concept is also known as unaided brand awareness. Brand recognition is defined as customer's ability to confirm prior exposure to a brand when given the brand as a cue, for example when a list of brands is shown (Keller, 2003). This concept is also known as aided brand awareness. In addition, brand awareness is essential for brand choice. When customers are acquainted and familiar with a brand, they are more likely to choose that brand (Hoyer & Brown, 1990; Macdonald & Sharp, 2000). Relating to visual attention, Pietersen and Warlop (1999) discovered that brand choice could be predicted from observations of visual attention. So, when a customer looks at a brand for a long time, it is more likely that this brand will be chosen in relation to a brand that has been less looked at. Therefore, brand choice is clearly closely related to customers' intentions.

Moreover, the most commonly used measure of marketing effectiveness is purchase intention. The Theory of Planned Behavior states that the intention of an individual to execute or not to execute a certain behavior is the determinant factor of that action (Ajzen, 1991). Simply put, when a customer has the intention to buy a product, it is likely that the customer is actually buying the product. In this study, we argue that when a customer interacts with the Hypebox he or she has a higher intention to buy the product that is featured, in comparison with advertising tools that are lower in technology richness. This assumption is demonstrated, for example, by the researches of Poncin and Mimoun (2014) and Li, Daugherty, and Biocca (2002). Li et al. (2002) point out that consumers who viewed 3D visualizations reported a more positive brand attitude and higher purchase intentions than those viewing 2D advertising. In addition, Kim and Biocca (1997) state that television commercials can increase the feeling of telepresence, subsequently having an influence on purchase decisions. Hence, if in-store customers feel that they are more thoroughly and emotionally involved in a certain way than before, for example by a higher technology richness, they are likely to evaluate a product with more self-confidence, resulting in considering the product over others (Li & Meshkova, 2013).

In conclusion, building on the theorization of MRT (paragraph 2.2.), and contributing to the above discussion, the following hypotheses are proposed:

H1: A medium-rich medium (i.e., LCD-screen using video communication) results in a higher (a) brand awareness and (b) purchase intention, than a low-rich medium (i.e., static display using pictorial communication).

H2: A high-rich medium (i.e., Hypebox using AR) results in a higher (a) brand awareness and (b) purchase intention, than a medium-rich medium (i.e., LCD-screen using video communication).

Furthermore, with the posed importance of brand engagement in terms of visual attention during the in-store advertising process (paragraph 2.1.) and the established three communication methods with their possible effects, the following hypothesis is formed:

H3: Brand engagement (i.e., visual attention) mediates the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and how well it is perceived (i.e., (a) brand awareness, (b) purchase intention).

2.4. Role of moderating factors

Besides the established variables discussed earlier, there may be additional factors that could influence the strength of the relationship between these variables. These moderating factors are brand familiarity and distraction.

2.4.1. Brand familiarity

Brand familiarity involves “the amount of time that has been spent processing information about the brand, regardless of the type or content of the processing that was involved” (Baker, Hutchinson, Moore, & Nedungadi, 1986, p. 637). In the context of this study, brand familiarity comprises the extent to which a customer is familiar with the brand and how familiar they are with being exposed to brand messages.

On the one hand, as a rule, customers can more easily retrieve information on familiar brands than for unfamiliar brands (Alba & Hutchinson, 1987; Campbell & Keller, 2003). Moreover, customers who are exposed to a familiar brand will tend to focus more on the brand than the communication method (Choi, Lee, & Li, 2013). On the other hand, it may be argued that brand familiarity may result in a pre-existing choice for the featured brand, may improve customer engagement, and might increase the effect of the communication method (i.e., brand awareness, purchase intention) by the greater probability of being included in the brand consideration set. In the same way, familiarity with a competing brand may reduce customer engagement and the effect of the communication method. Although contradictory results may result from brand familiarity, we argue that:

P1: Brand familiarity has a positive influence on the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and customer engagement (i.e., brand engagement through visual attention).

Thus, the more supermarket customers are familiar with a brand, the longer they look at the featured product within the communication method, thereby the more engaged they are with the brand that

features the product within the communication method, which in turn results in high (a) brand awareness and (b) purchase intention.

2.4.2. Distraction

Distraction involves the extent to which the communication method prevents the customer from concentrating on the information given. Too much details in a communication method may be distracting customers from the main message (Voinov, Çöltekin, Chen, & Beydoun, 2018). Also, irrelevant elements or animation may have distraction effects on brand memory (Choi et al., 2013; Hong, Thong, & Tam, 2004).

In the context of this study, this means that a Hypebox using AR can be a distraction from the brand message, because customers may pay more attention to the novelty and impressiveness of this communication method.

Furthermore, Choi et al. (2013) claim that when a brand is familiar, higher distraction effects on implicit memory occurred, taking into account that this is probably because it requires relatively less attention to process the information. Correspondingly, Pieters, Warlop, and Wedel (2002) demonstrate that the information of a familiar brand is less intriguing than unknown information about an unfamiliar brand, meaning that customers fixate less on familiar messages. In addition to this discussion, distraction is included in the current study to investigate how AR functions in the context of information provision. The following proposition is proposed:

P2: Distraction has a negative influence on the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and customer engagement (i.e., brand engagement through visual attention).

Thus, the more supermarket customers are distracted by the visual aspects of the communication method, the shorter they look at the featured product within the communication method, thereby the less engaged they are with the brand that features the product within the communication method, which in turn results in low (a) brand awareness and (b) purchase intention.

2.5. Research model

The aforementioned factors form the current study, which is represented in a conceptual model in Figure 2 on the next page. In the current study, the independent variable is the communication method (i.e., static display, LCD-screen, Hypebox) and the dependent variables are the effects of in-store advertising (i.e., brand awareness, purchase intention). The relationship between the independent variable and the dependent variables is mediated by brand engagement. Brand engagement is

reflected by the antecedent variable visual attention. Lastly, the variables brand familiarity and distraction moderate the relationship between the independent variable and the mediator.

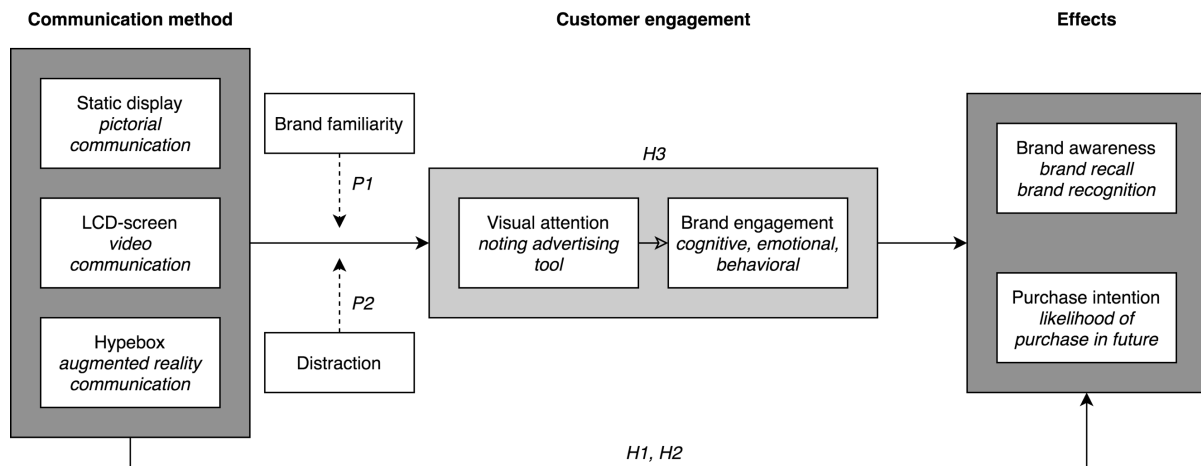


Figure 2. Conceptual model

3. Methods

This chapter describes the methods that were used in this research. The present study adopts a combination of two quantitative methods, an eye-tracking experiment and two questionnaires. The first paragraph of this chapter will discuss the research design. The second paragraph will present the study sample. Then, paragraph 3.3. will discuss the stimulus material that was developed for this study. Paragraph 3.4. will discuss the used procedure, and the last paragraph will explain how the constructs were measured.

3.1. Research design

This study adopted an experimental between-subjects design with three conditions. As mentioned earlier, the independent variable is the communication method, which has three levels: a static display using pictorial communication; an LCD-screen using video communication; and a Hypebox using AR. These three types of in-store advertising were distributed over two weeks. The Hypebox was tested first, then the LCD-screen, and lastly the static display. Moreover, each communication method conveyed the same brand message but differed in technology richness.

The study used a combination of two methods. Central to this study was the eye-tracking experiment. For this, respondents had to walk through a supermarket while wearing mobile eye trackers and perform an assignment. Here, nobody knew (yet) that this research was commissioned by Grolsch. By conducting this experiment, we could compare respondents' visual attention towards the three communication methods.

The eye-tracking experiment was supported by two short questionnaires: one before the experiment and one that was conducted immediately afterwards. This way we could measure the effectiveness of the communication method on the level of brand awareness and purchase intention.

The complete research schedule can be found in Table 1. Each respondent participated in both the eye-tracking experiment and questionnaires. This took a maximum of 15 minutes per respondent. The experiment required six days and was conducted in two weeks in February. In total there were 45 respondents in this study: fifteen respondents per communication method.

Table 1

Research schedule

Communication method	Respondents (<i>N</i>)	Date
Hypebox	10	Wednesday, February 5
Hypebox	5	Thursday, February, 6
LCD-screen	8	Friday, February 7
LCD-screen	7	Saturday, February 8
Static display	7	Thursday, February 13
Static display	8	Friday, February 14

3.2. Sample

The study sample consisted of 45 supermarket customers. For this, respondents were randomly approached before entering the supermarket. Yet, these respondents had to meet fixed selection criteria. The selection criteria were taken from Grolsch, because they have already done market research in this area. This meant that respondents had to be within the range of the target group of Grolsch (from 25 to 40 years old) and drink beer occasionally. However, because the target group often works during the day, the respondents varied between 18 and 58 years old. As can be seen in on the next age in Table 2, respondents' age was normally distributed. Respondents' mean age was similar for each type of communication method they have seen, $F(2, 42) = .55, p = .58$. Moreover, respondents' gender for the three communication methods was distributed exactly the same. Each condition had nine male respondents (60%) and six female respondents (40%). An extensive overview of the demographics of the 45 respondents can be found in Appendix I.

Table 2

Study sample

		Sample descriptive					
		<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Age					.55	2, 42	.58
	Static display	15	32.13	9.60			
	LCD-screen	15	29.13	7.65			
	Hypebox	15	32.80	12.80			

Note. Measured at significance level of 0.05.

3.3. Stimulus material

The stimulus materials were the three levels of the communication method: a static display, an LCD-screen and a Hypebox. Each communication method was placed at eye-level in the same place on the shelf, as can be seen in Appendix II. The static display used pictorial communication; the LCD-screen used video communication; and the Hypebox used AR. These three communication methods were distributed over two weeks according to the research schedule in Table 1. Illustrations of what each stimulus material prepared for the study looked like on the supermarket shelf can be found in Appendix III. The LCD-screen was made by placing a foam board behind the transparent screen of the Hypebox.

As previously mentioned, the same brand message was chosen for each of the stimuli in the study to communicate to the respondents. To achieve this, this process was partially outsourced to a digital signage company. This digital signage company created the content for the LCD-screen and the Hypebox. Grolsch created the content for the static display itself.

3.3.1. Brand message

The brand message involved emphasizing the taste of the specialty beer ‘Grolsch Kruidige Tripel’ (Figure 3). The brand message used in the experiment is derived from a ‘taste web’ which can be found in Appendix IV. As described earlier, the brand message was conformed to the communication method. This means that although the communication method was richer in conveying this message, the brand message remained exactly the same. This way, the impact of the communication methods could be compared. The content of the message was extensively discussed within every communication method to ensure that the content is sufficient to convey the brand message.



Figure 3. Grolsch Kruidige Tripel

3.3.2. Trigger content

Both of the LCD-screen and Hypebox used special video content to trigger customers (Figure 4). This content was displayed first and concerned a black background and a black beer outlined with green lines, which then changes into a green beer with horizontal lines that appear and disappear behind the beer. By then walking in front of a motion sensor, the (actual) content of the brand message is displayed.



