Consuming augmented reality marketing
- A qualitative study of user experiences

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Today, the use of digital technology in marketing is rapidly growing in importance and in size; the use of online video, social media and digital applications are becoming more and more popular. However, because there are so many ways of doing marketing digitally, they are constantly under the threat of over-proliferation. In other words, the Internet, which in itself is a medium cluttered with information, is being cluttered with online advertising which still applies marketing techniques from more traditional marketing (i.e. “push marketing”). Such techniques are, however, often unsuited for the digital environment.

This thesis examined the use of a new digital marketing technique, augmented reality marketing (ARM), and investigated user experiences with AR advertising content. The aim was to collect data and observations about authentic user experiences by showing the study participants various AR ads. This was done to examine how consumers experience ARM content to understand how ARM could be used best with the user in mind and avoid being another cluttering online marketing technique. The studied population was young, digitally-savvy consumers. This population was selected because such consumers are seen not only as early adopters and active users of technology but also contributors to eWOM through, for example, social media websites. The empirical study, which was qualitatively orientated, used interviewing and observation as the main data collection methods. The data that was collected from 8 in-depth interviews was analyzed with a content analysis.

The results showed that experiences were highly subjective and varied from respondent to respondent. The study used five (5) pre-identified characteristics (interactivity, vividness of content, user participation, user control, and absorption of user) as the basic framework through which the experiences were studied; these characteristics were discussed and observed in all of the respondent interviews. Almost all of the interviews indicated a specific learning curve towards the AR content. In the beginning, the respondents were often “wow-ed” by the technology and the content expressing excitement and joy, which was followed by a state where they started to pay closer attention to what was actually in the content. Finally, the respondents became more critical towards the content and expressed signs of boredom and in some cases frustration. In addition to the learning curve, the experiences took place on three levels, often simultaneously: behavioral level, cognitive level, and affective level.

The contributions of this study are in large part managerial. The implications include e.g. that there should be more in-depth consideration of the user experience while designing ARM content, the usability of the content/device should be improved, better user control should be enabled, and the designed content should attempt to be highly realistic in appearance.

**Keywords:** Consumer experience, augmented reality, digital marketing, digital natives
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1 INTRODUCTION

Digital advertising is a tricky business. When the Internet first became popular amongst mass audiences, its possibilities to marketers seemed endless. More recently, however, the proliferation of advertisement on the Internet has caused many consumers to avoid online advertisement all together. Cho and Cheon (2004:89) describe this as the “cluster-bomb” referring to the enormous quantity of Interned ads that exist today; the authors (2004) continue to state that the cluster-bomb is one of the main reasons why consumer responsiveness to Internet advertising is on the decline. Perhaps under the most scrutiny are online display advertisement such as pop-ups and banner ads where the click-through rates are continuously dropping. It is said that people are experiencing banner blindness, which refers to the active avoidance of looking at anything that looks like banner advertisement (Cho and Cheon 2004; Lovell 2009).

Due to the increasing unpopularity of the more traditional types of online advertising (e.g. banners, pop-ups and such), marketers have had to approach the issue in other, more innovative ways. Technological advances have been of great importance in this process. Increased computer capabilities, portable devices, and high-speed Internet connections have facilitated the introduction of innovative digital marketing techniques – such as mobile and tablet computer applications – that were non-existent a decade or so ago.

Even though the effectiveness of online advertising as a whole is at times questioned, e.g. because of its cluttering effect (e.g. Clemons 2009), the online video advertising market, for instance, is expected to grow in the coming years. The spending in online video is projected to increase to approximately $2.1 billion during 2011 (Klejna 2011). A similar trend is evident in another novel type of digital advertising – augmented reality – where associated revenues are expected to grow from $6 million in 2008 to over $350 million in 2014, according to ABI Research (2009). Furthermore, social media marketing, mobile marketing, and search engine marketing, which are all new digital marketing techniques, are also expected to increase their effectiveness as tools for advertising in the coming years (Reynolds 2010).

In addition to the ability to offer various new techniques, a highlighted trend in the world of digital marketing is how these techniques can be used to their full potential. Some of these ways include increased interactivity between the user and the content,
increased vividness of the content, and user absorption which are aimed at adding experiential value for the user (e.g. Wu 2006; Owyang 2010; Benjamin 2011). In fact, in scholarly marketing discussion – both traditional and digital – these features have become extensively popular in the last two decades (e.g. Pine II and Gilmore 1998; Schmitt 1999; Schmitt 2003; Mollen and Wilson 2010).

The fact that between 2010 and 2015, according to Cisco Systems’ Global IP Traffic Forecast 2010-2015, the estimated global device growth in tablet computers is expected to be approximately 750% and in smart phones 194%, plays a key role in the increasing popularity of marketing that is not only digital, but portable and interactive. This increased popularity is directly linked to the nature of using such handheld mobile devices; consumers interact with them, experience content through them, and are absorbed into playing and tinkering with them without being bound by a specific location. Especially considering the next generation of consumers, it is important to acknowledge that they will grow up into a world of technology where they will be “well-versed at touching, flicking and swiping screens to achieve what they want” (Thorniley 2010). However, not only is the next generation important but it is also crucial to consider the so-called “digital natives” who are today’s young adults who were born to a world where digital technologies existed and who possess more advanced expectations of the role of technology in their lives (Cunningham 2009). The digital natives are young adults in their late teens, 20s and early 30s who live much of their lives online and do not make separations between their online and offline identities (Palfrey and Gasser 2008).

Thus, in digital marketing, the consumer is at the center stage consuming, absorbing, and experiencing advertised content – and in many ways in a controlling position towards the content choosing what to see, and how and when to see it. However, even though there is extensive focus on the customer in marketing literature, the issue is often addressed strategically from the managerial side. A frequently used approach is the “how-to” one, which means that the question being asked is for example “how to sustain the customer experience” (Gentile, Spiller, and Noci 2007), “how to build loyalty” (Berry and Carbone 2007), or “how to carry out experiential marketing” (Schmitt 1999).

But when it comes to the consumer, there seems to be a problem. The managerial focus means that from the consumer perspective the approach is from the outside-in, from the company to the consumer. In other words, companies plan and implement
strategies which are expected to yield a certain result in regards to the consumer. The process, however, is not always that straightforward. Companies can, for example, create means for excellent customer service but it is ultimately up to the consumer to decide whether the service was, in fact, excellent or not. Naturally the consumer is an essential part of the research when companies or scholars design their “how-to’s” but the consumer opinion, which can be multilayered and complex, is often reduced to means and formulas due to quantitative reporting standards.

But, just like in assessing good customer service, many studies claim that it is ultimately up to the consumer how they subjectively assess and experience an advertisement in relation to their consumer history and socio-cultural environment (e.g. Mick and Buhl 1992). Therefore, for marketers the attempt to understand the subjective experience of the consumer in relation to any marketing content is highly important, because the experience could be vastly different or unexpected from what the marketer had anticipated.

Furthermore, when considering the population that is one of the most active users and the earliest adopters of digital technology in today’s world (Mchaney 2011), the digital natives, it is especially important to understand how consumers belonging to this group experience marketing, especially digital marketing. It is said that the consumption of digital content by the digital natives is characterized by rapid pace and simultaneous multitasking (e.g. Palfrey and Gasser 2008) which indicates that capturing the attention of this particular consumer group can be challenging. However, they are an important segment to consider for all marketers not only because of their early adoption behavior but also because they are likely to share their thoughts and experiences off and online, e.g. through social networking websites. Mchaney (2011:17) notes that “although most early adopters are not risk takers in all areas of their lives, they are willing to enthusiastically plunge into new technologies and share their experiences with friends and peers”. Thus, their contribution in both traditional and electronic word-of-mouth makes them an important consumer segment to consider.

To conclude, the primary goal of this thesis is to bridge the gap in knowledge about consumer experiences with digital marketing by acquiring in-depth knowledge about them from the consumer perspective. To be specific, the consumer experience will be approached from the viewpoint of the digital natives. The experiences will be examined in relation to one specific digital marketing technique, which is called augmented reality marketing (ARM). Augmented reality technology, which is explained in more
detail in Chapter 2.2., is a new tool where digital devices create a "layer" between the real world and the user. ARM has been chosen as the focus of the advertising experience investigation due to the interesting potential this type of marketing has to offer. Because AR technology is typically used with portable devices, it applies high levels of interactivity, active participation of the user, and control from the user towards the digital device and content, which make it an interesting mode to study in the world of digital marketing. In fact, many marketing authors believe that the way out of the “cluster-bomb” is to increase interactivity and participation of the consumer in the online marketing process and to offer them engaging digital experiences (e.g. Pine II and Gilmore 1998; Wise et al. 2008; Owyang 2010; Hofmeister-Toth and Nagy 2011).

1.1. Research problem

As was mentioned in the introduction, the digital world seems to offer an endless array of opportunities for marketing; however, not all of these opportunities have been as successful as was originally hoped for. Many digital marketing tools have faced the challenge of being categorized under the “cluster-bomb” label (Cho and Cheon 2004:89). Especially those tools that employ techniques from more traditional types of advertising (i.e. “push” marketing) seem to be facing challenges online (Clemons 2009). Augmented reality marketing is a new tool in the digital marketing mix that attempts to approach marketing in a way more suited for the online space rather than using techniques from traditional marketing. ARM, however, has only been in use in digital marketing for the last 5 years or so which means that it is new both for academics and marketers. Thus, to avoid falling into the “cluster-bomb” category and to understand how it could be used to its full potential keeping the user perspective in mind, it is important to examine how consumers, especially young and digitally-savvy consumers experience the use of augmented reality technology in digital marketing.

To be specific, the issue chosen to be examined is the experiences of digital natives with the consumption of augmented reality marketing where certain characteristics are assumed to have an effect on the overall experience. These characteristics are interaction with and control over the content and the digital device, absorption into the content, vividness of the content, and active participation into the creation of the experience. These specific characteristics have been identified by the author after an extensive review into related literature in the fields of marketing and information systems science. Although the study could include many other experience-related
characteristics, the ones chosen were found to be the most appropriate in the scope of this thesis because they are seen as characteristics that can be directly observed and experienced by consumers in the digital space. These characteristics are all ones that can be facilitated by content providers but they can ultimately only be experienced by the users who, in this context, are consumers. It is interesting to find out how digital natives experience ARM through these characteristics and how they describe these subjective experiences. Even though experiences could be studied simply as they are, these specific characteristics have been chosen because they provide a framework through which experiences can be studied in this thesis.