Figure 4. Trigger content used for LCD-screen and Hypebox

3.4. Procedure

In the present study, respondents had to complete a total of three components. The first part was filling in the first questionnaire ‘pre-experiment’, the second part was performing an assignment wearing mobile eye-trackers (Tobii Pro Glasses 2), and the last part was filling in the second questionnaire ‘after experiment’.

There were three different shopping situations: for the first situation the respondent was exposed to the Hypebox; for the second situation the respondent was exposed to an LCD-screen; for the third situation the respondent was exposed to the current shelf lay out, i.e., static display. Each respondent was exposed to only one shopping situation. Moreover, the two technologies were new to the store, so none of the respondents had the opportunity to observe or test the digital technology previously. Furthermore, nobody knew in the beginning that this research was commissioned by Grolsch. This became clear when they were halfway through the second questionnaire.

As mentioned before, the respondent filled in a questionnaire before and after the eye-tracking experiment. Both the questionnaire ‘pre-experiment’ and the questionnaire ‘after-experiment’ were conducted digitally through an electronic tablet. The ‘pre-experiment’ questionnaire lasted a maximum of five minutes.

The questionnaire ‘after-experiment’ lasted a maximum of ten minutes and was conformed to the communication method. This means that if the respondent was shown the Hypebox, the wording of the questions contained the words ‘transparent screen with video’. When the respondent got to see the LCD-screen, the questions contained the words ‘TV-screen’ and when the respondent got to see the static display, the questions contained the words ‘cardboard display’.

The visual aspects of the three communication methods were compared by means of an eye-tracking experiment. For this, the respondents wore mobile eye-trackers, while performing the following assignment in a supermarket: “Go to the beer section and buy a specialty beer”. The experiment-setting resembled an actual shopping environment: each respondent received € 7.50 to buy the product. This was given at the end of the study so that they had to meet each part.

3.4.1. Supermarket

The research was conducted at a Jumbo in the province of Gelderland. The reason that the research was carried out at this specific retailer was because here Grolsch' brand awareness is relatively at the same level as other beer brands, according to previous research by Grolsch. In Enschede, for example, Grolsch' brand awareness is considerably high due to the origin of Grolsch. By carrying out the research in a 'neutral' area, the research is higher on internal validity.

The Jumbo chosen for this research has a wide range of specialty beers; the shelf is five meters long. Moreover, the supermarket has a food corner, which is located left of the entrance. When a respondent was recruited, he or she could sit here at a table to complete the questionnaires.

3.5. Measures

The questionnaires consisted partly of existing scales and partly of self-developed scales, as listed in Appendix V. Most of the items were on a five point Likert scale. The questionnaire 'pre-experiment' can be found in Appendix VI, and the questionnaire 'after-experiment' in Appendix VII. In this paragraph, each construct is discussed.

To test the *brand familiarity* of respondents, a self-reported scale was used. The scale ($\alpha = .78$) was measured with ten items, before the eye-tracking experiment, and was rather general: 'How familiar are you with (the following) specialty beer brands?'

The measurement of *distraction* was derived from the definition of distraction as used and described in section 2.4.2, which involves the extent to which the communication method prevents the customer from concentrating on the information given. The scale was measured with one item: 'Do you think that the advertising tool distracts from the message that Grolsch wants to convey?'

In order to measure the *visual attention* of the communication method, items were partly adapted from Zaichkowsky (1994). These scales were originally used for involvement. Involvement is defined as "a person's perceived relevance of the object based on inherent needs, values, and interests" (Zaichkowsky, 1994), which is comparable to a person's visual attention of an object. These items formed a semantical differential scale of eleven items using seven intervals, including, for example 'boring – interesting' and 'unappealing – appealing'. One item was emitted (i.e., 'inconspicuous – prominent') to improve the Cronbach's alpha. This resulted in ten items that were used ($\alpha = .82$). Visual attention was also measured by asking in the questionnaire if the respondent noticed the advertising tool.

To measure *brand engagement*, items were adapted from the newly developed CBE scale from Hollebeek et al. (2014). This scale ($\alpha = .88$) can be divided into three dimensions. Firstly, there was a

consumer's level of brand-related thought processing and elaboration (i.e., CP, $\alpha = .85$). CP was measured by two out of three items to improve the Cronbach's alpha, i.e., 'noticing the advertising tool gets me to think about Grolsch' and 'noticing the advertising tool stimulates my interest to learn more about Grolsch'. Secondly, there was a consumer's degree of positive brand-related affect (i.e., AF, $\alpha = .81$). AF was measured by four items, for example: 'I feel very positive about Grolsch when I notice the advertising tool'. Lastly, there was a consumer's level of energy, effort and time spent on a brand (i.e., AC, $\alpha = .86$). AC was measured by three items, for example: 'Whenever I'm being exposed to advertisements of beer brands, I usually notice Grolsch'.

In order to measure *brand awareness*, a distinction was made between before ($\alpha = .79$) the eye-tracking experiment and afterwards ($\alpha = .72$). All items were open-ended and self-developed. Items that measured brand awareness before the experiment were: 'When you think of specialty beer, what brand comes to mind?' (i.e., brand knowledge before) and 'which brand would you choose when you would like to buy specialty beer?' (i.e., brand choice before). After the experiment, brand awareness was measured by 'which specialty beer brands have you noticed?' (i.e., brand recall after) and 'do you remember which brand was advertised within the communication method?' (i.e., brand recognition after). New scales were computed to make a distinction between respondents who name Grolsch and respondents who do not. Only after-brand awareness was used in the analyses.

Similarly, *purchase intention* was measured by using self-reported scales. Derived from its definition, the item to measure purchase intention was: 'To what extent does seeing the advertising tool invite you to buy Grolsch?'. Moreover, by writing down which product each respondent bought, a new scale was computed: *product choice*. Here, a distinction was made between Grolsch Tripel (i.e., the featured product), other Grolsch products, and non-Grolsch products.

Additionally, items were added that measured the level of consumption in beer and specialty beer. In addition, one item measured why a respondent put a certain specialty beer in his or her basket. This was measured to see if the display played an important role in the product of choice. Respondents were also asked what occasion he or she had in mind to buy this specialty beer. This was asked to find out more about what drives consumers. Lastly, an item measured whether the displayed communication method is suitable for Grolsch as a brand.

Moreover, using mobile eye trackers (Tobii Pro Glasses 2), respondents' visual attention was measured by the number of fixations, the total fixation time and the time until the first fixation (Behe et al., 2015; Tobii Technology, 2008). By mapping the eye-tracking data on still images (snapshots) visualizations could be generated, such as AOI's (Area of Interest) and heatmaps. In addition, a start and end event was created by setting TOI's (Time of Interest). This way, excessive data could be

filtered out. The last column of the table in Appendix V refers to how the constructs could be measured by eye-tracking.

4. Results

This chapter discusses the results of the study. To examine the research question: *“To what extent is the technology-richness of an advertising tool effective on creating brand engagement (i.e., visual attention) to enhance brand awareness and purchase intention of supermarket customers?”*, data gathered from questionnaires and an eye-tracking experiment of 45 respondents were analyzed. SPSS was used to analyze the data from the questionnaires. To analyze the data from the eye-tracking experiment, Tobii Pro Lab and then SPSS were used.

As stated in the research model (Figure 2), the independent variable in this study is the communication method (i.e., static display, LCD-screen, Hypebox) and the dependent variables are the effects of in-store advertising (i.e., brand awareness, purchase intention). The relationship between the independent variable and the dependent variables is mediated by brand engagement, which is reflected by the antecedent variable visual attention. Paragraph 4.1. will discuss the results of the questionnaire, followed by paragraph 4.2. which discusses the results of the eye-tracking experiment. Subsequently, paragraph 4.3. will discuss the correlations between constructs. This paragraph is followed by paragraph 4.4., which combines the two research methods into a regression analysis. Finally, based on the findings, an overview and a short discussion is given about the hypotheses.

Table 3 presents an overview of the measures employed in this study and their descriptive statistics is provided. As can be seen in Table 3, not many respondents filled in the entire questionnaire. This is because when respondents answered ‘no, I have not noticed anything’ on the question ‘have you seen a transparent screen with video (i.e., Hypebox) / a TV screen (i.e., LCD-screen) / a cardboard display (i.e., static display)?’, the questionnaire ended. Therefore, the actual sample size (N) was considerably low: the static display had only five respondents ($N = 5$) who completed the entire questionnaire, the LCD-screen had four ($N = 4$), and the Hypebox had six ($N = 6$). This should be taken into account when discussing the results of the questionnaires. This does not apply to the results of the eye-tracking experiment. Here, each respondent completed the assignment ($N = 15$ per communication method).

Table 3

Scale descriptives per communication method

Scale descriptives									
	Static display			LCD-screen			Hypebox		
	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Brand familiarity	15	3.87	.99	15	4.00	.66	15	3.87	.52
Distraction	5	4.00	1.22	4	4.00	.82	6	3.67	.52
Visual attention	5	4.68	.76	4	4.22	.41	6	4.63	.84
Brand engagement	5	2.49	.84	4	2.75	.88	6	2.61	.73
Cognitive processing	5	2.90	.96	4	2.75	1.26	6	3.08	.92
Affection	5	2.45	.86	4	2.50	1.06	6	2.71	.75
Activation	5	2.27	.89	4	3.08	1.20	6	2.17	.78
Purchase intention	5	2.60	.55	4	2.50	.58	6	3.00	.89
	<i>N</i>	<i>No (%)</i>	<i>Yes (%)</i>	<i>N</i>	<i>No (%)</i>	<i>Yes (%)</i>	<i>N</i>	<i>No (%)</i>	<i>Yes (%)</i>
Brand awareness									
Brand knowledge (before)	15	86.7	13.3	15	93.3	6.7	15	93.3	6.7
Brand choice (before)	15	93.3	6.7	15	93.3	6.7	15	100	0
Brand recall (after)	15	80	20	15	73.3	26.7	15	73.3	26.7
Brand recognition (after)	5	100	0	4	50	50	6	66.7	33.3
Product choice									
Grolsch Tripel	15	93.3	6.7	15	100	0	15	93.3	6.7
Other Grolsch product	15	100	0	15	93.3	6.7	15	93.3	6.7

Note. The scales of brand awareness and product choice consisted of binary items, where 'Yes' stands for respondents who named Grolsch. The scale of brand awareness was divided into brand awareness before the eye-tracking experiment and after the experiment. For further analysis, only after-brand awareness is used.

4.1. Questionnaires

The first part of the study consisted of a small questionnaire. Here, mostly demographic questions were asked. The second part of the study consisted of the eye-tracking experiment, which will be discussed in paragraph 4.2. The last part of the study also consisted of a questionnaire. Here, questions were asked about the effect of the (three) communication methods. First, the effect of the communication method on visual attention and brand engagement is discussed, followed by the effect of the communication method on customers' attitude (i.e., brand awareness, purchase intention, product choice). A complete overview of the effects of the three communication methods (i.e., static display, LCD-screen, Hypebox) with α of .05, can be found on the next page in Table 4.

Table 4

Effects of communication method on questionnaire measurements

Significance in means between groups (i.e., communication method)			
	<i>F</i>	<i>df</i>	<i>p</i>
Visual attention	.52	2, 12	.61
Brand engagement	.12	2, 12	.89
Cognitive processing	.13	2, 12	.88
Affection	.14	2, 12	.87
Activation	1.28	2, 12	.31
Brand awareness (after)	.34	2, 42	.71
Purchase intention	.72	2, 12	.51
	χ^2	<i>df</i>	<i>p</i>
Product choice			
Grolsch Tripel	1.05	2	.59
Other Grolsch product	1.05	2	.59

Note. For visual attention, brand engagement and purchase intention, $N = 5$ for static display, $N = 4$ for LCD-screen, $N = 6$ for Hypebox. For brand awareness and product choice, $N = 15$ for each condition. Kruskal-Wallis ANOVA and Pearson's chi-square of contingencies (with α of .05) indicated also non-significant results.

4.1.1. Communication method: visual attention and brand engagement

One-way analyses of variance (ANOVA) were conducted to investigate the difference between the communication methods (i.e., static display, LCD-screen, Hypebox) on visual attention and brand engagement.