For marketers, augmented reality technology may be able to provide new ways of connecting with consumers and creating memorable advertising experiences that would not be available without this technology. The interesting aspect of this study is to investigate whether this is, in fact, the case; in other words, what do young consumers have to say about their experiences with such content.

1.2. Aim of the study

The primary aim of the study is to understand consumer experiences with ARM and how the identified experience-related characteristics (interactivity, absorption, control, participation, and vividness of content) affect the experiences. This information is collected to gain a more comprehensive understanding of what kind of experiences young, digitally-savvy consumers have with ARM content and how they themselves describe these subjective experiences.

The secondary aim has been selected to support and deepen the knowledge about the primary aim. The secondary aim is to gain an understanding of the potential of using AR technology in marketing, especially with consumers who are young adults who use digital technology frequently by monitoring and recording their authentic user experiences. Young, digitally-savvy adults in their 20s and early 30s have been selected as the sample population in the empirical study. This population has been chosen because young adults are seen to be the ideal target group for augmented reality marketing; Adams (2009) states that AR technology opens up possibilities in how brands can be marketed especially to savvy, young consumers.

In this study, the sample population consists of young adults in their 20s and 30s residing in Finland. According to a study made by Statistics Finland (published
people belonging to these age groups have some of the highest percentages out of the entire population in using the Internet multiple times a day (e.g. 80% of respondents in the age group 25-34) as well as having a smart phone in their personal use (55% in the age group 25-34). Therefore, it can be stated that consumers in their 20s and 30s, in this case those residing in Finland, are active users of digital technology and for that reason also highly potential recipients of digital marketing, such as ARM. Not only are these consumers active users, but they are also considered as early adopters of new digital technologies and active eWOM participants. Thus, understanding how such digital natives experience ARM is important, especially for marketers in practice – in this study the focus will be on digital natives residing in one country specifically.

1.3. Research approach

The chosen research approach in this study is a qualitative one. The purpose of the study is to provide the participants a free platform to discuss the researched issue and let them express their experiences in a relatively unrestricted manner through open-ended interviewing.

In this study, the consumer experience has been approached in a phenomenological way; in other words, trying to understand the said phenomena from the perspective of the people involved (Groenewald 2004), which is why a qualitative approach was chosen. This is supported by Mick and Buhl (1992) who state that each person has a distinct and substantial worldview and all human phenomena should be researched as they are subjectively experienced.

In addition to the phenomenological view, the qualitative research approach – as opposed to a quantitative approach – supports this particular study because of the chosen data collection method. That is to say, that the data has been collected by showing the research participants augmented reality content on a tablet computer and interviewing them about the content, which needed to be done in a face-to-face setting. Thus, a quantitative Internet questionnaire, for instance, would not have been suitable in this study because a sufficient access to ARM content could not have been assured for all participants, and authentic, real-time reactions could not have been monitored.

When issues such as experiences are researched, they are often given specifications, such as dividing customer experiences into categories of functional and emotional
benefits (e.g. Berry, Carbone and Haeckel 2002). Hypotheses are created on the basis of these assumptions which can be based on, for example, previous theory or a pilot study. The hypotheses are then tested, and confirmed or disconfirmed. This is the traditional deductive research model in most social studies. This approach is widely used but it leaves little room for examining findings that might not fit into the frame of the research approach.

In this study, the focus is on the subjective perception of the consumer, and thus a more abductive-oriented research approach has been applied. In other words, the goal has not been to build a theory to be tested, but to collect data from the study participants and examine the information the data yields, and potentially build theoretical implications or link them to existing research (Perry 1998). The abductive research approach is a mixture of the deductive and the inductive approaches, and it is useful if the researcher’s objective is to discover new things such as unforeseen relationships (Dubois and Gadde 2002). As studies in augmented reality marketing are limited, previous research has provided few frameworks that could be used for empirical testing, which further supports the use of an abductive approach where the aim is to discover new things.

1.4. Delimitations

Because there are very few previous studies in the field of augmented reality marketing, especially involving consumer experiences, there are no direct suggestions on how to carry out such a research from previous studies. To the knowledge of the author, there are also few studies, if any, which could be expanded or used directly for this research. Thus, prior to the empirical research, it was difficult to know with certainty whether the chosen experience-related characteristics would be suitable for the study of augmented reality marketing. They were chosen from literature relating to experiences and digital marketing according to their assumed relevance to this study topic.

In regards to the empirical study, this study examines consumer experiences specifically concerning product-related augmented reality marketing, which has not been extensively researched before. This approach was mainly chosen because of the availability of product-related AR advertising as opposed to service-related advertising. At the time of the empirical study, there were considerably more AR advertisement applications available that were directly product-related than service-related.
1.5. Structure of the thesis

This thesis consists of five (5) main chapters, which are the introduction, the theoretical review, the research methodology, the results of the empirical study, and finally, the conclusions chapter where the results of the empirical study are concluded, and discussion about the implications and the limitations of the study are included.

The chosen structure is designed so that it gives the reader a comprehensive look into the subject. It is also structured in a way where the following chapter or section builds on the information included in the previous chapter. The introduction chapter introduces the topic to the reader and explains the author’s take on the study. The literature review studies previously published literature that relates to this particular study and helps the reader to understand the key concepts. The methodology chapter explains how the empirical part of this study was carried and what was important during that stage. The results of the empirical study are included in the following chapter, where they are arranged under three main headings which were discovered during the data analysis process. Finally, the last chapter will offer conclusions of the results in connection to the literature review, and make suggestions and discuss the limitations of this study.
2 MARKETING AND EXPERIENCES

This chapter examines various experience-related issues that concern this study. There are certain features that distinguish the digital environment and that link closely to augmented reality marketing and consumer experiences, so it is important to first look at what is meant by the digital environment. It is then followed by an examination of augmented reality marketing and different ways in which experiences can take place, as well as a look into the experience-related characteristics of the digital environment. Augmented reality marketing is explained in the beginning of the chapter to give the reader a basic understanding of what it is because it will be referred to throughout the rest of the sections.

2.1 Definition of the digital environment

The digital environment has many names. It is referred to as cyberspace, virtual environment, virtual reality, e-environment, and probably most often, the Internet or online (e.g. Shih 1998; Coyle and Thorson 2001). Thus, even though there are a number of terms that are used of the e-environment, they all refer to the same thing: an individual using a digital device to be present in an online setting, and simultaneously being present in the real world. In research, this is often referred to as telepresence. Telepresence describes to what extent the consumer feels present in the computer-generated environment, which is an alternative environment to the one where the consumer tangibly exists (Shih 1998).

The terms referring to the digital environment are used quite interchangeably and often the word used describes also when the related literature was produced; the literature referring to cyberspace in the 1990s is understandably quite different than the literature referring to the Internet from 2010s. In this thesis, when a reference to “online” or “the digital environment” is made, it refers to the digitally created virtual environment where the consumer is present at a given moment with the help of technology; the virtual, or digital, environment can be anything from a website to a tablet computer application.
2.2. Augmented reality marketing

A recent buzz-worthy introduction to the digital environment, and particularly digital marketing, is the use of augmented reality applications or ARPs. Augmented reality marketing refers to the merger of the real, physical world and computer-generated data to enhance what people see around them (Blecken and Davis 2009). The technology itself has been in existence for a while; in fact, the origins of augmented reality are in military aviation (Bulearca and Tamarjan 2010). Because AR has been used in marketing really only for the last five years or so, there is little academic discussion relating to the subject. In fact, the use of AR is a contested subject within the marketing paradigm because there is no long-term evidence of its success, such as benchmarks (Bulearca and Tamarjan 2010). Many authors question its effectiveness and consider the hype around AR to be mostly about the novelty or “wow” factor of the technology (e.g. Clawson 2009).

Bulearca and Tamarjan (2010) conducted a qualitative focus group study on Augmented Reality Experiential Marketing (AREM) to look for ways in which AREM could be beneficial for companies and brands both in the short and long-run. The study used an AR application by the UK glass retailer company Glasses Direct where users could try on glasses at home on their computer with the help of a webcam. The goal was to look at ways in which AR marketing could lead to the creation of experiential value in the pre-purchase stage. The study results indicated some promising results in regards to AREM, such as a very good first impression of the Glasses Direct AR application among the study participants; however, there were ultimately many limitations and complications the researchers came across during the research process. Some of them were linked to the fact that the researchers had a positively biased view towards using augmented reality in marketing which had effected, for instance, the way in which questions were positioned to the participants. This indicates the fact that because augmented reality is a new and exciting but under-researched marketing tool, researchers themselves might be biased towards the “shiny object” syndrome (Owyang 2010).

In the marketing community, there is criticism towards the use of AR technology, but there are also proponents who see the possibilities augmented reality has to offer. One of the most important aspects that ARM can offer is the ability to capture the consumers’ attention by generating memorable marketing content (Blecken and Davis 2009). Perhaps one of the most attention-grabbing techniques that AR technology
enables the creation of 3D images onto the screens of digital devices. For example, the Norwegian shoe company Viking Footwear has created an AR application which can be downloaded from Apple’s application store into an iPhone/iPad. The application is installed into the device and when opening the application, a camera frame opens up which can be directed at a special Viking advertisement of a shoe print (referred to as an AR marker) which then becomes a 3D model of a Viking shoe on the screen of the digital device (see Figure 1).