Visual attention

As can be seen in Table 4, the effect of communication method on visual attention was non-significant. This indicates that there is no statistical evidence that respondents who were exposed to the Hypebox (that uses AR) perceived the visual attention of the communication to be higher than the respondents who experienced other communication methods (i.e., static display, LCD-screen).

Brand engagement

The scale of brand engagement was divided into three dimensions: Cognitive Processing (CP), Affection (AF) and Activation (AC). As can be seen in Table 4, the effect of communication method on brand engagement was non-significant, indicating that there is no statistical evidence that the Hypebox could facilitate higher brand engagement than the other communication methods (i.e., static display, LCD-screen).

4.1.2. Customers' attitude: brand awareness, purchase intention and product choice

Similarly, one-way ANOVA was used to investigate the effect that the communication method (i.e., static display, LCD-screen, Hypebox) had on brand awareness and purchase intention. For product choice, Pearson's chi-square test of contingencies was used.

Brand awareness

As previously mentioned, only after-brand awareness is used for analysis. As can be seen in Table 4, the effect of communication method on after-brand awareness was non-significant, meaning that there is no statistical evidence that the respondents who were exposed to the Hypebox elicited a higher brand awareness than the other communication methods (i.e., static display, LCD-screen).

Purchase intention

Similarly, as can be seen in Table 4, the effect of communication method on purchase intention was non-significant. This indicates that there is no statistical evidence that the respondents who were exposed to the Hypebox elicited a higher purchase intention than the other communication methods (i.e., static display, LCD-screen).

Product choice

The scale of product choice was divided into two dimensions: Grolsch Tripel (i.e., the featured product), and other Grolsch products. A list of which product each respondent chose to buy is provided in Appendix VIII. As can be seen in Table 4, the effect of communication method on both Grolsch Tripel and other Grolsch products were non-significant, indicating that there is no statistical evidence that the Hypebox could elicit a greater choice of Grolsch products than the other communication methods (i.e., static display, LCD-screen).

4.2. Eye-tracking

The second part of the study consisted of the eye-tracking experiment. Each respondent participated and was exposed to one of the three conditions (i.e., static display, LCD-screen or Hypebox). To analyze the difference in respondents' visual attention towards the three conditions, Tobii Pro Lab was used. Put simply, the questions that will be answered, are: 'How many times do respondents look at a certain AOI?', 'for how long do respondents look at a certain AOI?' and 'what is the stopping power of a certain AOI?'. These measures are indicated by fixation count, total fixation duration and time to first fixation, and were measured in seconds. To analyze the data of the mobile eye trackers three separate AOI's were drawn: one for the communication method, one for the featured product and several for the other products of Grolsch. Screenshots of what the AOI's looked like for each

condition can be found in Appendix IX. The first AOI to be discussed is the communication method itself. Second, the AOI of the featured product, and finally the AOI of other Grolsch products.

4.2.1. Communication method

In Table 5, the effect of the communication method on the fixation count, the total fixation duration and time to first fixation is provided, with AOI the communication method itself.

Table 5

Effects of communication method on eye-tracking measurements, AOI: communication method

AOI: communication method					
	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Fixation count			.14	2, 42	.87
Static display	.87	1.13			
LCD-screen	1.27	2.25			
Hypebox	1.00	2.62			
Fixation duration			.34	2, 42	.71
Static display	.14	.18			
LCD-screen	.34	.82			
Hypebox	.26	.83			
Time to first fixation			.00	2, 42	1.00
Static display	13.24	19.66			
LCD-screen	13.34	19.68			
Hypebox	13.24	29.13			

Note. Measured at significance level of 0.05, total fixation duration and time to first fixation were measured in seconds.

As can be seen in Table 5, one-way ANOVA showed that the effect of communication method on the eye-tracking measurements was non-significant. This indicates that there is no statistical evidence that the Hypebox elicits more fixations, longer fixations or more stopping power than the other communication methods (i.e., static display, LCD-screen). The fixation duration of each communication method is visualized in heatmaps using a panoramic picture of the shelf. These can be found in Figure 5, 6 and 7.



Figure 5. Heatmap relative fixation duration of the static display generated in Tobii Pro Lab



Figure 6. Heatmap relative fixation duration of the LCD-screen generated in Tobii Pro Lab



Figure 7. Heatmap relative fixation duration of the Hypebox generated in Tobii Pro Lab

4.2.2. Grolsch Tripel

For the AOI ‘Grolsch Tripel’ a distinction was made between Tripel1 and Tripel2. Tripel1 indicates Grolsch Tripel next to the communication method, and Tripel2 indicates Grolsch Tripel on its usual spot on the shelf. In the end, only two respondents chose to buy the Grolsch Tripel, one respondent who was exposed to the static display, and one who was exposed to the Hypebox.

Tripel1

In Table 6, the effect of the communication method on the fixation count, the total fixation duration and time to first fixation is provided, with AOI the Grolsch Tripel1. As can be seen in Table 6, one-way ANOVA showed that the effect of communication method on the eye-tracking measurements was non-significant. This indicates that there is no statistical evidence that the Hypebox elicits more fixations, longer fixations or more stopping power on the Grolsch Tripel next to the communication method, than the other communication methods (i.e., static display, LCD-screen).

Table 6

Effects of communication method on eye-tracking measurements, AOI: Grolsch Tripel1

AOI: Grolsch Tripel1					
	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Fixation count			1.49	2, 42	.24
Static display	1.53	1.89			
LCD-screen	.67	1.11			
Hypebox	4.67	11.38			
Fixation duration			1.69	2, 42	.20
Static display	.28	.36			
LCD-screen	.12	.21			
Hypebox	1.22	3.05			
Time to first fixation			.06	2, 42	.94
Static display	13.77	20.79			
LCD-screen	12.15	18.68			
Hypebox	11.06	23.95			

Note. Measured at significance level of 0.05, total fixation duration and time to first fixation were measured in seconds.

Tripel2

In Table 7, the effect of the communication method on the fixation count, the total fixation duration and time to first fixation is provided, with AOI the Grolsch Tripel2. As can be seen in Table 7, one-way ANOVA showed that the effect of communication method on the eye-tracking measurements was non-significant. This indicates that there is no statistical evidence that the Hypebox elicits more fixations, longer fixations or more stopping power on the Grolsch Tripel on its usual spot, than the other communication methods (i.e., static display, LCD-screen).

Table 7

Effects of communication method on eye-tracking measurements, AOI: Grolsch Tripel2

AOI: Grolsch Tripel2					
	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Fixation count			.25	2, 42	.78
Static display	1.13	2.13			
LCD-screen	.73	1.10			
Hypebox	.80	1.61			
Fixation duration			.80	2, 42	.45
Static display	.27	.68			
LCD-screen	.09	.14			
Hypebox	.12	.21			
Time to first fixation			1.40	2, 42	.26
Static display	5.93	10.47			
LCD-screen	8.86	13.98			
Hypebox	20.92	41.61			

Note. Measured at significance level of 0.05, total fixation duration and time to first fixation were measured in seconds.

4.2.3. Other Grolsch products

In Table 8, the effect of the communication method on the fixation count, the total fixation duration and time to first fixation is provided, with AOI other Grolsch products. For the AOI ‘other Grolsch products’ every other Grolsch product on the shelf besides the Grolsch Tripel was taken into account. These results have been added together to form one variable. In the end, only two respondents chose to buy other Grolsch products besides the Grolsch Tripel, one respondent who was exposed to the Hypebox, and one who was exposed to the LCD-screen.

Table 8

Effects of communication method on eye-tracking measurements, AOI: other Grolsch products

AOI: other Grolsch products					
	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Fixation count			.19	2, 42	.83
Static display	4.87	5.64			
LCD-screen	6.53	6.83			
Hypebox	5.27	9.89			
Fixation duration			.20	2, 42	.82
Static display	1.21	1.64			
LCD-screen	1.37	1.55			
Hypebox	.99	1.78			
Time to first fixation			.53	2, 42	.59
Static display	6.03	6.64			
LCD-screen	10.32	13.45			
Hypebox	8.96	13.54			

Note. Measured at significance level of 0.05, total fixation duration and time to first fixation were measured in seconds.

As can be seen in Table 8, one-way ANOVA showed that the effect of communication method on the eye-tracking measurements was non-significant. This indicates that there is no statistical evidence that the Hypebox elicits more fixations, longer fixations or more stopping power on other Grolsch products, than the other communication methods (i.e., static display, LCD-screen).

4.3. Correlation analysis

To assess the one-on-one relationships between constructs, a correlation analysis was conducted. This provided a basic and quick overview on how constructs do or do not relate to one another. It also helped to determine which constructs might have been interesting to include in the regression analysis. Table 9, on the next page, presents the results of the correlation analysis. When the results are significant, they are denoted by asterisks (* = sig. level of .05, ** = sig. level of .01). Only the results that are significant and with a $r > .50$ will be discussed in detail. The underlying variables of the constructs are shown in italics.

At first sight, the table shows that the constructs of this sample ($N = 45$) do not correlate much with each other. The independent variable (i.e., communication method) correlates with none of the other variables. This also applies to the demographic variables (i.e., age, gender). Fixation count positively correlated with total fixation duration ($r = .95^{**}$), which is not surprising because these variables are both based on the number of fixations. However, when looking at the dependent variables (i.e., brand awareness, purchase intention), interesting correlations are revealed.

The Pearson correlation between fixation count and brand awareness is 0.52^{**} , which indicates that there is a positive relationship between the variables. This suggests that the more fixations customers have on Grolsch' communication method, the higher their brand awareness of Grolsch. Brand awareness also correlates positively with brand engagement ($r = .64^*$), meaning that the more engaged the customer is with Grolsch as a brand, the higher their brand awareness. In addition, brand awareness positively correlates with activation ($r = .69^{**}$), which is part of the scale brand engagement, meaning that the more energy, effort and time the customer has spent on Grolsch, the higher their brand awareness.

Purchase intention correlated positively with time to first fixation ($r = .73^{**}$), indicating that the more time it takes for customers to fixate on Grolsch' communication method, the higher their purchase intention. A possible explanation for this is that the Jumbo chosen for this study had a wide range of specialty beers, which probably means that customers needed more time to view each product on the shelf. As a result, customers may have considered more products than they normally would, including products of Grolsch. It is possible that, while having multiple products in the consideration set, the communication method had just that little bit of visual persuasion to convince customers to intentionally buy Grolsch products. This statement can also be applied to the positive correlations between time to first fixation and brand engagement ($r = .61^*$) and affection ($r = .58^*$). The first fixation itself possibly does not influence preference for a brand, but influence the engagement with a brand by gate-keeping the alternative products that entered the consideration set.

Moreover, purchase intention correlated positively with brand engagement ($r = .60^*$), meaning that the more engaged the customer is with Grolsch as a brand, the higher their intention to purchase Grolsch products. In addition, purchase intention positively correlates with affection ($r = .62^*$), which is part of the scale brand engagement, meaning that the higher customers' degree of positive brand-related affect when interacting with Grolsch, the higher their purchase intention. Finally, purchase intention correlated positively with brand awareness ($r = .61^*$), indicating that the higher customers' brand awareness of Grolsch, the higher their intention to buy Grolsch products.

Table 9

Correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
<i>Measures</i>																			
1	Communication method	1																	
2	Static display	-.866**	1																
3	LCD-screen	.000	-.500**	1															
4	Hypebox	.866**	-.500**	-.500**	1														
5	Gender	.000	.000	.000	.000	1													
6	Age	.027	.055	-.157	.102	-.065	1												
7	Brand familiarity	.000	-.043	.087	-.043	.163	-.008	1											
8	Distraction	-.181	.117	.100	-.203	.468	-.036	.214	1										
9	Visual attention	-.016	.146	-.281	.113	.188	-.172	-.240	.181	1									
10	Fixation count	.027	-.062	.077	-.015	.049	.211	.199	-.160	-.170	1								
11	Fixation duration	.076	-.116	.102	.015	.065	.218	.221	-.187	-.232	.953**	1							
12	Time to first fixation	.000	-.001	.002	-.001	-.282	.077	-.149	-.195	.454	.388**	.266	1						
13	Brand engagement	.061	-.105	.106	.005	.274	-.126	.074	.093	.374	.167	.032	.609*	1					
14	Cognitive processing	.090	-.025	-.119	.132	.355	.000	-.040	.300	.365	.049	-.097	.474	.870**	1				
15	Affection	.142	-.105	-.051	.147	.389	-.088	-.109	.198	.407	.005	-.130	.580*	.907**	.838**	1			
16	Activation	-.066	-.136	.417	-.245	-.034	-.225	.311	-.249	.178	.345	.284	.483	.738**	.358	.471	1		
17	Brand awareness (after)	.110	-.127	.064	.064	.171	.166	.355*	-.338	-.057	.518**	.426**	.237	.635*	.414	.478	.693**	1	
18	Purchase intention	.260	-.139	-.207	.320	.069	.282	-.036	-.308	.414	.234	.185	.732**	.602*	.500	.624*	.401	.612*	1

Note. ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

Blue indicates (significant) correlations that are part of the same scale, dark green indicates significant correlations with $r > .50$, light green indicates significant correlations with $r < .50$.

4.4. Regression analysis

A regression analysis is based on the same principle as the correlation analysis, however this type of analysis describes how an independent variable is numerically related to the dependent variable. As previously discussed, the main effects of communication method (i.e., static display, LCD-screen, Hypebox) were non-significant. Nevertheless, mediation and moderation analyses were conducted to investigate whether the mediators and moderators affected the relationship between the independent variable (i.e., communication method) and dependent variables (i.e., brand awareness (after), purchase intention).

4.4.1. Mediation analysis

Mediation analyses were used to estimate and test hypotheses about the paths of casual influence from the independent variable (i.e., communication method) on the dependent variables (i.e., brand awareness, purchase intention), one through the mediators (i.e., brand engagement, eye-tracking measurements). In order to calculate the direct and indirect effect of these mediations, Model 4 and Model 6 in the PROCESS macro of Hayes (2013) were used. The regression/path coefficients that are reported here are in unstandardized coefficients.

Effect of brand engagement

Multiple regression analysis was conducted to assess each component of the mediation. This process is visualized in a conceptual model (Model 4) in Figure 8. The results consist of the association between the independent and dependent variable (c-path), the effect of an independent variable on the mediator (a-path), the effect of the mediator on the dependent variable (b-path), and the association between the independent variable and dependent variable, through the mediator (c'-path).

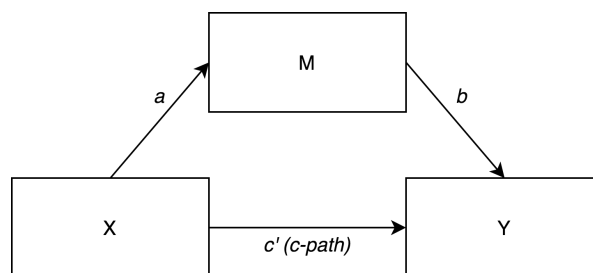


Figure 8. Conceptual model for simple mediation analysis (Model 4)

The mediation analysis of the effect of brand engagement (including all sub dimensions) on the dependent variables is visualized in Figure 9.

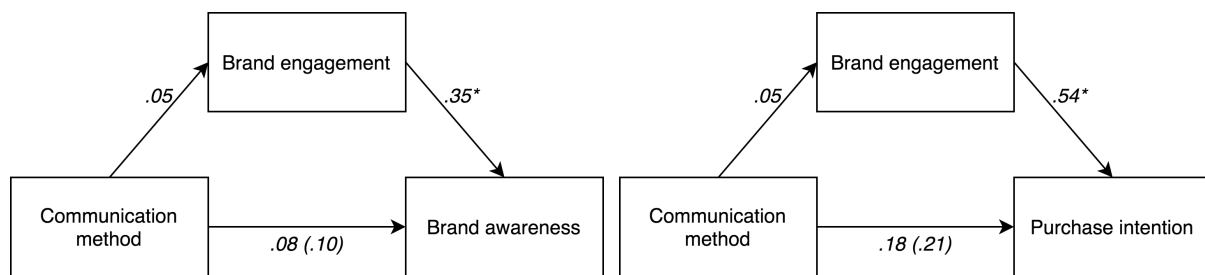


Figure 9. Mediation analysis for the effect of brand engagement on brand awareness (after) and purchase intention

Note. Unstandardized coefficients and significance values (* $p < .05$, ** $p < .01$, *** $p < .001$) are reported. The unstandardized coefficients in brackets indicate the effect ignoring the mediator.

First, the regression of communication method on brand awareness, ignoring the mediator brand engagement, was not significant ($b = .10$, $t(13) = .76$, $p = .46$). Second, the regression of communication method on brand engagement was not significant ($b = .05$, $t(13) = .22$, $p = .83$). Lastly, results indicated that the mediator, brand engagement, was positively associated with brand awareness ($b = .35$, $t(12) = 2.87$, $p = .01$). Although the a-path was not significant and the b-path was significant, mediation analyses were tested using the Hayes (2013) method. As can be seen in Figure 9, the c'-path of the association between communication method and brand awareness remained non-significant ($b = .08$, $t(12) = .77$, $p = .46$) when controlling for brand engagement. This means that the results of the mediation analysis did not support the mediating role of brand engagement in the relation between communication method and brand awareness (indirect = .02, $SE = .23$, 95% CI [-.19, .22]). As can be seen in Figure 9, putting purchase intention as dependent variable in the mediation analysis indicated similar results. Hence, brand engagement is not a mediator in the relation between communication method and purchase intention (indirect = .03, $SE = .14$, 95% CI [-.22, .35]).

Effect of eye-tracking measurements

To investigate the effect of respondents' visual attention (i.e., fixation count, total fixation duration and time to first fixation) on the dependent variables (i.e., brand awareness, purchase intention), Model 6 was used. This model, which is visualized in Figure 10, contains serial mediation, meaning that it takes into account the causal chain linking of multiple mediators (i.e., d21-path, d31-path and d32-path).

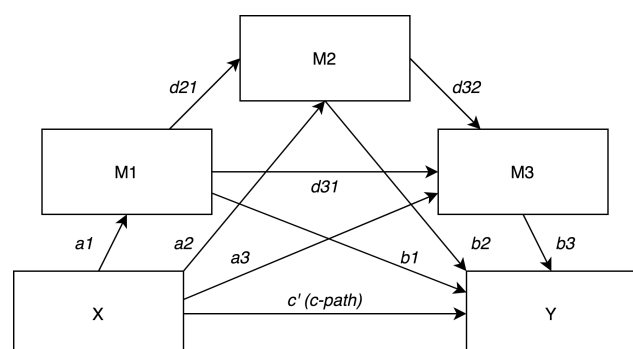


Figure 10. Conceptual model for serial mediation analysis (Model 6)

The mediation analysis of the effect of the three mediators (i.e., fixation count, total fixation duration and time to first fixation) on the dependent variables is visualized in Figure 11.

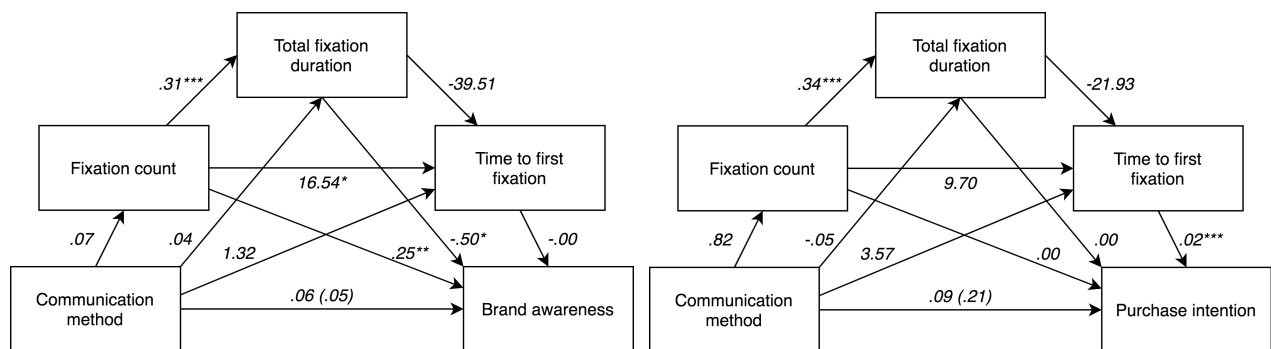


Figure 11. Mediation analysis for the effects of eye-tracking measurements on dependent variables

Note. Unstandardized coefficients and significance values (* $p < .05$, ** $p < .01$, *** $p < .001$) are reported. The unstandardized coefficients in brackets indicate the effect ignoring the mediator.

First, the regression of communication method on brand awareness, ignoring the mediators, was not significant ($b = .05$, $t(43) = .78$, $p = .44$). Second, the regression of communication method on fixation count ($b = .07$, $t(43) = .19$, $p = .85$), fixation duration ($b = .04$, $t(42) = 1.23$, $p = .22$), time to first fixation ($b = 1.32$, $t(41) = .33$, $p = .74$), was not significant. Results indicated that the mediator fixation count was positively associated with brand awareness ($b = .25$, $t(40) = 2.83$, $p < .01$), the mediator fixation duration was negatively associated with brand awareness ($b = -.50$, $t(40) = -2.13$, $p = .04$) and the mediator time to first fixation was not significant in the relation between communication method and brand awareness ($b = -.00$, $t(40) = -.27$, $p = .79$). Furthermore, fixation count was positively associated with fixation duration ($b = .31$, $t(42) = 10.09$, $p < .001$) and time to first fixation ($b = 16.54$, $t(41) = 2.45$, $p = .02$). Additionally, the regression of fixation duration on time to first fixation was not significant ($b = -39.51$, $t(41) = -2.00$, $p = .05$).

As can be seen in Figure 11, the c' -path of the association between communication method and brand awareness remained non-significant ($b = .06$, $t(40) = 1.21$, $p = .23$) when controlling for the mediators. This means that the results of the mediation analysis did not support the mediating role of fixation count, fixation duration and time to first fixation in the relation between communication method and brand awareness (indirect = $.00$, $SE = .03$, 95% CI $[-.06, .06]$). Other indirect effects also pointed to non-significant results.

As shown on the right in Figure 11, putting purchase intention as dependent variable in the mediation analysis, indicated similar results. Hence, fixation count, fixation duration and time to first fixation are not mediators in the relation between communication method and purchase intention (indirect = $-.10$, $SE = .51$, 95% CI $[-1.03, .42]$). Other indirect effects also pointed to non-significant results.

4.4.2. Moderation analysis

Moderation analyses were used to estimate and test hypotheses about the paths of casual influence from the independent variable (i.e., communication method) on the mediators (i.e., brand engagement, eye-tracking measurements). Our research model included two moderators on these paths: brand familiarity and distraction. In order to confirm the effect of a third variable, an interaction effect in the model needs to be included, to see if indeed such an interaction is significant and helps explain the variation in the response variable better than before. To calculate the direct and indirect effect of moderation, Model 1 in the PROCESS macro of Hayes (2013) was used, as visualized in Figure 12.

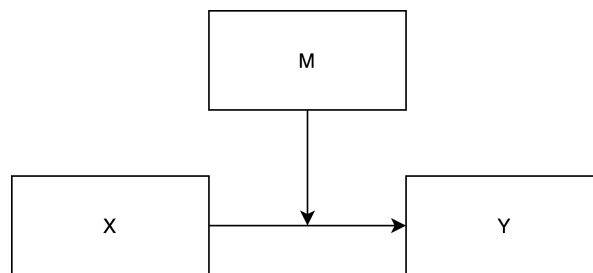


Figure 12. Conceptual model for moderation analysis (Model 1)

Effect of brand familiarity

To test the hypothesis whether brand familiarity moderates the relationship between communication method and brand engagement, a hierarchical multiple regression analysis was conducted. In the first step, two variables were included: brand familiarity and communication method. These variables accounted for a non-significant amount of variance in brand engagement, $R^2 = .01$, $F(2, 12) = .06$, $p = .94$. To avoid potentially problematic high multicollinearity with the interaction term, the variables were centered and an interaction term between communication method and brand familiarity was created (Aiken & West, 1991). Next, the interaction term between communication method and brand familiarity was added to the regression model, which, nevertheless, accounted for a non-significant proportion of the variance in brand engagement, $\Delta R^2 = .04$, $\Delta F(1, 11) = .42$, $p = .91$, $b = .52$, $t(11) = .65$, $p = .53$. This indicates that brand familiarity does not moderate the relation between communication method and brand engagement.