![Viking shoe augmented reality marker](image1)

![3D image of the Viking shoe on an iPad screen](image2)

**Figure 1  Viking shoe 3D augmented reality application**

Thus, because AR is able to create memorable content for users, it is often referred to as a form of experiential marketing (e.g. Bulearca and Tamarjan 2010). ARM is also versatile; it can be used in multiple ways. AR applications can be inserted into magazines, websites, and even in stores at points-of-sales. For example, Lego has used AR technology in its stores where special in-store kiosks called Digital Boxes have been put in selected locations providing customers the ability to access 3D footage of Lego constructions by simply holding up an unopened Lego box to the kiosk’s webcam (Owyang 2010). Also, special augmented reality codes (e.g. Quick Response or QR codes) can be inserted into various locations eliminating the need for consumers to remember URL addresses. A consumer can, for example, point their smart phone
camera to a QR code of a hotel advertisement in a magazine, and the phone will open up the hotel’s reservation website instantaneously.

While most ARM examples (e.g. Lego, the hotel reservation, Glasses Direct) refer to the pre-purchase stage of the consumption process, the technology can also be applied to the other stages. For example, book publishers can add AR technology to regular printed material so when a person has purchased a book and is reading it at home, the events in the book could “come alive” through the use of 3D imagery on the pages which can elevate the post-purchase satisfaction of the consumer. Naturally, not all marketing is aimed at bringing a consumer instantly to a point of purchase. Sometimes the goal is to raise awareness of a brand and provide the consumers with positive brand associations. Cuddeford-Jones (2009) states that augmented reality can be seen to bring a brand to life in a greater depth than any other online or offline medium. Furthermore, Blecken and Davis (2009) note that augmented reality technology enables consumers to experience a product, or even a service, free of charge in a real-life situation that is relevant to their needs.

To avoid being gimmicky, advertisers need to consider how augmented reality could be applied to their particular field. Clawson (2009) offers certain guidelines to what to consider. First and foremost, AR technology should be customer-oriented meaning that the technology should be aimed at capturing the consumer’s imagination rather than creating a public relations hype. Secondly, any company’s AR strategy should be harnessed to its brand objectives. Thirdly, companies should approach AR with utility in mind, meaning that the technology should create usefulness to its user and not just be technology for technology’s sake. Clawson states that it is the useful services that will ultimately survive after the initial AR hype has passed. Finally, the consumer should be educated about the AR technology. Most people are initially resistant to adopting new trends, so companies should create compelling applications to help reduce the resistance and attract the consumer.

2.3. Digital marketing and consumer experiences

As has become obvious in the previous sections, the digital environment is becoming an increasingly important communication medium for marketing purposes. Some industry professionals state that the term e-business is, in fact, old-fashioned because soon all business will be e-business. If this is true, then most likely all marketing in the future will at least have an element of e-marketing in it, and it is important to know the
environment-specific characteristics of digital marketing as well as to understand something about the related consumer experiences. These are included in the following sections.

The experience-related characteristics of the digital environment are in most cases two-folded in nature; they exist both for the marketer and the consumer but in different ways. The marketer is seen as the facilitator of these characteristics whereas the consumer is the one experiencing them. In other words, the marketer can enable the means, but it is ultimately the consumer who decides whether these characteristics exist and how they are experienced. This will also be discussed in detail in the next sections.

2.3.1. Consumer experiences

“Experiences [are]... the intertwining of human beings and their environment.”
(John Dewey, as cited in Brakus, Schmitt, and Zarantonello 2009:54)

This section looks at what is understood by consumer experiences on a more general level; the next section examines experiences in the digital environment. Considering the aim of the thesis, it is important to understand what is meant by experiences. Furthermore, there has been considerable attention given to experiences in marketing literature in the last two decades, so experiences overall have become important within the marketing discipline.

Academics have pointed out that it is important for companies to understand what the customer experience entails, where experiences can be applied, and how they can benefit a company (e.g. Padgett and Allen 1997; Schmitt 1999; Schmitt 2003; Gentile et al. 2007; Meyer and Schwager 2007). The focus of experience research is often on services; services provide a setting where experiences are easy to produce for consumers (e.g. IKEA showrooms, Disney World, Hard Rock Cafe).

Even though experiences are often thought of as something tangible that takes place in the physical world, research suggests that there are many different types of experiences. Scholars in marketing talk about, for example, the brand experience (discussed in more detail in Chapter 2.3.3). Schmitt (2003) discusses the three key aspects of the brand experience: the product experience, the look and the feel ("brand identity"), and experiential communications. That is to say that, consumers are assumed to experience
the product itself, the kind of brand identity it embodies, and the communication of how it is being marketed. Thus, experiences are holistic occurrences affected by many different things; they can also differ between product-related and service-related businesses. Meyer and Schwager (2007:118) note, however, that “customer experience is the internal and subjective response customers have to any direct or indirect contact with a company”.

Today, one of the most important stages where the communication about the experiential aspects of a company or a brand takes place is the digital environment. Not only is the e-environment a platform for communication, it can also be an experience in itself.

2.3.2. Digital experiences

Information systems (IS) literature provides an interesting insight into the world of the digital experience. From IS literature, it is evident that the nature of computing has changed in the recent years. Computers and digital devices are no longer used only for specific tasks like calculating or word processing; computing has become an ordinary part of the everyday experiences of consumers to the point where consumers no longer pay attention to the fact that they are actually using a digital device to do something. If lost in a city, a person can easily use the GPS on their smart phone to locate themselves without really knowing where they are.

Yoo (2010) discusses the two-folded nature of computing experiences: representational computing and imagined computing. Representational computing refers to a relationship between users and technology in which the technology is used as representation of something in the real world (Yoo 2010). For example, a map on a GPS system represents – in a digital format – a location in the real world. Thus, in representational computing, the computer does not represent the end-experience in itself; it is merely a device that represents something about the real world.

By imagined computing, Yoo (2010:218) discusses what is called “the alterity relationship” where the relationship between the users and technology is one where the relationship with the technology is the essential part of the interaction and resides in a world of its own. An example of this is Second Life, which is a virtual world where the users (called “Residents”) interact with each other through avatars on “the grid” which is how the world inside Second Life is referred to (www.secondlife.com). Here, the e-
environment is the end-experience in itself. Imagined computing can be considered as cut off from the real world, but Yoo (2010:218) goes onto say that the disconnection the users of imagined computing feel from the real world could potentially be one of its main attractions.

These two views, however, are quite limited in their view of how the e-environment can be experienced (i.e. either as a direct representation of the real world through abstraction, or a world in itself). Yoo (2010:218-220) offers a third view, which is labeled as experiential computing. This view notes that there is an embodied relationship between technology, the world, and the user. Technology provides the user with “glasses” through which the user can see the world in a different way. In this approach technology is not simply being interpreted by the user, nor does it represent the end experience in itself. Instead, it directly shapes and occasionally transforms people’s lived experiences (Yoo 2010). Technology can be seen as an enhancer of everyday life; thus, augmented reality technology links closely to experiential computing. In regards to marketing, experiential computing can offer consumers "glasses" (e.g. a smart phone screen) through which they can be provided digital marketing content that has the potential of affecting their lived experiences. For example, the Viking shoe commercial, which was discussed earlier, is a two-dimensional magazine ad without the digital application which makes it a three-dimensional shoe on the screen of a portable device. Thus, the digital device directly affects the consumer’s experience of the advertisement because it creates a digitally-enhanced layer between the print ad and the user.

2.3.3. Brand experiences

This section describes what is meant by brand experiences. A description of brand experiences has been included to give the reader an understanding of what it is because in the empirical section of the thesis, branded products are used as the ARM content shown to the study participants.

Brand experiences have become important in marketing because what most companies fundamentally want is for their customers and potential future customers to be able to positively experience stimuli related to their company, e.g. their products, services, and ultimately their brand. Brakus, Schmitt, and Zarantonello (2009:53) define brand experiences “as subjective, internal consumer responses (sensations, feelings, and cognitions) and behavioral responses evoked by brand-related stimuli”. The authors
note that brand experiences differ from other commonly used brand constructs such as brand attitudes or brand attachments. Brand experiences can be seen as more holistic approach to consumer emotions and cognitions. Brand experiences are not general evaluative judgments about the brand (e.g., “I like the brand”). They include specific sensations, feelings, cognitions, and behavioral responses triggered by specific brand-related stimuli. For example, experiences may include specific feelings, not just an overall “liking” (Brakus et al. 2009:53).

Furthermore, Brakus et al. (2009) note that not all brand experiences are equal in strength and intensity; there are brand experiences that are stronger and more intense than others. Also, there is variability in the valence of the experiences. Some brand experiences are more positive than others, and some may be negative (Brakus et al. 2009). However, Ha and Perks (2005) state that for a consumer, experiencing a brand has more of an effect to the overall consumer experience than the features and benefits of a product; the brand can produce deeper and more memorable meanings than the tangible features or the assumed benefits of a product. Schmitt (1999) suggests that corporations, especially those with high corporate visibility (e.g. Apple or Nike), should create experiential identities for themselves, and also for their unique brands.

Brand experiences exist also in the digital environment. Ha and Perks (2005) state that online, consumers increasingly expect websites to offer them not only relevant content but also positive experiences. The authors also say that e-consumers tend to use good websites (i.e. ones that offer relevant and engaging information) that offer them positive experiences; Ha and Perks make a referral to a Forrester Report published in 1999 by noting that, what makes 75% of consumers to return to their favorite website, is a prior positive experience with the site. Thus, an appealing website and a positive prior experience may elevate the overall brand experience for a consumer; and vice versa, a poor experience may demote it.

Experiences, due to their subjective nature, can be thought of in a story format and thus linked to psychology. For example, when a consumer is asked to explain a poor experience they have had with an online shopping website, they often tell a story about where and how the experience took place. This relates to narrative psychology where the basic assumption is that people have a natural tendency to organize information about events in a story format (Padgett and Allen 1997). In all life experiences, people have to continuously organize elaborate sequences of events and their reactions to these events into a meaningful whole, which is often done through organizing them into
stories (Padgett and Allen 1997). Also brands and all stimuli related to them can be organized in story-like formats.

To conclude, brand experiences are internal consumer responses to stimuli that a company provides through various platforms, such as the Internet (i.e. the previously mentioned facilitator role of the company). The brand-related stimuli induce specific sensations, feelings, cognitions, and behavioral responses that make up and affect the consumer experience, which can be organized into a story format. To the overall consumer experience, experiencing the brand is said to be more effective than experiencing product features or benefits. Because an experience is subjective and internal to the consumer, it may be able to evoke, for instance, emotions in a very different way than, let us say, a more simplistic price-point advertising of a product in a magazine.

As was mentioned earlier, a strong link between the brand experience and augmented reality marketing is believed to exist due to the fact that AR technology is able to bring brands to life in a new way, and to offer consumers three-dimensional, fully interactive, and engaging experiences with brands (Cuddeford-Jones 2009).

2.4. Experience-related characteristics

The following sections focus on the features of the digital environment that have been identified by the author to be the characteristics through which the consumer experiences will be examined, i.e. the basic framework of the study. It must be noted that the characteristics are discussed in separate sections but they are not independent from each other; these characteristics often overlap and directly influence one another. For example, even though interactivity and control are discussed in separate sections, they are highly interlinked; control plays an essential role in how consumers perceive and experience interactivity on a website, for instance.

2.4.1. Interactivity

In everyday life, we can see that interactivity is becoming more and more common in, for example, human-digital device interaction, such as that in augmented reality applications. Also in marketing, interactivity has become perhaps one of the most researched topics of the 21st century (e.g. Rodgers and Thorson 2000; Coyle and Thorson 2001; Liu and Shrum 2002; Wu 2006; Mollen and Wilson 2010).
Although interactivity has been a growing trend for years (Liu and Shrum 2002:53), there are differing views among scholars of how exactly it can be defined. Wu (2006:88) notes that for the past two decades, researchers from a wide range of disciplines have studied interactivity and offered their own definitions about it. Cho and Leckenby (1999) offer one way of looking at interactivity through communication. They state that in traditional communication, which is labeled as one-way media, information comes from one source (the sender) to multiple receivers (the mass audience) whereas in interactive media the communication has two-way, interactive forms.

To put it simply, interactivity can be described as a two-way communication process between a sender and a receiver. Perhaps the most typical form of sender-receiver interactivity takes place within human-human communication (Cho and Leckenby 1999) where two humans communicate, or interact, with each other. The authors note that there are other types of interactivity as well, which include human-message interaction, and human-machine interaction.

**Human-message interaction** refers to the interplay between a user and a message that comes, for instance, from browsing a magazine, watching a TV advertisement, or surfing an Internet website. In other words, humans interact with the content they receive through a medium by processing the received information and potentially responding to it. Cho and Leckenby (1999) note that in traditional media, users have many content-related choices but ultimately no control over the messages they receive through the medium. Consumers can only flip through channels or turn the page of a magazine to look for messages that match their interests and attitudes. In interactive media, like the Internet, the human-message interaction becomes two-way. The Internet permits users more freedom in controlling the received messages and allows customization according to the needs of the individual (Liu and Shrum 2002:54).

**Human-machine interaction** refers to the interaction process involving the use of machines (e.g. computers) to engage in communication (Cho and Leckenby 1999). In other words, in the human-machine interaction, the user engages with a machine for communication purposes, for example sending an email or browsing a website. Although there are some studies that extend the notion of interactivity to human-machine interaction, it can be seen as not so relevant as the other two forms of interactivity because its role is more of a facilitator (Cho and Leckenby 1999). In other
words, this kind of interaction facilitates the access to digital human-message interaction, for instance.

In marketing, perhaps the most important type of interactivity is the one that occurs between the consumer and the advertised message, which originates from a company (human-message interaction). Bezjian-Avery, Calder, and Iacobucci (1998:23) describe interactive marketing as a continual process where the needs and desires of a customer “are uncovered, met, modified, and satisfied by the providing firm”. Interactivity between the firm and the customer extracts information from both parties with the intention of aligning interests and possibilities (Bezjian-Avery et al. 1998). Thus, interactivity in marketing is not only a two-way process between the sender (a company) and the receiver (the consumer); it is a continuously on-going two-way process. This is an opposing view to more traditional marketing, for example most Integrated Communications Models (IMC), where the consumer is often considered more of an object than a subject (Finne and Grönroos 2009).

Wu (2006:88) also notes that there are two distinct sides to interactivity that should be considered: the marketer’s side and the consumer’s side. These two sides are different in nature:

A communicator's (e.g., marketer's) perspective tends to see interactivity as a characteristic, feature, property or capability inherent in a medium, or an interaction system that enables or facilitates an interaction between two parties, whereas an audience's perspective (e.g., consumer's) tends to view interactivity as a trait, message relatedness or psychological state of the mind of the audience. (Wu 2006:88)

Thus, the marketer’s perspective is often more feature-driven whereas the consumer’s perspective is more experiential – the marketer is the one who enables the means of interaction and the consumer is the one who experiences the interaction. Even though Wu (2006) points out that there are two sides to interactivity, in defining interactivity in relation to websites, the author also advocates for the consumer’s perspective.

More recently, there have been studies that have presented the notion of perceived interactivity which can be categorized as a more experiential view on the issue focusing mostly on the user perspective (e.g. Mollen and Wilson 2010; Wu 2006). Mollen and Wilson (2010) state that perceived interactivity is a phenomenon that occurs when a user interacts with computer-mediated communication entities, such as a website, and perceives that a certain level of controllability, responsiveness, and two-way
communication exists. In other words, according to this perspective, the perception of the interactivity resides with the user who feels that they are able to control the interaction, and that it is responsive to whatever actions the user takes. Shih (1998:656-657) adds that it is not enough for the medium to merely provide responsiveness; the response needs to be as instant as possible. If the technology does not provide a fast feedback mechanism, the user feels less interactivity because the nature of conversation with the medium disappears.

Even though there are varying views on what interactivity is, interactivity in marketing is undoubtedly becoming increasingly popular. John Deighton (in Sorrell and Salama 1996:151) states some of the underlining reasons for this. He says that interactivity points to two features of communication: the ability to address an individual, and to gather and remember the responses of that individual. These features enable addressing the individual in a way that takes into account their unique responses.

**Interactive digital marketing**

As was mentioned in the previous section, in addition to being applied to traditional marketing, interactivity also exists in the digital environment. In fact, compared to most standard media outlets, researchers claim that the online environment is the most comprehensive facilitator for interactivity (Rodgers and Thorson 2000). The Internet provides users with more ways of interacting with the content than, for instance, a print magazine. In regards to marketing, Deighton (in Sorrell and Salama 1996:151) states that interactivity can be seen as a tool that enables good marketing to become good conversation. An online setting provides a feasible place for this kind of conversation to take place; and a conversation is always two-sided. In online marketing, as with any marketing, there is always the side of the advertiser and the side of the consumer.

For both the advertiser and the consumer, there are certain features that are under the control of that particular group in an online setting. Rodgers and Thorson (2000) name them as the Consumer-controlled aspects of the Internet (p. 43), and the Advertiser-controlled aspects of the Internet (p. 47). Even though the authors state that interactivity in online marketing is a two-sided process, again, it is noted that the perception of control has moved from the advertiser mostly to the consumer (p. 43).

Figure 2 presents the Interactive Advertising Model by Rodgers and Thorson (2000:45) which has been modified by the author for this study. The figure illustrates what
aspects of interactive advertising are under the control of the advertiser and what are under the control of the consumer, as there have been frequent referrals to these two sides throughout the study.

The figure also shows the order in which consumers presumably move through the interactive advertising stages; first, there is a motivation to go online, which is followed by information processes (previous cognitive associations that the consumer has), after which the consumer comes across advertiser-controlled content, and ultimately forms a specific outcome in regards to that content.

**Figure 2  The Interactive Advertising Model (modified from Rodgers and Thorson 2000:45)**

In the figure, in the consumer-controlled category, the authors include motives (e.g. shopping, information search), mode (serious vs. playful), information processing, and the outcomes, which are the consumer responses to the advertisement. In the advertiser-controlled category, the authors include ad types (e.g. product ad, political ad), ad formats (e.g. banner, pop-up), and ad features (e.g. color, size, audio,
animation). This figure has been included because it displays a strategic approach to the facilitator-experiencer relationship between the consumer and the advertiser, and shows how the consumer presumably moves through the interactive advertising stages. Again, as is visible from the figure, the advertiser facilitates the means of interactivity (i.e., the content) whereas the consumer’s role is more on a psychological level experiencing the content (ad type, format and features), and forming opinions and attitudes pre and post-purchase.

2.4.2. Vividness of content

In addition to interactivity, another important feature of the digital environment is the vividness of the information that it is able to provide for users (Shih 1998). Steuer (1992) defines vividness as the way in which an environment presents information to a person’s senses, which is also referred to as the representational richness of a mediated environment. Information can be presented in multiple ways, for example, using text, animation, or sound. Shih (1998:656) states that the more vivid the information that is provided to an individual is, the less the individual needs to fill in information on their own. For example, an augmented reality application can show a three-dimensional (3D) model of a product and its functions, whereas a magazine advertisement can only show the product in a two-dimensional picture. This means that the AR advertisement is more vivid in appearance.

On the Internet, very high levels of vividness can be achieved. Within a corporate website, rich media tools such as video and animation can be used as vividness-increasing tools that enhance the richness of the user’s website experience (Coyle and Thorson 2001:68). Coyle and Thorson continue to say that in order to enrich a user experience, vivid information on websites should appeal to multiple senses such as sight, hearing, and even touch.

With the development of technology, companies can offer users vivid and more direct experiences with their products or services on online platforms; a user can test-drive a car on a website, or look at 3D images of shoes in an online shoe store. Naturally, these are not direct experiences like actually driving a car in real traffic, but in the online world, these are as direct as current technology is able to provide. Thus, it is evident that increasingly high levels of representational richness (i.e., the representation of information to the senses) and the ability to assimilate the real world exist in the digitally-generated environment, such as with the use of AR applications. However,
such as is the case with interactivity, also vividness is a state enabled by a company/marketer, but its perception rests in the mind of the consumer.