Next, multiple hierarchical multiple regression analyses were performed to check whether brand familiarity was a possible moderator on other relationships with communication method. The correlation between brand familiarity and brand awareness possibly indicates a moderation. The variables brand familiarity and communication method accounted for a significant amount of variance in brand awareness, $R^2 = .14$, $F(2, 42) = 3.37$, $p = .04$. This is mainly predicted by brand familiarity. Next, the interaction term between communication method and brand familiarity was added to the regression model, which, nevertheless, accounted for a non-significant proportion of the variance in

brand awareness, $\Delta R^2 = .01$, $\Delta F(1, 41) = .61$, $p = .08$, $b = .08$, $t(41) = .78$, $p = .44$. Hence, brand familiarity does not moderate the relation between communication method and brand awareness, but it does have an influence.

Effect of distraction

Distraction is the second moderator that was hypothesized to influence the relationship between communication method and brand engagement. In the first step, the two variables were included in the hierarchical multiple regression analysis. The variables communication method and distraction accounted for a non-significant amount of variance in brand engagement, $R^2 = .15$, $F(2, 12) = .09$, $p = .91$. Next, the interaction term between communication method and distraction was added to the regression model, which, nevertheless, accounted for a non-significant proportion of the variance in brand engagement, $\Delta R^2 = .23$, $\Delta F(1, 11) = .27$, $p = .93$, $b = -.19$, $t(11) = -.65$, $p = .53$. This indicates that distraction does not moderate the relation between communication method and brand engagement.

4.4.3. Moderated mediation analysis

When performing mediation analysis, no significant association was found between the independent variable (i.e., communication method) and the dependent variables (i.e., brand awareness, purchase intention), through the mediators (i.e., brand engagement, eye-tracking measurements). However, to test the entire research model, Model 7 in the PROCESS macro of Hayes (2013) was used. Not surprisingly, due to the previous mediation and moderation analyses, this analysis indicated non-significant results.

4.5. Hypotheses

In conclusion, Table 10 provides an overview that discusses the hypotheses and propositions based on the main findings of the current study.

Table 10

Overview of hypotheses and propositions and study's findings

Hypothesis	Findings
<p>H1: A medium-rich medium (i.e., LCD-screen using video communication) results in a higher (a) brand awareness and (b) purchase intention, than a low-rich medium (i.e., static display using pictorial communication).</p>	<p>Not supported. There are no significant differences between the three communication levels. Besides, the effect of communication method on brand awareness and purchase intention is non-significant.</p>
<p>H2: A high-rich medium (i.e., Hypebox using AR) results in a higher (a) brand awareness and (b) purchase intention, than a medium-rich medium (i.e., LCD-screen using video communication).</p>	<p>Not supported. Brand engagement does not mediate the relationship between communication method and brand awareness and purchase intention. This finding also applies to the eye-tracking measurements.</p>
<p>H3: Brand engagement (i.e., visual attention) mediates the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and how well it is perceived (i.e., (a) brand awareness, (b) purchase intention).</p>	<p>Not supported. Brand familiarity does not have a significant influence on the relationship between the communication method and customer engagement.</p>
<p><i>P1: Brand familiarity has a positive influence on the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and customer engagement (i.e., brand engagement through visual attention).</i></p>	<p>Not supported. Distraction does not have a significant influence on the relationship between the communication method and customer engagement.</p>
<p><i>P2: Distraction has a negative influence on the relationship between the communication method (i.e., static display, LCD-screen, Hypebox) and customer engagement (i.e., brand engagement through visual attention).</i></p>	<p>Not supported. Distraction does not have a significant influence on the relationship between the communication method and customer engagement.</p>

5. Discussion

The present study focused on supermarket customers' brand engagement in terms of visual attention towards their brand awareness and purchase intention under one of three types of medium richness communication methods (i.e., static display, LCD-screen, Hypebox). The main research method was an eye-tracking experiment, which was enriched with two short questionnaires, one before and one after the eye-tracking experiment. The experiment measured supermarket customers' visual attention towards the three communication methods, and the questionnaires measured supermarket customers' brand engagement, brand awareness and purchase intention. In this chapter, the main findings are presented and discussed, followed by study's limitations and suggestions for future research.

5.1. Findings

Overall, the results from the study led to unexpected but useful conclusions and interpretations. The current study built on Media Richness Theory's (MRT) notion that the richer the medium, the more effective it is in communicating a message. Because the main findings show that there is no statistical difference between the static display, LCD-screen and Hypebox, we cannot confirm or deny whether the LCD-screen is more effective than a static display, or whether a Hypebox is more effective than an LCD-screen, to enhance brand awareness or purchase intention.

The reason the value differences were not significant could be due to the method, which did rely heavily on respondents performing an assignment with € 7.50 to spend. Perhaps the respondents were too focused on the assignment or on spending the € 7.50 wisely by getting the most out of it, indicating that customers of supermarkets are probably more goal-oriented which possibly overrides visual saliency (Gidlöf, Anikin, Lingonblad, & Wallin, 2017; Kowler, 2011). This emphasizes the importance of instructions in gaze studies. In addition, the three communication methods were placed in one place. Perhaps moving the communication method closer to where you enter the aisle would make the communication method more noticeable.

It could also depend on the supermarket and its customers. The study was conducted in a small village in the Dutch province of Gelderland. According to the Jumbo supermarket, most of its customers fall in the category of dual-income households, successful families (but very traditional / reformed), traditional elderly or well-off elderly. Perhaps a supermarket in a capital rather than a village would yield different results, as these customers would likely be more among the specialty beer target group, meaning those customers are less reformed and whose age is lower. Future research should address this issue. Moreover, the range of specialty beers may also have played a role, as this was five meters long. If the range was only three meters, the communication methods would probably be more

noticeable because then the environment is less visually challenging and offers fewer options (Gidlöf et al., 2017; Glaholt, Wu, & Reingold, 2009; Reisen, Hoffrage, & Mast, 2008).

Nevertheless, we can confirm the importance of brand engagement. Findings showed that brand engagement did not mediate the relationship between communication method and brand awareness. This is not in line with the theorized hypothesis, which states that brand engagement acts as a mediator based on the research by Hollebeek et al. (2014). Yet, it can be stated with certainty that customers must first notice the communication method in order to engage with it. It was assumed that placing one of the communication methods on the shelf would automatically attract attention: there is normally no such thing on the shelf. However, results showed that not many customers noticed the communication methods and that there was no statistical difference between the communication methods either. Consequently, this raises the question whether placing a rich communication method on a shelf in a supermarket, on its own, is enough to attract attention and convey a message. This presumption is in line with Scholz and Smith (2016) who stress that marketers must focus on customer engagement and the dimensions that stimulate this, such as sociability and entertainment, to generate value for customers with AR. As such, it can be suggested that MRT should be reconsidered to include a dimension of engagement to facilitate the communication method, rather than relying on communication method its ability.

Moreover, findings indicated that the eye-tracking measures (i.e., fixation count, total fixation duration, time to first fixation) did not mediate the relationship between communication method and the dependent variables. In addition, the results indicated that the differences between both the means and the standard deviations were large. This indicates that respondents their fixations are very different from each other, so the results need to be interpreted carefully.

Nevertheless, time to first fixation correlated positively with purchase intention, indicating that the more time it takes for customers to fixate on Grolsch' communication method, the higher their intention to purchase Grolsch products. Time to first fixation also correlated positively with brand engagement and affection. A possible explanation for this, is that the Jumbo chosen for this study had a wide range of specialty beers, which probably means that customers needed more time to view each product on the shelf. As a result, customers may have considered more products than they normally would, including products of Grolsch. It is possible that, while having multiple products in the consideration set, the communication method had just that little bit of visual persuasion to convince customers to intentionally buy Grolsch products. Hence, the first fixation itself possibly does not influence preference for a brand, but influences the engagement with a brand by gate-keeping the alternative products that entered the consideration set. This is in line with previous findings stating that catching the first gaze of the consumer might be unnecessary (Orquin & Mueller-Loose, 2013; van der Laan, Hooge, de Ridder, Viergever, & Smeets, 2015). Perhaps retaining attention is more

important than making customers stop and take notice (Armel, Beaumel, & Rangel, 2008; Shimojo, Simion, Shimojo, & Scheier, 2003). Future research should investigate this further.

5.2. Limitations

An obvious limitation is the small number of respondents who actually saw the communication method. Many respondents have therefore not completed the entire questionnaire. As a result, the impact on brand awareness and purchase intention could not be measured as accurately. However, the fact that respondents did not notice the various communication methods is also interesting for Grolsch.

Moreover, we collected samples by convenience sampling. This could have caused under- or overrepresentation of groups within the populations. Besides, the location of the supermarket turned out to be a village with more elderly people and reformed people. The research was also conducted during the day, while the target group usually works. Together, this made it difficult to find respondents who belonged to Grolsch's target group. That is why we broadened the target group for this study. Nevertheless, this group still represents an interesting and important scope for Grolsch.

Another limitation concerns the shopping situation: in real life, you do not wear special glasses when choosing a specialty beer to buy. There is also no one to take you to the supermarket shelf. This may have led respondents to feel that they were being watched, which affected their eye movements and the time it took them to make a decision. In addition, some respondents made a decision very quickly compared to other respondents. This could be because they already knew what they wanted to choose to buy or that they did not have much time to complete the assignment in detail. A number of respondents also indicated that they expected something interesting to look at on the shelf. However, this did not cause them to notice any of the communication methods.

Other limitations mainly concern the stimulus material. In the questionnaire after-experiment, images of the stimulus material were shown to ask the respondents whether they had seen the corresponding communication method. These photos were blurry, as shown in Appendix III, so respondents could not see that the study was commissioned by Grolsch. It is possible that the photos were blurred too much, resulting in respondents not being able to recognize the corresponding communication method. However, it is also possible that respondents did recognize the communication method, but that they answered 'no' because they saw the progress bar in the questionnaire and perhaps should answer more questions.

Moreover, special trigger content with a motion sensor was used with the LCD screen and the Hypebox. How customers respond to this was not pre-tested before. The same applies to the content of

the communication methods, it may be that the images or the product itself were not attractive enough for customers to stop them and look at one of the communication methods.

As discussed earlier, the large assortment of specialty beers could also have had an impact on customers. Due to the excess of choice, customers may not have known where to look. Furthermore, the placement of the communication methods may have played a role. Because the static display as a communication method was used earlier, we placed the LCD screen and the Hypebox in the same place so that we could compare the communication methods. It is possible that the communication methods elsewhere, where it is more noticeable, would have generated more visual attention, for example closer to where you enter the aisle.

Lastly, the label on the left of the communication method, as can be seen in Figure 16, was removed for five of the fifteen respondents per shopping situation. This was because there was a probability that this would obstruct the view of respondents to see the communication method, see Appendix X. The removal of this label could have affected the validity of the study. In the end, however, it made no difference.



Figure 13. Label indicating 'Blond Bier'

5.3. Future research

Because of the non-significant results, much room for future research remains. First, only three types of communication methods were tested in this study. There are many more types of communication that can potentially affect customers' visual attention. It would be interesting to explore which types of communication are more effective than another. Moreover, the content of the communication method is essential. Future research should investigate which type of content is relevant, for example, to supermarket customers. One can argue that when customers do not have much time to do groceries, they are not willing to watch a video because it takes too much time.

Moreover, future research must investigate whether combining the communication with buying triggers, such as discounts or free samples, is (more) effective. It may not be enough to let the communication method stand alone. Customers may need something that makes them look at the communication method. It would therefore be interesting to explore this issue.

Furthermore, as stated earlier, it is possible that placing the communication method elsewhere could generate more visual attention, as demonstrated by the study by Chandon et al. (2009). Future research should investigate this issue. Hereby the size of the assortment must be taken into account. It could be argued that when the range is smaller, customers' visual attention could be greater because there is less to look at.

In addition, it appeared that when the communication method (i.e., LCD screen) had been on the shelf for some time, in our case from Saturday 8 February to Thursday 13 February, more Grolsch Tripel's were sold, namely eight, compared to the week before where only three were sold. Therefore, it is interesting for future research to put the communication method on the shelf for a week or so. It may be that repeated exposure of the communication method creates a more positive attitude towards the communication method. This is also known as Zajonc's (1968) mere exposure effect: people tend to develop a preference for things merely because they are familiar with them.

Moreover, the research was conducted at a Jumbo supermarket in a small village in the Dutch province of Gelderland. According to this Jumbo, most of its customers fall in the category of dual-income households, successful families (but very traditional / reformed), traditional elderly or well-off elderly. Because every supermarket in the Netherlands has different types of customers, multiple supermarkets must be involved when conducting research. It would also be interesting to investigate whether other Dutch supermarkets (i.e., Albert Heijn, Coop) produce different results. In addition, it could be that when conducting the same research in a stronghold, i.e. where the brand awareness of Grolsch is relatively high, the results are more effective because customers would recognize Grolsch as the brand commissioning the communication method. This would also be interesting to investigate.

6. Conclusion

The current study investigated the extent to which medium-richness of an advertising tool is effective on creating brand engagement (i.e., visual attention) to enhance brand awareness and purchase intention of supermarket customers. In order to examine this, hypotheses were formulated based on MRT. The expectation was that a high-rich medium (i.e., Hypebox using AR) would be more effective than a medium-rich medium (i.e., LCD-screen using video communication), and that a medium-rich medium would be more effective than a low-rich medium (i.e., static display using pictorial communication). In this research, 'effectiveness' covered the factors that establish customers' brand engagement in terms of visual attention, which in turn enhanced brand awareness and purchase intention. In addition, it was hypothesized that brand familiarity and distraction would act as moderators in the relationship between communication method and customer engagement (i.e., brand engagement through visual attention). The main research method was an eye-tracking experiment, which was conducted among supermarket customers. This experiment was enriched with two short questionnaires. In order to test all the hypotheses in SPSS, this study made use of Tobii Pro Lab and the PROCESS macro developed by Hayes (2013).

The results indicated that there is no statistical difference between the mediums (i.e., static display, LCD-screen, Hypebox). In addition, the effect of the mediums on brand awareness and purchase

intention was non-significant. Besides, brand engagement had no mediation effect on the relationships between communication method and the dependent variables, brand awareness and purchase intention. Moreover, the moderators, brand familiarity and distraction, did not significantly affect the relationship between communication method and customer engagement.

However, since not many respondents noticed the communication method, it can be argued that the use of in-store advertising tools in enhancing the brand awareness and purchase intention, need more than the richness of a tool itself. Placing one of the mediums on the shelf did not automatically attract attention and did not convey the message efficiently. Therefore, it can be suggested that MRT should be reconsidered to include a dimension of engagement to facilitate the communication method, rather than relying on communication method its ability.

Furthermore, it can be stated that despite the predictability of attention and eye movements, the evaluated decision only partially explained these processes. Time to first fixation appeared to correlate positively with purchase intention, brand engagement and affection. Hence, the first fixation itself possibly does not influence preference for a brand, but influence the engagement with a brand by gate-keeping the alternative products that entered the consideration set. In other words, catching the first gaze of the consumer might be unnecessary. Perhaps retaining attention is more important than making customers stop and take notice.

6.1. Recommendations for the use of in-store advertising tools

Overall, there does seem to be room for improvement in in-store advertising. The current study found that placing a rich medium (i.e., Hypebox using AR) on a supermarket shelf, does not automatically creates visual attention and brand engagement, thereby enhancing customers' brand awareness and purchase intention. Although the differences between the mediums (i.e., low-rich, medium-rich, high-rich) are not statistically significant, some recommendations for the use of in-store advertising tools can be given.

Because AR is a technology that is increasingly common today, but is not yet widely used in in-store advertising, it provides opportunities for marketers. However, advertising tools that use AR must be facilitated through engagement and not stand alone. Therefore, marketers need to investigate and test how customers can become more engaged with the advertising tool. This can be done, for example, by combining the advertising tool with discounts or free samples.

In addition, careful thought must be given to the content of such an advertising tool. For example, in this case study, it is possible that because of the large specialty beer assortment of the supermarket,

customers may not have known where to look due to the excess of choice. Therefore, the content of an advertising tool must be adapted to the environment in such a way that the advertising tool stands out. Also, in this study, the content was not pre-tested, so the content may not have been attractive enough for customers to stop them and look at one of the communication methods. Marketers must therefore take this into account.

Furthermore, an advertising tool using AR should probably fit with the store and its customers. Although using AR is becoming more common, many residents of environments, such as small villages, are probably less likely to engage with the advertising tool because they are less comfortable with it than residents of a capital. This needs to be investigated further.

6.2. Practical and academic implications

This research has explored a novel subject, providing unexpected but interesting results. It provides practical evidence on how AR works in a retail context, and that designing an advertising tool that uses AR is not all there is. There are more factors to consider to make it more attractive to customers, such as the content of the advertising tool and its placement, in order for customers to notice the advertising tool. In addition, findings indicate that it may not be necessary to catch the customers' first gaze. Rather than making people stop and take notice, marketers should focus on retaining customers' attention.

Moreover, this research is relevant for academic purposes because of its various directions for future research. In particular, research into adding an extra dimension to MRT and how it would affect rich-mediums, such as mediums using AR, and combining advertising tools with buying triggers, such as discounts or free samples, could be important directions.

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Appendix I: Demographics of respondents

Table 11

Demographics of respondents

		Sample characteristics					
		Static display		LCD-screen		Hypebox	
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Gender							
	Male	9	60%	9	60%	9	60%
	Female	6	40%	6	40%	6	40%
Age							
	< 25	4	27%	5	33%	4	27%
	25-30	3	20%	5	33%	3	20%
	31-35	3	20%	2	13%	2	13%
	36-40	2	13%	1	7%	3	20%
	41-45	1	7%	2	13%	0	0%
	46-50	1	7%	0	0%	1	7%
	> 50	1	7%	0	0%	2	13%
Drink alcoholic beverages							
	Wine	9	60%	12	80%	10	67%
	Beer	15	100%	15	100%	15	100%
	Specialty beer	13	87%	13	87%	11	73%
	Radler	8	53%	8	53%	9	60%
	Liquor	7	47%	11	73%	6	40%
	Mixed	6	40%	8	53%	6	40%
	I do not drink alcoholic beverages	0	0%	0	0%	0	0%
Buy beer in supermarket							
	Less than once a month	2	13%	3	20%	3	20%
	Once a month	2	13%	4	27%	4	27%
	Once in two weeks	6	40%	3	20%	6	40%
	Once a week	3	20%	2	13%	1	7%
	A few times a week	2	13%	3	20%	1	7%
Drink specialty beer							
	Less than once a month	2	15%	4	31%	1	9%
	Once a month	3	23%	3	23%	4	36%
	Once in two weeks	2	15%	0	0%	2	18%
	Once a week	3	23%	4	31%	0	0%
	A few times a week	3	23%	2	15%	4	36%
Buy specialty beer in supermarket							
	Less than once a month	3	23%	5	38%	4	36%
	Once a month	3	23%	4	31%	3	27%
	Once in two weeks	5	38%	1	8%	3	27%

Once a week	1	8%	2	15%	1	9%
A few times a week	1	8%	1	8%	0	0%
<i>Familiar with Grolsch</i>						
Never heard of it	1	7%	0	0%	0	0%
Ever heard of it, but never tried	0	0%	0	0%	1	7%
Heard a lot, but never tried	2	13%	3	20%	0	0%
I have tried this brand once	9	60%	9	60%	14	93%
I drink this brand mostly or regularly	3	20%	3	20%	0	0%
<i>When buying specialty beer</i>						
I always make a list	0	0%	1	7%	1	7%
I have a fixed/favorite beer	4	27%	6	40%	7	47%
I let myself be seduced in the store	7	47%	5	33%	8	53%
I look at what is on offer	5	33%	4	27%	7	47%
I only buy beer from famous brands	2	13%	2	13%	1	7%
I am always looking for new beers	4	27%	2	13%	3	20%
I am advised by information at the shelf	1	7%	1	7%	1	7%
I often buy specialty beers that can be found on display outside of the shelf	0	0%	0	0%	1	7%
I take the season into account	5	33%	7	47%	6	40%
I am looking for beautiful packaging	0	0%	2	13%	1	7%
Otherwise	2	13%	1	7%	0	0%

Appendix II: Supermarket shelf

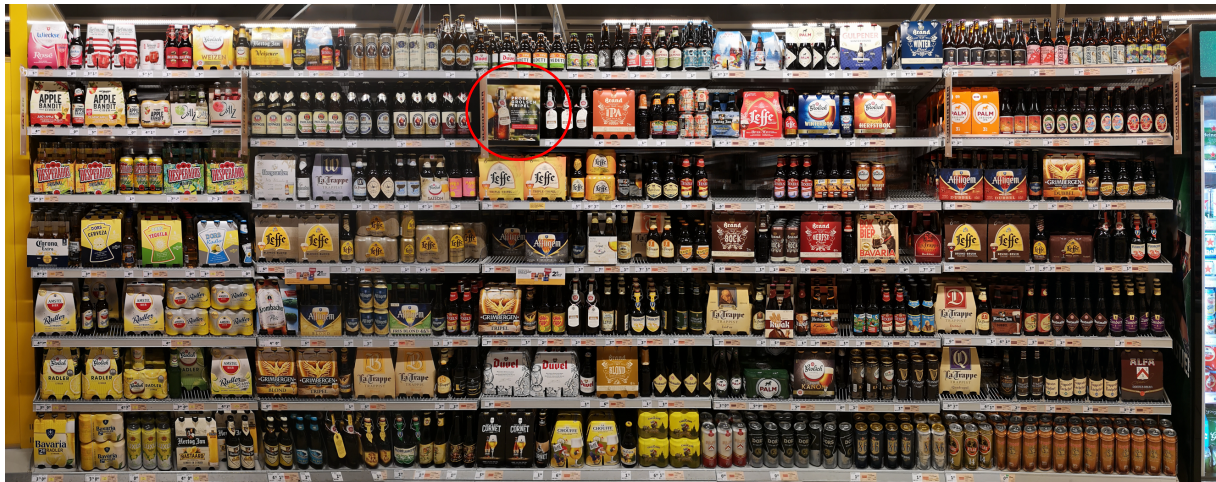


Figure 14. Static display on the supermarket shelf

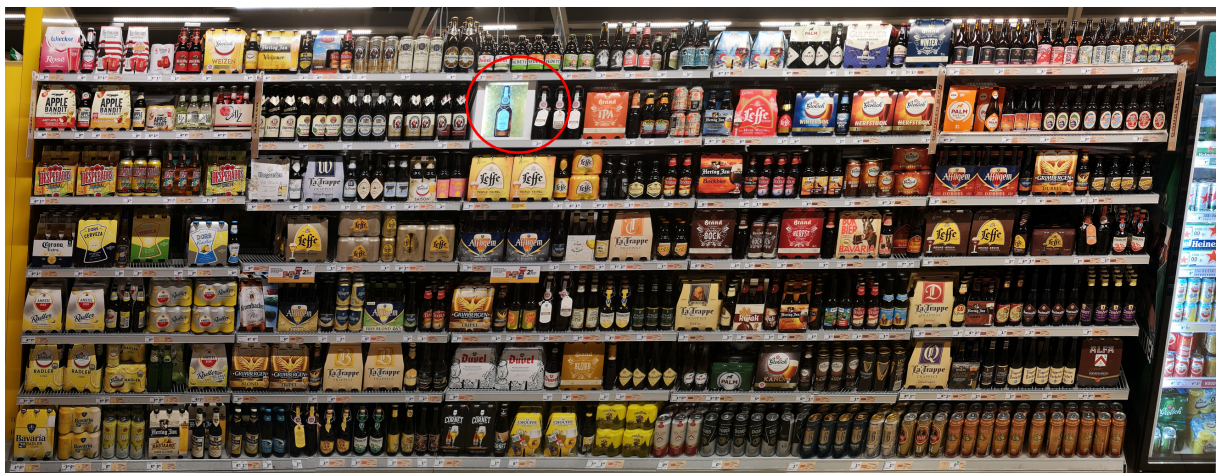


Figure 15. LCD-screen on the supermarket shelf



Figure 16. Hypebox on the supermarket shelf

Appendix III: Stimulus materials

Note. Left: stimuli developed for experiment, right: stimuli blurred for questionnaires