Vividness can be divided into two categories by breadth and depth. Steuer (1992) explains sensory breadth as being the number of sensory dimensions that are simultaneously presented through one medium. In other words, there are multiple sensory dimensions that can be presented to the user at the same time, and the wider the range of technology-enabled sensations a medium can provide at a given moment, the greater the breadth (Shih 1998). For example, an augmented reality advertisement can present the user with visual, audio, and haptic (touch-related) stimuli which is more than a newspaper, which can only provide visual stimuli. Therefore, an AR ad has more breadth than the newspaper. Shih (1998) says that breadth is essential in an online setting because when interacting with the environment, people tend to use all of the senses that can be applied to that particular situation.

The depth of sensory information touches upon the subject of quality and content. In other words, sensory depth refers to the level of quality and the amount of information that is embedded into a given content (Shih 1998). For instance, high definition online video has more depth than a photograph because it gives the viewer more visual information. Due to the fact that the video is in a format that is high in resolution, it also gives the viewer a higher level of image quality than a regular photograph. Hence, in digital environments, the goal of the advertiser is to capture the essence of the real world in the highest possible quality and pass this on to the consumer who can potentially experience it by using multiple senses.

2.4.3. User participation

Participation in the creation of one's personal experience is an inherent part of the digital environment and is discussed next. User participation relates closely to the consumer experience because it describes what the e-environment is like from the user's point of view: a medium able to evoke instant participation with the digital device and the content.

Participation can be viewed to exist on a continuum where at the one end is active participation and at the other end is passive participation (Pine II and Gilmore 1998). In between are levels of participation which are little, somewhat, or quite active or passive. Pine II and Gilmore (1998) describe active participation as a process where
customers play essential roles in the creation of a performance/event that yields the ultimate experience. In passive participation, the customers do not affect the performance or the event at all but are nevertheless participating in it.

In the e-environment, participation refers to how much the user participates in the creation of their subjective online experience. For example, in an augmented reality setting, the consumer can be considered as highly active because they are actively involved with the process of creating their personal online experience by playing with their digital device. Viewing an online video, on the other hand, is more passive because the consumer does not participate in the creation of the experience so much; they have selected what to view, which is active participation, but once the selection has been made, the participation is mostly observatory, which is more passive.

Thus, due to its nature, the digital environment is such where the consumer can choose whether they want to actively participate in the creation of their online experiences or not. In relation to online marketing, the consumer can choose to be a highly active participant of their personal experience by trying out different AR applications, for instance, or highly passive by merely looking at banner advertisement on a website by-passingly.

2.4.4. User control

In this section, another important experience-related feature of the digital environment is included: control. In an online setting, consumers are in control of much of their own user experience unlike in most traditional media. In contrast to other, more traditional media like TV, the Internet allows consumers to process information at their own pace (Dijkstra et al. 2005:378). This is referred to as internal pacing where information transfer is being controlled by the receiver, as opposed to external pacing where the information transfer is controlled by the sender, such as in television (Dijkstra et al. 2005).

In addition to enabling internal pacing, the Internet also allows the consumer to search for and read information when it is most convenient for them. Furthermore, the Internet also allows for the consumer to use “bricolage” (Shih 1998). Shih (1998) explains bricolage to be the manipulation of objects around a person’s immediate environment in order to develop and assimilate ideas. On the Internet, consumers play, or tinker with, online objects such as links to websites, online videos, and augmented
reality applications. Shih (1998:660) suggests that bricolage supports the sometimes un-hierarchical way in which humans learn – in other words, much of what people learn is learned through physical contact with the surrounding environment that allows learning by playing and assimilation. This notion would support the use of augmented reality in marketing where learning is a key issue (e.g. learning about product features) as playing and tinkering is an essential part of AR technology.

The sense of being in control is a highly subjective state of mind. Again, like with the other experience-related characteristics, companies and marketers can enable means of control to take place when the consumer is in the digital space but it is the consumer who ultimately feels like a sense of control exists or does not exist. Liu and Shrum (2002:55) note that the control that a person exerts online is voluntary and an Internet user acts according to their own goals and wills. Also, there are differences in consumers of how much control they want or need. Sometimes high levels of control might lead to excessive cognitive involvement, which might not be preferred by all consumers (discussed more in Chapter 2.5.).

2.4.5. Absorption of the user

Absorption is another experience-related characteristic that links closely to the other previously mentioned characteristics, such as control, participation, and the vividness of the presented content. Absorption refers to the connection or the environmental relationship that a person has to an event or a performance (Pine II and Gilmore 1998:97). In other words, a person can be absorbed into an event they are partaking in, for instance, because of high levels of cognitive involvement and intense focusing.

Rodriguez-Sanchez, Schaufeli, Salanova, Cifre, and Sonnenschein (2011) state that absorption links closely to the concept of flow, which is a state of high concentration on an event or a performance. The authors (2011:76) note that absorption is “a sense of deep involvement and total concentration”. Furthermore, it is stated (2011:79) that absorption is a cognitive state (reasoning-based) as opposed to an affective state (emotion-based). Thus, when a person is absorbed into something, they are cognitively focused and involved in the content presented to them. In the study by Rodriguez-Sanchez et al (2011), absorption is also connected to a level of goal-orientation. In other words, absorption is often a feature in situations where a person is working on a task and is orientated towards completing the task and achieving a particular goal.
Thus, absorption is a subjectively perceived psychological state, such as the other experience-related characteristics. Due to the fact that absorption can be linked to the state of flow, which is generally considered a positive state affected also by levels of enjoyment (Rodriguez-Sanchez et al 2011), absorption can be viewed as a desirable state to be achieved with users of a particular content. This is presumably true especially with content that has been produced with the intent of the attaining user focus; that is to say, with content where the user can perform a task and apply goal orientation, and potentially get a sense of achievement after completing the task.

2.5. Summary

It must be noted that even though the digital environment, being interactive, absorptive, and vivid in sensory information, is thought to enable the use of new and increasingly innovative marketing techniques, there is some debate on the effectiveness of some e-environment features and the appropriateness of their use.

Interactivity, for instance, is quite often viewed as a positive thing in marketing. Most research considers interactivity to be two-way communication between the communicator and the user with the intention of aligning the interests of both parties. However, like mentioned, the effectiveness, and even the perception of the existence of interactivity, is in most cases left to the user. From the marketer's perspective, this might not be beneficial due to the lack of control the marketer has over the subjective view of the user. Mollen and Wilson (2010:920) suggest that:

> There is no relationship between the provision of interactive features embedded in a website and consumers' appreciation of interactivity and therefore... in certain cases, interactivity has a detrimental effect on consumer attitudes to websites, since it supports the notion that some consumers are resistant to levels of interactivity that make excessively onerous demands on cognitive processing.

That is to say, interactivity can sometimes create experiences that are too cognitively involving for the user. Liu and Shrum (2002:60) note that cognitive involvement comes through the active control of the medium, and the two-way communication with the medium. Moreover, the authors say that this kind of active control requires the user to be cognitively active and make choices, which forces the user towards more mental processing than is needed for traditional media or low interactive on-line experiences. Thus, in today's proliferated online marketing environment, interactivity – especially the kind that involves high levels of cognitive processing and the user's close attention
– might be detrimental to the success of the medium where it is applied to because consumers simply do not have the time or the patience for increased mental attention.

Furthermore, there exist also other studies where the results can be considered discrepant. On the one hand, a research suggests that high levels of vividness (i.e. multiple sensory stimulation) leads to better user experiences, which would indicate that the simultaneous use of video, audio, and physical participation of the user is a positive thing (e.g. Shih 1998). On the other hand, another study proposes that memory or recall for online advertisement is low when the user is involved in performing a task in the e-environment, suggesting that their focus is on performing the task and not on the content of the ad (e.g. Kuisma et al. 2010).

Thus, it is evident that when it comes to human psychology, it is hard to predict outcomes, and research results are highly dependent on what kind of stimulus is used for testing and what exactly is being examined, which holds true for any study. Similar stimulus might in some cases produce very different results; animation could be considered a positive thing for online brand experiences but a negative thing in regards to memorization of advertising content.
3 RESEARCH METHODOLOGY

This chapter includes the research methodology of the thesis explaining what the chosen method was for the empirical study, what kind of sample was chosen to be examined, and how the empirical data was analyzed.

To recap before going further into the methodology, the primary aim of this thesis is to understand consumer experiences with ARM and how the identified experience-related characteristics (interactivity, absorption, control, participation, and vividness of content) affect the experiences. The secondary aim is to gain an understanding of the potential of using AR technology in digital marketing with consumers who are young adults who use digital technology frequently by monitoring and recording their authentic user experiences. This information is collected to gain a comprehensive understanding of what kind of experiences the so-called digital natives have with ARM content and how they describe these subjective experiences. This helps in understanding how such content should be designed to best keep the user and their experience in mind.

Due to the fact that there is little previous research on this particular topic, there are no direct suggestions from previous research of how such studies into this subject should be carried out. However, as experiences are inherently subjective, a qualitative, more in-depth research approach was found to be appropriate for this study. The purpose of the empirical study - using interviewing as the main data collection method - was to provide the consumer a free platform to discuss the given issue and let them express their experiences in a relatively unrestricted manner.

The empirical research did not rely on the testing of a specific model or theory such as in deductive research. Instead, the empirical research was more inductive-oriented where the research participants were interviewed in an open manner and encouraged to share opinions and thoughts about the subject. The aim was to collect data where potential unforeseen patterns/ideas/relationships would emerge that could be comprised into new theory or to offer a novel approach to existing but somewhat scarce literature.

Relatively few restrictions were put on the participant responses, meaning that the interview questions were designed to be open-ended where free discussion was promoted and the use of probe questions was applied. Saunders et al. (2007) refer to
this as non-standardized research interview design. This kind of design enables probing. Probing refers to a technique where respondents’ answers can be probed with additional questions to gain a deeper understanding of a particular subject, which is important when the aim of the research is to understand the meanings that respondents ascribe to particular phenomena (Saunders et al. 2007). Probing can also lead to discussion into areas that the researcher had not considered earlier. This, in particular, is important in the scope of this study as augmented reality technology in marketing is still so new and its potential uses are underexplored.

3.1. Method

The data in the empirical study was collected through semi-structured interviews and observations of the study respondents. In the interviews, each respondent was shown six (6) examples of augmented reality marketing content (Appendix 1) with the help of an iPad tablet computer. The marketing content was pre-selected by the author with the help of a pilot interview and it represented six different brands.

The pilot interview was carried out in April 2012 in order to find out what ARM content could be chosen for the actual empirical research. The pilot respondent was shown all together 11 randomly selected ARM advertisements that were available at the time and asked to describe how he experienced these ads. During the interview, the pilot study respondent was asked questions and probes relating to the experience-related characteristics mentioned in Chapter 2.4. The respondent’s body language and emotions were also observed. The combination of the pilot respondent’s responses and observed reactions with the author’s desire to include advertisement from different brands and different uses of ARM were used as the methods on how the final content (6 advertisements) for the empirical research was chosen. The advertisements that were left out were ones that had poorly working technology (i.e. the applications could not be viewed properly) or that were similar to the ones chosen (i.e. there were 3 different car brands that were included in the pilot study and only one car advertisement was chosen for the official study).

The final advertisements included in the official study were Absolut Vodka (alcoholic beverages), Viking (hiking shoes), Nike (sportswear), Silhouette (glasses manufacturer), Mazda (car manufacturer), and Pixar (digitally animated movies). As was mentioned earlier, the orientation in the study was towards product-related ARM applications. Pixar, however, is not a directly product-related brand but the chosen
Pixar augmented reality application included a toy-looking figure so it was considered suitable for this study.

All of the advertisements, except the one by Silhouette, required the use of AR markers which were paper print-outs printed prior to the interviews (Appendix 1). The advertisements worked by opening a pre-downloaded application on the iPad and directing the device's camera towards the AR marker which would then display a 3D advertised image on the screen of the device. In the Silhouette ad, an application was opened and the camera was directed towards the face of the respondent after which they could try on a selection of digital glasses and sunglasses on their face. Appendix 1 includes images of all of the AR markers that were used in this study, as well as an illustration of what was visible on the iPad screen where the marker was viewed through it.

It must be noted that the advertisements for Nike and Pixar were not made by these companies. For them, an application by a company called String, which develops AR content for companies, was used. The String application had an AR marker of a sneaker and a green, toy-like animated figure which were labeled by the author as Nike and Pixar advertisements. The sneaker and the figure were highly similar to Nike's footwear and Pixar's animated figures, so the respondents were told these were prototype advertisements made by String for these companies. This was done in order for all the advertised content to be associated with a specific brand. Real branded content was preferred during the time when the ARM ads were selected for the study because of the desire to examine content with a marketing purpose, and not just any AR-related content. There was, however, limited access to different kinds of authentic branded content so the String application was chosen due to its availability. The limitations of having included content branded the author (i.e. fake branding) are included in Chapter 5.6. Even though the Pixar and the Nike applications are fake in regards to their connection to the real brands, they will be referred to as “Pixar” and “Nike” throughout the following parts for the sake of readability.

During the interviews, each respondent was interviewed about the presented content during its consumption; in other words, the respondent was interviewed during the time while they were viewing and playing with the ads. The respondent's reactions, such as facial movements and emotions, were also monitored and written down during the interview. After the respondent was shown the ARM advertisements, they were
interviewed about the overall experience they had with the content; some respondents also described such experiences during their interview without being asked directly.

To give the reader a more thorough understanding of what took place during the interviews, the following section describes the typical course of action: the respondent and the author were seated in a face-to-face manner in the selected interview location. This was done in order for the respondent to feel like there was enough privacy to look and play freely with the content they were presented; if the researcher had been sitting next to the respondent, they might have felt like they were being watched and thus might not have acted in a free manner. The respondent was given a general idea about what was to take place during the interview and that the purpose of the interview was to get an understanding of how the respondent experiences what s/he was shown. The respondent was also asked if they were familiar with AR as a technology. If they were not, they were explained on a general level what it is. After this, the respondent was shown the advertisements separately and while they were viewing the ads, they were asked questions about the content and their experience with it. Prior to seeing the advertisements, the respondents were also asked about their previous knowledge or impressions about the brand.

The interviews were recorded for transcription purposes. The observation of emotions and facial expressions was written down as field notes during the interviews. The interviews were not videotaped because the use of video was not found appropriate in this study. Being notably videotaped could have distracted the respondents from focusing on the content and expressing thoughts about the content in a free and relaxed manner. The interviews were conducted in public venues and in the respondent’s homes. A basic interview guide was used during the interviews (Appendix 2) to help maintain a certain structure throughout all the interviews.

### 3.2. Sample

The sample consisted of eight (8) interviewees, all residing in Finland. The sample was mostly Finnish; however, there were two participants from other nationalities. The nationality or other demographic factors about the respondents were not regarded as highly important prior to the data collection; the age and the respondent’s technology-familiarity were the unifying characteristics of the group and why the participants were chosen to be included in the study (i.e. the digital native categorization). The Statistics Finland study (2011), that was referred to earlier, notes that young adults residing in
Finland are active users of mobile technology and the Internet, and thus highly potential recipients of digital marketing such as ARM. For this reason, this population was seen by author as a viable sample to study in regards to experiences about ARM. Furthermore, young adults are seen to be the ideal target group for augmented reality marketing, for instance by Adams (2009) who states that AR technology opens up various possibilities in how brands can be marketed especially to savvy, young consumers. The so-called digital natives are also considered important in regards to early technology adoption and eWOM participation.

The chosen sample represents a typical case population (Patton 2002) where the respondents represent typical examples of actively technology using, young consumers in their 20s and early 30s, which is why this sampling method was chosen. What makes a respondent in this group typical is that they represent an example of a person who is in the majority of their age group in Finland; in other words, s/he uses the Internet multiple times a day and owns a smart phone through which s/he has a portable access to digital content.

In addition to being typical cases in regards to technology use and young age, the sample was chosen because it consisted of information-rich cases, which Patton (2002) refers to as intensity sampling. In intensity sampling, cases that are information-rich in manifesting a phenomenon intensely but not extremely are chosen (Patton 2002:243). In the sample for this study, the respondents were seen information-rich in regards to a high level of knowledge and previous experiences with digital technology. Thus, they could potentially express multifaceted thoughts and emotions about the presented ARM content because the mode itself (portable touch-screen technology) would not be overwhelmingly new for them and as such the focus of their attention. This kind of knowledge about some of the respondents was available to the researcher because of prior personal contacts. This means that an element of convenience sampling was also used as a sampling method (Patton 2002). Snowball sampling (Patton 2002) was also applied in some occasions, as during the interviews, some of the respondents recommended their peers as potential information-rich cases to be interviewed.

The total sample was 8 respondents, of which 5 were female and 3 were male. After 6 interviews had been conducted, the author felt like a saturation point had been reached with the data gathered (i.e. no significantly new data was emerging from the interviews). However, to further strengthen the results, 2 additional interviews were carried out which confirmed the saturation assumption. Naturally, because the focus of
the study is on experiences, which are subjective, there could always be some new information that could be gathered. However, most of the interviews – albeit unique – displayed similar tendencies and trends, which indicated that 8 interviews were sufficient. Also, the interviews were highly in-depth and there were multiple hours of information-rich data which was found to be enough for the scope of this thesis.

Table 1 presents information about the respondents and the sampling method of how they were chosen; F refers to a female respondent and M to a male respondent.

**Table 1  Respondent codes and sampling method used**

<table>
<thead>
<tr>
<th>Respondent code</th>
<th>Age</th>
<th>Sampling method used</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>27</td>
<td>Typical case, intense sampling, convenience</td>
</tr>
<tr>
<td>F2</td>
<td>29</td>
<td>Typical case, intense sampling, snowball</td>
</tr>
<tr>
<td>F3</td>
<td>25</td>
<td>Typical case, intense sampling, snowball</td>
</tr>
<tr>
<td>F4</td>
<td>26</td>
<td>Typical case, intense sampling</td>
</tr>
<tr>
<td>F5</td>
<td>23</td>
<td>Typical case, intense sampling</td>
</tr>
<tr>
<td>M1</td>
<td>35</td>
<td>Typical case, intense sampling, convenience</td>
</tr>
<tr>
<td>M2</td>
<td>33</td>
<td>Typical case, intense sample, snowball</td>
</tr>
<tr>
<td>M3</td>
<td>22</td>
<td>Typical case, intense sample, snowball</td>
</tr>
</tbody>
</table>

**3.3. Interviews and interview guide**

All of the interviews took place in Helsinki, Finland during April, May and June 2012 and were done in a face-to-face setting. The interviews and their transcriptions were mostly carried out in Finnish; two were conducted in English. The majority of the interviews took place in the respondents' homes and some in public venues, such as cafés. The durations ranged from 52 minutes to 109 minutes. Table 2 shows the detailed information of each interview.
### Table 2  Interview information

<table>
<thead>
<tr>
<th>Respondent code</th>
<th>Date</th>
<th>Duration</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>11.4.2012</td>
<td>52 min</td>
<td>Cafe</td>
</tr>
<tr>
<td>F2</td>
<td>14.4.2012</td>
<td>53 min</td>
<td>Library</td>
</tr>
<tr>
<td>F3</td>
<td>16.4.2012</td>
<td>79 min</td>
<td>Home of the respondent</td>
</tr>
<tr>
<td>F4</td>
<td>25.4.2012</td>
<td>109 min</td>
<td>Home of the respondent</td>
</tr>
<tr>
<td>F5</td>
<td>5.5.2012</td>
<td>74 min</td>
<td>Cafe</td>
</tr>
<tr>
<td>M1</td>
<td>18.4.2012</td>
<td>72 min</td>
<td>Home of the respondent</td>
</tr>
<tr>
<td>M2</td>
<td>6.5.2012</td>
<td>88 min</td>
<td>Home of the respondent</td>
</tr>
<tr>
<td>M3</td>
<td>6.6.2012</td>
<td>52 min</td>
<td>Home of the respondent</td>
</tr>
</tbody>
</table>

A basic interview guide (Appendix 2) was used in the interviews to give them structure but many probe questions and additional discussion were used when they were found appropriate. Thus, even though the interviews followed a similar structure, the spoken content varied highly due to the discussion had on the personal insights of the respondents.