Figure 17. Hypebox

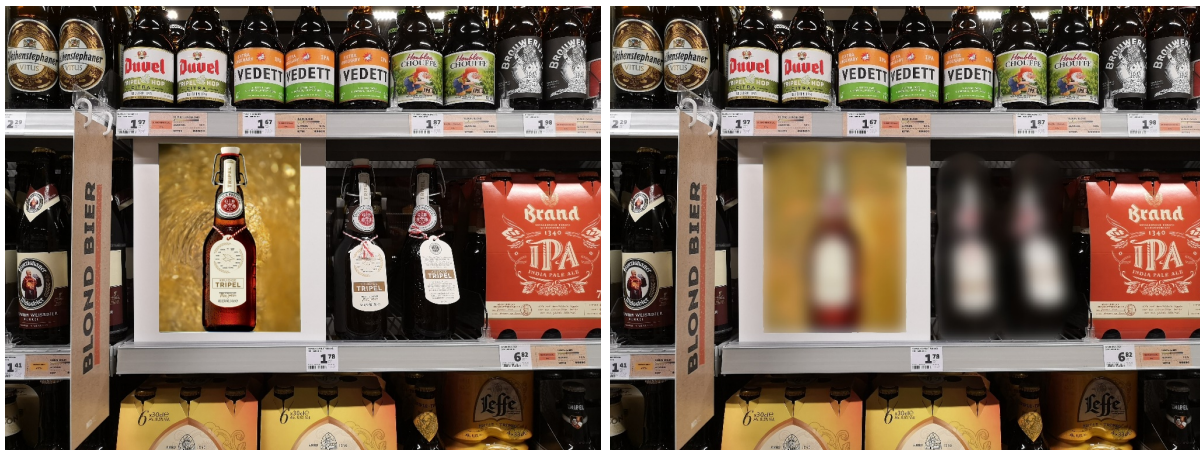


Figure 18. LCD-screen

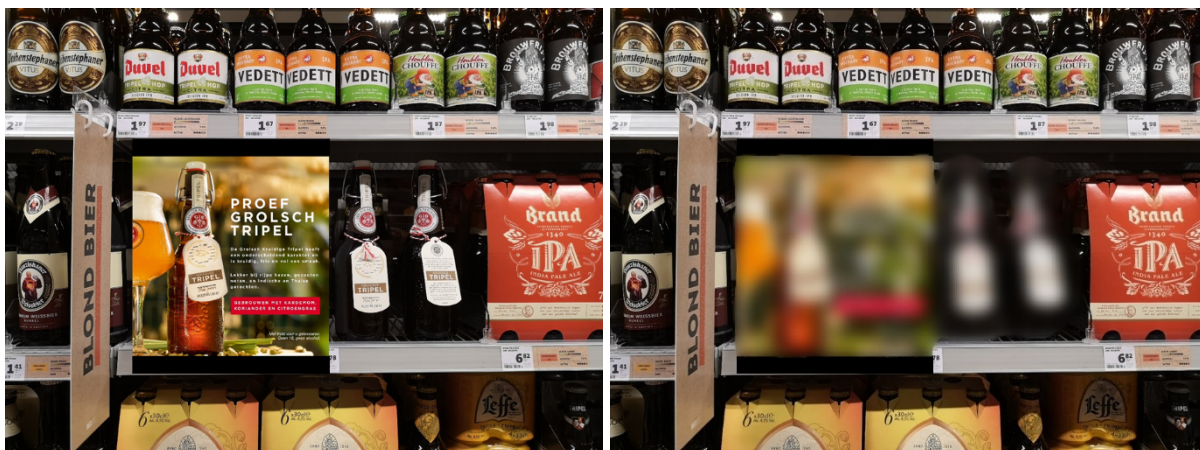


Figure 19. Static display

Appendix IV: Brand message



Figure 20. Taste web of Grolsch Kruidige Tripel

Appendix V: Measurement scales

Table 12

Measurement scales for the questionnaires and eye-tracking experiment

Construct	Source	Questionnaire items (before/after)	Eye-tracking
Brand familiarity	Self-developed	How familiar are you with (the following) specialty beer brands? - Affligem - Bavaria - Brand - Duvel - Grimbergen - Grolsch - Hertog Jan - La Chouffe - La Trappe - Leffe	<ul style="list-style-type: none"> Focus more on the featured product within the communication method than the communication method itself
Distraction	Self-developed	Do you think that the advertising tool distracts from the message that Grolsch wants to convey?	<ul style="list-style-type: none"> Focus more on the communication method or other visual cues than the featured product within the communication method
Visual attention	Self-developed, Zaichkowsky (1994)	Did you notice the advertising tool? What do you think of this communication method? - Unimportant – important - Boring – interesting - Irrelevant – relevant - Inconspicuous – prominent - Unappealing – appealing - Mundane – fascinating - Unexciting – exciting - Worthless – valuable - Uninvolving – involving - Not needed – needed - Inefficient – efficient	<ul style="list-style-type: none"> Look at advertising tool for a long time Stopping power of advertising tool
Brand engagement - <i>Cognitive processing (CP)</i>	Hollebeek et al. (2014)	<i>CP1</i> Noticing the advertising tool gets me to think about Grolsch. <i>CP2</i> I think about Grolsch a lot when I'm noticing the advertising tool. <i>CP3</i> Noticing the advertising tool stimulates my interest to learn more about Grolsch.	<ul style="list-style-type: none"> Look at featured product within the communication method for a long time Look at Grolsch products Look at other beer brands than Grolsch

- <i>Affection (AF)</i>		<p><i>AF1</i> I feel very positive about Grolsch when I notice the advertising tool.</p> <p><i>AF2</i> Noticing the advertising tool from Grolsch makes me happy.</p> <p><i>AF3</i> I feel good when I notice the advertising tool from Grolsch.</p> <p><i>AF4</i> I'm proud to use Grolsch when I notice the advertising tool.</p>	
- <i>Activation (AC)</i>		<p><i>AC1</i> I spend a lot of time noticing advertisements from Grolsch, compared to noticing advertisements of other beer brands.</p> <p><i>AC2</i> Whenever I'm being exposed to advertisements of beer brands, I usually notice Grolsch.</p> <p><i>AC3</i> Grolsch is one of the brands I usually notice when I'm exposed to advertisements of beer brands.</p>	
Brand awareness <i>Before</i>	Self-developed		<ul style="list-style-type: none"> • Look at specialty beer brands • Look at featured product within communication method
- <i>Brand knowledge</i>		When you think of specialty beer, what brand comes to mind?	
- <i>Brand choice</i>		Which brand would you choose when you would like to buy specialty beer?	
<i>After</i>			
- <i>Brand recall</i>		Which specialty beer brands have you noticed?	
- <i>Brand recognition</i>		Do you remember which brand was advertised within the communication method?	
Purchase intention	Self-developed	To what extent does seeing the advertising tool invite you to buy Grolsch?	<ul style="list-style-type: none"> • Put specialty beer in basket

Note. Every item was translated to Dutch for the actual study to accommodate respondents' mother language.

Appendix VI: Questionnaire pre-experiment

Welkom bij het eerste deel van het eye-tracking onderzoek

Fijn dat je mee wilt doen aan dit onderzoek.

Mijn naam is Jill en ik studeer Communication Science aan de Universiteit Twente.

Voor mijn afstuderen onderzoek ik de beleving van het bierschap in een supermarkt. De methodes die ik hiervoor ga gebruiken zijn eye-tracking en twee korte enquêtes (vóór en na de eye-tracking).

Het onderzoek zal ongeveer 15 minuten duren. Om de eye-tracking opdracht uit te voeren krijg je geld om een product te kopen. Het product mag je uiteindelijk houden.

We beginnen het onderzoek met het invullen van een korte vragenlijst. Dit duurt maximaal 5 minuten.

Denk eraan dat er geen goede of foute antwoorden zijn. Ik ben gewoon benieuwd naar je mening.

Wanneer je iets niet begrijpt, aarzel dan niet om de onderzoeker aan te spreken.

Alvast bedankt voor je medewerking!

- Ik geef toestemming en wil verder gaan met dit onderzoek
- Ik geef geen toestemming en beëindig hiermee mijn deelname aan dit onderzoek

1. Wat is je geslacht?

- Man
- Vrouw
- Anders

2. Wat is je leeftijd?

3. Welke alcoholische dranken drink je?

- Wijn
- Bier/pils
- Speciaalbier
- Radler
- Sterke drank
- Mixdrank
- Ik drink geen alcoholische dranken

Er zullen nu een paar vragen gesteld worden over het product wat centraal staat in dit onderzoek: bier.

4. Hoe vaak koop je bier/pils in de supermarkt?

- Een paar keer per week
 - Een keer per week
 - Een keer per twee weken
 - Een keer per maand
 - Minder dan een keer per maand
-

5. Hoe vaak drink je speciaalbier?

→ *Only displayed when Speciaalbier is selected*

- Een paar keer per week
- Een keer per week
- Een keer per twee weken
- Een keer per maand
- Minder dan een keer per maand

6. Hoe vaak koop je speciaalbier in de supermarkt?

→ *Only displayed when Speciaalbier is selected*

- Een paar keer per week
 - Een keer per week
 - Een keer per twee weken
 - Een keer per maand
 - Minder dan een keer per maand
-

7. Als je aan speciaalbier denkt, aan welk(e) merk(en) denk je dan?

8. Heb je weleens gehoord van de volgende speciaalbiermerken?

	Nog nooit van gehoord	Weleens van gehoord, maar nog nooit geprobeerd	Veel van gehoord, maar nog nooit geprobeerd	Ik heb dit merk weleens geprobeerd	Ik drink dit merk meestal of regelmatig
Affligem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bavaria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duvel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grimbergen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grolsch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hertog Jan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La Chouffe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La Trappe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leffe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Voor welk merk zou je kiezen wanneer je speciaalbier zou willen kopen?

10. Welk(e) van onderstaande stelling(en) zijn voor jou van toepassing bij het kopen van speciaalbier?

Er zijn meerdere antwoorden mogelijk (max. 3).

- Ik maak altijd een lijstje
- Ik heb een vast/favoriet bier
- Ik laat me verleiden in de winkel
- Ik kijk wat in de aanbieding is
- Ik koop alleen bier van bekende merken
- Ik ben altijd op zoek naar nieuwe bieren
- Ik laat me adviseren door informatie bij het bierschap
- Ik koop vaak speciaalbier dat buiten het schap op display te vinden is
- Ik houd rekening met het seizoen
- Ik ben op zoek naar mooie verpakkingen
- Anders, namelijk: _____

Bedankt voor het invullen van de enquête.

Dit is het einde van het eerste onderdeel. We gaan nu verder met het volgende gedeelte van het onderzoek.

Ben je geïnteresseerd in de resultaten of heb je vragen over dit onderzoek? Dan kun je contact opnemen met dit e-mailadres: j.wychgel@student.utwente.nl.

Instructies eye-tracking (MONDELING)

Nu je de eerste paar vragen hebt beantwoord, wordt er speciale eye-tracking bril bij je opgedaan. Deze bril zal registreren wat je ziet.

Voordat we naar het bierschap gaan wil ik je vragen om naar het midden van dit papiertje te kijken zodat je ogen aan de bril kunnen wennen.

Nu je de eye-tracking bril op hebt, zou ik je willen vragen om een opdracht uit te voeren. Het is hierbij belangrijk dat je langs het bierschap loopt zoals je dat normaal zou doen. De opdracht houdt in dat je naar het bierschap loopt en een speciaalbiertje in je mandje doet die je zou willen kopen.

Wanneer je dit hebt gedaan, zal de onderzoeker de eye-tracking bril bij je afdoen. Daarna kun je de laatste enquête in te vullen. Het bier waar je voor gekozen hebt om te kopen mag je aan het eind van het onderzoek houden. Hiervoor krijg je €7,50. De opdracht is dus:

Ga naar het bierschap en koop een speciaalbiertje.