Also, an iteration technique was implemented in the interviews carried out at a later stage in the process. Spiggle (1994:495) discusses the process of iteration during the data collection phase as a process when the researcher notices, after analyzing the initial interviews that they have yielded some information that the researcher wishes to know more about in the subsequent interviews. Thus, there were some issues and ideas that were mentioned by participants in the initial interviews that were incorporated into the subsequent interviews, for example, in the form of probe questions.

In each interview, the ARM content was presented to each respondent in the same order (1. Absolut Vodka, 2. Viking shoe, 3. Nike sneaker, 4. Silhouette glasses, 5. Mazda car, and 6. Pixar figure). This was done in order to maintain an element of cohesion.
between the interviews, and to be able to observe the reactions the respondents had towards this particular chain of advertisements. Changing of the order of the ads between respondents was considered prior to the empirical study but it was found more appropriate to keep them in the same order throughout. This was done to maintain a certain structure and to be able to compare reactions between respondents. If the order had been shifted between interviews, the reactions the respondents described could have been due to what was previously seen, and if the previous content was different between all the respondents, it would have been difficult to compare the results and draw conclusions.

The overall tone in all of the interviews was relaxed and conversational. This was done in order to have the respondents be as relaxed and as open as possible with their responses. This was needed because the research relied on information gathered from a subjective, and thus a highly personal point-of-view. This is also a reason why many of the interviews were done in the homes of the respondents; these were found to be comfortable and relaxed surroundings.

The interview questions were mostly asked during the time when the respondent was viewing the advertisements. This was found as a good method during the pilot interview due to the fact that as the respondents were highly focused on the content they were seeing and playing with, they were not paying so much attention to the actual interview situation. Thus, there seemed to be less self-restricting on what the respondents were saying; the responses were more authentic. During the interviews, it was discovered that if the respondent was not holding the iPad and viewing an ad, their responses were immediately more premeditated and careful.

3.4. Data analysis

The empirical data was analyzed by conducting a content analysis of each of the transcribed interviews. Content analysis is used to classify textual material where the aim is to reduce it to more relevant and manageable bits of data (Weber 1990). The goal in using content analysis in this study was to thoroughly examine how each participant described their experience in relation to the content they were shown. The information from the content analyses indicated that the interviews had certain connecting themes and issues that were mentioned by almost all of the participants.
Thus, the data analysis was chosen to be a thematic one where the data was explained and analyzed through important and frequently mentioned themes. Also, interesting and relevant issues that were mentioned in singular interviews were included in the analysis. The overall idea was to find interesting ideas and assimilations from the content. Spiggle (1994:493) refers to this method as categorization, which is a technique of classifying or labeling units of data. Spiggle (1994:493) notes that "the essence of categorization is identifying a chunk or a unit of data (e.g., a passage of text of any length) as belonging to, representing, or being an example of some more general phenomenon".

Thus, the experience-related characteristics that were explained in the theoretical section, as well as the themes that rose from the empirical data, were used as the categories under which units of data were classified. For instance, interactivity was used as one of the categories and all units of data (i.e. parts in the interview transcripts) that made a reference to interactivity were placed under this category in the data analysis. Units of data were not limited to one category; in fact, there were many data units that belonged to two or more categories.

During the data analysis stage, the categories under which the data were placed were arranged into three main sections according to the nature of the data in the category. In other words, it became apparent that the interview responses were linked to three main themes, which are behavioral responses, cognitive responses, and affective responses. In Chapter 4, the results of the data analysis stage are arranged and examined under these three themes.

3.5. Quality of research

This section will focus on assessing the quality of research in the thesis. The assessment is included to give the author a chance to assess the quality of the work as well as give the reader the opportunity to evaluate the completeness of the work (Wallendorf and Belk 1989). The five categories of trustworthiness by Wallendorf and Belk (1989), which are credibility, transferability, dependability, confirmability, and integrity, are used to assess the quality of this study. The work by Wallendorf and Belk (1989) is cited from an Internet source (Association of Consumer Research) which includes the article without page breaks; thus, no specific page numbers are included here.
Credibility

Wallendorf and Belk (1989) discuss that credibility refers to the "adequate and believable representations of the constructions studied". In other words, while assessing credibility, one is considering what was done by the researcher in the data collection phase, how interpretations about the data were formed, and how these interpretations are presented. Wallendorf and Belk note that there are a number of ways in which credibility can be enhanced throughout the research process. Many of the suggested techniques, such as prolonged engagement with the research participants and on-site team interaction, were not applicable in this study because of the limited time span as well as the fact that the author was doing the study alone and not in a team.

However, the credibility of the research in this study is increased by the triangulation between sources and methods which has been done by the author throughout the study. Triangulation between sources (Wallendorf and Belk 1989) refers to the technique where the researcher develops evidence for the final interpretation by interacting with several types of informants; also, material from literature can be used as another type of a source. In this study, triangulation between sources was done by carrying 8 in-depth interviews with respondents with unique views into the use of augmented reality in digital marketing, as well as a thorough examination of related literature. Triangulation between methods (Wallendorf and Belk 1989) refers to multiple ways in which data can be collected. In this thesis, data was collected through recorded interviews as well as observations, which were written down as field notes during the interviews. These two methods were seen as ways in which the data could be collected in an in-depth and comprehensive manner. Videotaping was also considered but it was not found appropriate in this study because it might have had an effect on the responses of the participants (i.e. the respondents might have felt like the interview situation resembled too much of a controlled study setting which was not desired by the author; the purpose was to provide a relaxed and natural setting).

Transferability

The issue of transferability touches upon the subject of how the findings of a particular study have applicability in other contexts (Wallendorf and Belk 1989). The authors mention various ways in which transferability can be enhanced; however, all of the suggestions suggest including multiple sites, organizations, or groups into the
investigation. This study includes only investigation into one phenomenon amongst a group of participants, thus the suggestions of Wallendorf and Belk (1989) are not highly applicable. Furthermore, the purpose of this study is to look at a particular phenomenon in an experiential way understanding how individuals experience this phenomenon at this particular point of time. Transferability, thus, does not apply to this study particularly well because experiences are highly subjective and the results from a study conducted in the exact same way as this one could be expected to be different no matter when it was conducted. The purpose of this study is to understand a phenomenon, not try to duplicate its results in another study.

**Dependability**

Dependability in qualitative research refers to the notion of reliability in quantitative research (Wallendorf and Belk 1989). In other words, by dependability Wallendorf and Belk imply to how a researcher can determine whether the findings of a particular study would be replicated with similar research participants in a similar context. The authors note that this issue is connected to the assumption that there exists a single objective reality to be discovered, especially in certain positivist philosophies of science. The authors continue to state that "dependability (---), as a criterion, is linked to time and change processes, rather than to stability and similarity as reliability issues are in positivist research". It is suggested that dependability in qualitative research would be enhanced by observation over time and explanation of change.

In this study, the possibility to return to the respondents weeks or even months later, as is suggested by Wallendorf and Belk, was not possible. Also, because the study is not a longitudinal one, it is not possible to look for aspects that would explain changes in the respondents’ answers. However, as was mentioned with transferability, the purpose of this study is not to look for ways in which the respondents answers change over time; the purpose is to look at a phenomenon at this point in time. In fact, because the study looks at a new phenomenon of which the participants were not highly aware of prior to the study, it is expected that their views on the subject will change over time if and when augmented reality as a technology develops and becomes more widely used.

**Confirmability**

Confirmability (Wallendorf and Belk 1989) refers to the degree of which the findings of a particular study are determined by the answers of the respondents as opposed to the
motivations and interests of the researcher. At times this is referred to as neutrality. Wallendorf and Belk do not fully support the term neutrality due to the fact that there can be no absolute objectivity and the researcher can at best only be aware of his/her biases. The suggestions made by the authors for improving confirmability relate again to a team context, e.g. collecting data by multiple members in a team to reduce individual bias.

However, as this has been a study made by only one person, such methods have not been possible to use. Thus, the confirmability of this study is thus enhanced by the fact that the research process has been monitored by a supervisor; a process which is referred to as "confirmability audit" by Wallendorf and Belk including, for instance, commentaries on the adequacy of data and the plausibility of interpretations. Also, throughout the research process, the author has attempted to reflect on the potential biases that have affected the study (e.g. in the limitations chapter under the conclusions section acknowledging that a positive bias towards AR was noticed during the data analysis phase).

**Integrity**

The fifth and final category in how the quality of research could be assessed is integrity (Wallendorf and Belk 1989). According to the authors, integrity refers to the "extent to which the interpretation [of data] was unimpaired by lies, evasions, misinformation, or misrepresentations by informants". Five methods to enhance integrity are mentioned: prolonged engagement and the construction of rapport and trust; triangulation across sources, methods, and researchers; good interviewing technique; safeguarding informant identity; and, researcher self-analysis and introspection. As the techniques using a longitudinal or a team approach were not applicable in this study, the integrity of the research is increased by triangulation between sources and methods, a good interviewing technique, safeguarding informant identity, and research self-analysis.

Triangulation between sources was done by analyzing and comparing the interview data between the different informants. Furthermore, Wallendorf and Belk (1989) suggest that statements made spontaneously by respondents should be valued more than responses to direct question; thus, many spontaneous responses have been included in the data analysis section. Triangulation between methods was carried out by comparing the data collection methods (recordings and observations). Wallendorf and Belk suggest that it is useful to compare interview-based responses on action
towards observation-based responses to action. In this study, this was done by comparing observations and spoken records to each other; for example, at times it was observed that a respondent was seemingly interested and absorbed into particular content but in the spoken records they mentioned that they were in fact feeling quite bored. Thus, mere observations could have given a false idea of how the respondent was feeling.

Also, the author attempted to incorporate a good interviewing technique to reach the aims of the study. Wallendorf and Belk (1989) suggest that interviews should start with non-threatening and broad questions with more detailed questions following in the latter parts of the interview. Probing, reframing, and trying other alternative approaches are also seen as parts of a good interviewing technique. Furthermore, is it suggested that the researcher should also reveal something of his or herself to the respondent to appear less threatening and make the interview more natural. These techniques were found to be appropriate in this study and they were used during the data collection phase in all of the interviews.