Appendix VII: Questionnaire after-experiment

Welkom bij het laatste deel van het eye-tracking onderzoek

Bedankt voor je medewerking tot nu toe.

Net als vóór de eye-tracking opdracht zou ik je willen vragen om een korte vragenlijst in te vullen. Dit duurt nog enkele minuten.

Denk eraan dat er geen goede of foute antwoorden zijn. Ik ben gewoon benieuwd naar je mening.

Wanneer je iets niet begrijpt, aarzel dan niet om de onderzoeker aan te spreken.

1. Welke speciaalbiermerken heb je gezien in het bierschap?

Speciaalbiermerk 1 _____

Speciaalbiermerk 2 _____

Speciaalbiermerk 3 _____

2. Je hebt een speciaalbier uitgekozen om te kopen. Zou je deze normaal gesproken ook kopen?

- Zeer waarschijnlijk
- Waarschijnlijk
- Noch waarschijnlijk noch onwaarschijnlijk
- Onwaarschijnlijk
- Zeer onwaarschijnlijk

3. Wat zijn de voornaamste redenen dat je dit speciaalbier hebt uitgekozen om te kopen?

Er zijn meerdere antwoorden mogelijk (max. 3)

- | | |
|--|--|
| <input type="checkbox"/> Ik koop het wel vaker | <input type="checkbox"/> Omdat het duurzaam is gebrouwen |
| <input type="checkbox"/> Vanwege een aanbieding | <input type="checkbox"/> Vanwege de informatie bij het bierschap |
| <input type="checkbox"/> Voor de afwisseling | <input type="checkbox"/> Vanwege het alcoholpercentage |
| <input type="checkbox"/> Om iets nieuws te proberen | <input type="checkbox"/> Goede prijs/kwaliteit verhouding |
| <input type="checkbox"/> Omdat ik het lekker vind | <input type="checkbox"/> Vanwege de verpakking |
| <input type="checkbox"/> Omdat ik vaker voor dit merk kies | <input type="checkbox"/> Anders, namelijk: _____ |
| <input type="checkbox"/> Van een kleine brouwerij | |

4. Voor welke gelegenheid heb je dit speciaalbier uitgekozen om te kopen?

- | | |
|---|---|
| <input type="radio"/> Als kleinigheid bij bezoek aan vrienden/familie | <input type="radio"/> Voor vrienden/familie op bezoek bij mij |
| <input type="radio"/> Voor mezelf (doordeweeks) | <input type="radio"/> Voor mezelf (weekend) |
| <input type="radio"/> Een feestje/verjaardag elders dan thuis | <input type="radio"/> Een feestje/verjaardag bij mij thuis |
| <input type="radio"/> Gewoon om het op voorraad te hebben | <input type="radio"/> Andere gelegenheid, namelijk: _____ |

De volgende vragen gaan over de advertentie die te zien was in het bierschap.

5*. Heb je een transparant scherm met video (opstelling 1) / een TV-scherm (opstelling 2) / een kartonnen display (opstelling 3) gezien? Zie de foto hieronder.

- Ja, dit heb ik gezien
- Nee, mij is niets opgevallen → End questionnaire

** This question differs per setup (1, 2, or 3) that is being tested during the experiment. In addition, an illustration of the setup is displayed (Appendix II, illustrations on the right). Here Grolsch's appearances are blurred.*

Furthermore, in the remainder of the questionnaire, the word 'communicatiemiddel' is replaced by the corresponding setup.

6. Wat vind je van deze manier van adverteren?

	1	2	3	4	5	6	7	
Onbelangrijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Belangrijk
Saai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Interessant
Irrelevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relevant
Onopvallend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prominent
Onaantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aantrekkelijk
Gewoon/alledaags	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fascinerend
Niet opwindend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Opwindend
Waardeloos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Waardevol
Ontmoedigend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bemoedigend
Onnodig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Nodig
Inefficiënt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Efficiënt

7. Weet je nog welk biermerk werd geadverteerd met behulp van het communicatiemiddel?

- Ja, namelijk: _____
- Nee

Het biermerk waarmee werd geadverteerd is Grolsch.

Nu volgen enkele stellingen over het communicatiemiddel dat je hebt gezien en Grolsch.



8. In hoeverre ben je het eens met de volgende stellingen?

	Helemaal niet mee eens	Enigszins mee oneens	Noch eens noch oneens	Enigszins mee eens	Helemaal mee eens
Het zien van het communicatiemiddel zorgt ervoor dat ik ga denken over Grolsch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik denk meer aan Grolsch bij het zien van het communicatiemiddel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het zien van het communicatiemiddel maakt mij meer geïnteresseerd in Grolsch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. In hoeverre ben je het eens met de volgende stellingen?

	Helemaal niet mee eens	Enigszins mee oneens	Noch eens noch oneens	Enigszins mee eens	Helemaal mee eens
Ik heb positieve gevoelens over Grolsch na het zien van het communicatiemiddel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het zien van het communicatiemiddel van Grolsch maakte mij blij.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voelde mij goed toen ik het communicatiemiddel van Grolsch zag.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben er trots op om Grolsch te drinken bij het zien van het communicatiemiddel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. In hoeverre ben je het eens met de volgende stellingen?

	Helemaal niet mee eens	Enigszins mee oneens	Noch eens noch oneens	Enigszins mee eens	Helemaal mee eens
Ik besteed veel tijd aan het bekijken van advertenties van Grolsch in vergelijking met het kijken naar advertenties van andere biermerken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wanneer ik word blootgesteld aan advertenties van biermerken, valt Grolsch mij meestal op.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grolsch is een van de merken die mij meestal opvalt als ik te maken krijg met advertenties van biermerken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Vind je het communicatiemiddel passen bij Grolsch?

- Zeker passend bij Grolsch
- Passend
- Noch passend noch niet passend
- Niet passend
- Helemaal niet passend

12. Vind je dat het communicatiemiddel afleidt van de boodschap die Grolsch wil overbrengen?

- Helemaal niet
- Nauwelijks
- In redelijke mate
- In hoge mate
- In zeer hoge mate

13. In hoeverre nodigt het zien van het communicatiemiddel in het bierschap je uit om Grolsch te kopen?

- Zeer uitnodigend
- Heel uitnodigend
- Matig uitnodigend
- Enigszins uitnodigend → End questionnaire
- Totaal niet uitnodigend → End questionnaire

14. Welk(e) Grolsch-product(en) zou je dan kopen?

Er zijn meerdere antwoorden mogelijk.

- Grolsch Premium Pilsner
 - Grolsch Radler (0.0% of 2.0%)
 - Grolsch Speciaalbier
 - Grolsch Alcoholvrij
-

Dit is het einde van het onderzoek. Bedankt voor je deelname!

Je kunt de tablet teruggeven aan de onderzoeker.

Ben je geïnteresseerd in de resultaten of heb je vragen over dit onderzoek? Dan kun je contact opnemen met dit e-mailadres: j.wychgel@student.utwente.nl.

Afsluiting (MONDELING)

Bedankt voor je medewerking. Je kunt nu je product afrekenen. Als bedankje voor je deelname heb ik hier nog een kleinigheidje.

In dit onderzoek werden er drie opstellingen getest in het schap:

- een kartonnen display;
- een TV-scherm;
- een transparant scherm met video (Hypebox).

Bij elke opstelling werd dezelfde merkboodschap gecommuniceerd zodat de communicatiemiddelen met elkaar vergeleken konden worden. Elke deelnemer werd blootgesteld aan één opstelling.

Daarnaast was het belangrijk dat je vooraf niet wist dat het onderzoek werd uitgevoerd door Grolsch. Dit werd daarom aan het einde pas verteld. Mocht je je willen terugtrekken uit dit onderzoek, dan kan dit nog steeds.

Appendix VIII: List of products

Table 13

List of which product each respondent has chosen to buy

Deelnemer	Product	Verpakking	Communicatiemiddel gezien n.a.v. questionnaire
1	La Chouffe	Fles	X
2	Kona Hanalei Island IPA	Fles	X
3	Liefmans Fruitesse	Fourpack fles	
4	Desperados Original	Sixpack fles	
5	N'ice Chouffe	Fourpack fles	
6	La Trappe Blond	Sixpack fles	
7	Desperados Original	Sixpack fles	
8	Floreffe Dubbel	Fles	
9	Affligem Fris Blond	Fles	
10	Thai Thai Tripel	Fles	X
11	Grolsch Herfstbok	Sixpack blik	X
12	N'ice Chouffe	Fourpack fles	
13	Grolsch Tripel	Fles	X
14	N'ice Chouffe	Fourpack fles	X
15	N'ice Chouffe	Fourpack fles	
16	N'ice Chouffe	Fourpack fles	
17	Desperados Original	Sixpack fles	
18	Cuvée des Trolls Dubuisson	Fles	
19	Bavaria Bok Bier	Sixpack fles	
20	Wieckse Rosé	Sixpack fles	
21	Desperados Original	Sixpack fles	
22	Grimbergen Tripel	Sixpack fles	
23	Leffe Tripel	Sixpack fles	
24	La Trappe Blond	Sixpack fles	X
25	La Chouffe	Fourpack fles	
26	Leffe Blond	Sixpack fles	X
27	Duvel Tripel Hop Citra	Fles	
28	Kasteel Donker	Fles	X
29	Löwen Weisse Hefe-Weissbier	Fles	
30	Grolsch Weizen	Sixpack fles	X
31	Liefmans Fruitesse	Fourpack fles	X
32	Leffe Blond	Sixpack fles	X
33	Bavaria Bok Bier	Sixpack fles	
34	Desperados Mojito	Sixpack fles	
35	BrewDog Punk IPA	Fles	
36	Duvel Tripel Hop Citra	Fles	
37	La Chouffe	Fourpack fles	X
38	Affligem Dubbel	Sixpack fles	
39	La Chouffe	Fourpack fles	
40	Grolsch Tripel	Fles	
41	Leffe Winterbier	Sixpack fles	X
42	Leffe Blond	Sixpack fles	X
43	La Chouffe	Fourpack fles	
44	La Chouffe	Fourpack fles	
45	Hertog Jan Karakter	Fourpack fles	

Appendix IX: Areas of interest (AOI's)



Figure 21. AOI's for the static display

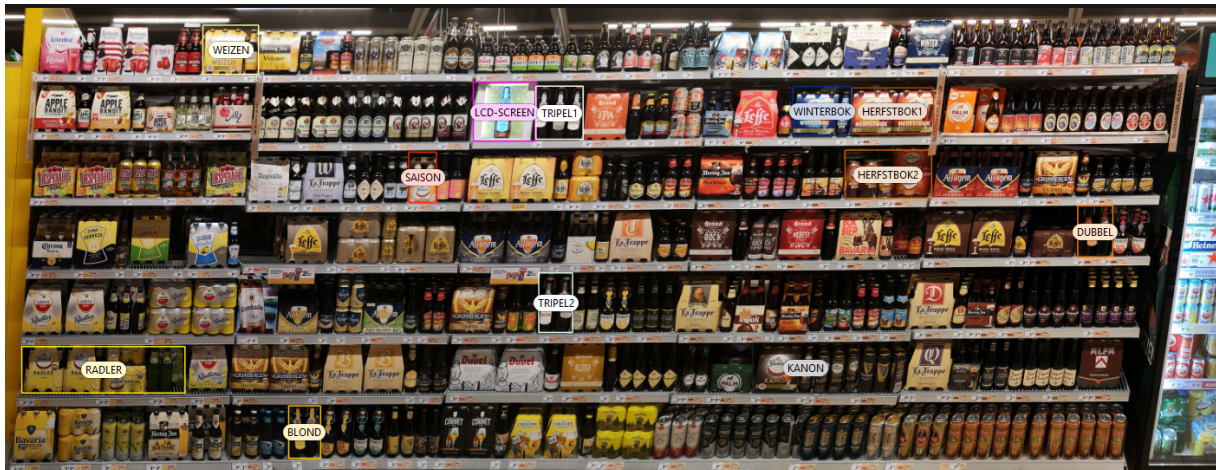


Figure 22. AOI's for the LCD-screen



Figure 23. AOI's for the Hypebox

Appendix X: View of respondents



Figure 24. View of respondents when performing eye-tracking assignment