As the interviews were incorporated into the consumption process of the AR advertisements, is it important not to just consider the spoken interviews but also how the respondents understood the imagery and language used in the digital ads. All in all, the respondents understood the ad content – both images and language – very well even though none of the ads were in Finnish (6 of the 8 respondents were native Finns). All of the respondents, however, speak fluent English as was discovered during the interviews, and as they are so-called digital natives, they were also familiar with the type of ad imagery used in the applications (e.g. transitions between images, 3D technology). Thus, during the interviews, there were no problems with understanding the overall ad language.

Furthermore, the interview data was coded during the transcription phase in order to protect the anonymity of the respondents. This is referred to by Wallendorf and Belk (1989) as safeguarding the informant identity. This was also told to the respondents prior to the interviews to establish a sense of trust. Finally, a process of self-analysis and researcher introspection was present throughout the research process (as was mentioned in the previous section). This was done in order to understand the effect of the author on the data interpretation and conclusions, which is important in any naturalistic research according to Wallendorf and Belk.
4  HOW DO CONSUMERS EXPERIENCE ARM?

This chapter includes the main findings of the empirical research. The following sections are arranged according to three major themes that became apparent to the author during the data analysis stage: behavioral, cognitive, and affective.

This chapter includes multiple quotes from the interviews. This has been done so the reader can get a sense of what the respondents said and how they themselves described specific issues. The quotes are either general statements made by the respondents during their interview or commentaries about specific advertisements. Some words or parts of sentence have been omitted from the quotes by using "(--)" due to the fact that they were unclear or irrelevant information in reference to the quote, such as phrases like "umm", "you know", "like" etc. There have also been words or parts of sentences that have been added to the quotes by using "[...]" to clarify the quote. The quotes from the interviews carried out in Finnish have been translated into English by the author.

4.1. Behavioral responses

This section describes the behavior-related responses that were discovered from the interview data (both spoken and observed). Behavior here refers to any physical action carried out or mentioned by the respondents relating to the study topic. The section is divided into sub-sections which describe different behavioral elements (not placed in a particular order of importance).

During the data analysis section, it became evident that the experience-related characteristics that were chosen to be the features, through which experiences would be examined, were in fact heavily behavior-oriented. For example, discussions and observations about control and interaction had mostly to do with physically controlling/interacting with the medium or the content. The behavioral responses are discussed next.

4.1.1. Perceived control

Control was an element that was directly mentioned or indirectly observed in all of the interviews. When control was discussed, it was often mentioned in reference to being in control of the situation, or being in control of what was happening and what was coming next. Respondent F1 mentioned that the direct touch that she had with the
device (the touch-screen tablet) made her feel to being control of the situation and reality.

"The touch] gives it a whole new purpose I think. It makes you in control. Of the you know... Touch. Reality." (F1)

From the interview with F2, a similar reaction was recorded. She discussed that the touch function and how the advertisements were made, made her feel like she could control where the advertisement was going.

"Normally you're just shown something, like it's just put in front of your face and you have to look at it... But here you can look at it in your own pace. For as long as you want." (F2)

Respondent M1 also mentioned control in his interview. For him, the high level of control that he perceived to exist was surprising and unexpected. He also discussed the fact that in many of the ads shown to him, he felt like he was in control of things happening on the screen of the device, as well as being able to turn the AR marker on the table and control that also. While viewing the Absolut Vodka ad, he said that:

"This is really unexpected. I thought the screen would just show me a picture of something. But I was surprised that this is so controllable, that it sort of lives with you when you turn [the iPad]." (M1)

Furthermore, for this respondent having to make some effort to be in control was a positive thing. In comparison to other types of advertising, he liked having to do something for the advertisement (i.e. position the iPad so that it would keep the ARM image on the screen):

"[The notion of control] feels interesting, that you really have to do something to keep the image on the screen. I think it's quite fun that the image doesn't just stay on the screen after the first time you get it there, but you have to make a little bit of an effort to see it." (M1)

Most of the previous quotes had a positive tendency; control, and especially the sense of being in control, was found as a positive characteristic. Control was also mentioned in a more negative reference in regards to the iPad as a device, and in regards to some of the content. In these references, the respondents mentioned that they felt that it was, at times, difficult to control the device or difficult to control the connection between the device and the AR marker, which was usually placed on a table in front of the respondent. Respondent M3 did not like the fact that to be able to control the
advertisements, he could not just use the swipe-function (i.e. swiping across the screen with fingers to change the image to another one) but he had to stand up or move the iPad to different directions to see all the sides of the 3D content.

"No, I don’t like [having to move around]. A clear and accurate swipe function would be much better.” (M3)

For almost all of the respondents, it was the first time using an iPad, even though all the respondents had used touch-screen technology previously. However, being able to control the iPad/Apple functions took some time and practice. Some felt that the device was too heavy after holding it for a while and that some of the ads would have been easier to look at with a smaller device. For some, holding the iPad in one hand and trying to play with the application with the other hand, also felt difficult. In the following quote, respondent F3 explains her feelings about trying to control the iPad and the Silhouette glasses application.

"It is a little difficult that how do you get it [the glasses] to be in the right place on your face [holding the iPad at the same time] and to be the right size. (--) How do I manage this on my own face exactly?" (F3)

Respondent F5 also had difficulties in controlling the content in the Silhouette application:

"Now [the glasses] are rotated into my face and I don’t know how to fix that, because you can only rotate them one way and now they are crooked.” (F5)

The times when the respondents felt like the device or the technology was not working properly, or they felt that they were not given enough information on how to control the content, various levels of frustration were observed. There were also responses where a direct lack of control was mentioned. Some respondents felt like technical difficulties and the perceived elementary level of the technology made it hard to be in control, and actually see the advertisement, at all times. Often those respondents who mentioned the lack of control found it bothersome, and even annoying. Next, the quote describes what respondent M2 experienced while viewing the Absolut Vodka ad.

"I get a negative quality experience from this one. It is hard to get this [the camera] to hit that [the ad on the marker]. Even if this moves a little, it affects what I see on the screen. (--) The picture flicks and goes out all the time. I don’t think this is a good user experience, it’s hard to control this.” (M2)
Respondent F5 also discussed the notion of control in her interview. She, however, approached it from a different angle. In her opinion, control did exist in all of the advertisements but she felt like the control was on a superficial level. She explains her experience in the following when asked if she felt like she was in control while viewing the ads:

"On a very superficial level. [...] In the Absolut Vodka one, well, I'm in control of choosing what advertisement I'm looking at. The Viking shoe, you just get to spin around (→), get to choose from three shoes [but] it's not like I can browse through a whole mall of shoes. It's quite limited (→). I didn't feel like I was in control that much having the ability to have a 360 view. It's cool but I'm still very much at where the company wants me to be, this narrow place" (F5)

For this respondent the technology did not provide a sense of autonomous control; she was able to have control but it was on elements that had been pre-selected for her. The respondent felt like she did not have the freedom to do whatever she liked but that she was doing what the advertiser wanted her to do.

As a concluding note, it must be stated that even though control has been categorized as a behavior-oriented characteristic in this study, that does not fully describe the term. In fact, control is a psychological state that all individuals sense in a subjective way. In the data analysis it became evident, however, that in this study many behavioral elements enabled the sense of being in control, or not being in control, which is why this characteristic has been included in this particular chapter.

### 4.1.2. Perceived interactivity

Interaction is another heavily behavior-oriented feature that was evident in all of the interviews. Interaction is closely related to control – both in literature and in this study. Interactivity-related discussions with the respondents were mostly linked to being interactive with the device as well as being in direct contact with interactive digital content. Interaction was mentioned by many of the respondents as the most important element that separates this kind of content from other, more traditional type of advertising, as is discussed by respondent M2:

"The interaction is what brings this technology close to the user. It is the one element that I feel that makes this kind of thing special, it is its main benefit." (M2)
Interaction was one of the features that could be observed as well discussed in an equal amount in almost all the interviews. The general pattern was that a participant would interact with the device and try its interactive features, play with it, and then discuss what s/he had experienced. The following quote is from the interview with participant F4 where she is playing with the Absolut Vodka application:

"[Trying to figure out the swipe-function, understands how the function works on the screens, starts examining the different pictures in the application] This is fun!" (F4)

As becomes somewhat obvious from the previous quote, interactivity would generally be positively affected by the sense of being in control and the device responding to the actions taken by the respondent. In other words, the respondents would indicate, for example, that an application was fun to interact with after they learned how to control it. After the respondents learned how to control an application, and if they liked what they saw in it, they would normally play with it for a longer time and examine its content more carefully. Next, quotes from F4 and M1 are included where the respondents are interacting with the Viking shoe advertisement:

"It is fun to see how far to the side you can go before the picture disappears [from the screen]. This gives you the kind of feeling that you want to look at this for a longer time, and again and again [starts playing with the application more]. It doesn't give you the feeling, like, show me the next one already." (F4)

"It's kind of fun that you really have to point this [the iPad] towards the right direction. And then there's the zoom function, that if you are far away, also the ad is far away and if you physically move closer, the ad also gets bigger on the screen. It's realistic." (M1)

These quotes express some aspects about the interaction in this context, which would often lead to increased action like standing up or turning sideways. Furthermore, many respondents felt like the technology was able to offer close to real life sensations, especially through the use of 3D imagery. Some felt that the images, especially the Viking boots, were so realistic looking that they wanted to incorporate touching of real product into their interaction with the advertisement. Next, a quote regarding the Viking ad from respondent M1 is included:

"This looks almost like a real shoe, like this is almost like being in a real shoe store. The only thing that's missing is the ability to actually touch the shoe." (M1)

The way that the iPad is able to present content and especially the type of ARM content that has been produced for the device, evoked also other types of interactivity-related
behavior. As was mentioned, one behavior that was observed often was the physical movement of the respondents that they intuitively did while trying to interact with the content. For example, with the Mazda advertisement, many respondents actually stood up to walk around the AR marker to see the car from different angles. A similar behavior was evident when the respondents were trying to view the inside of the car which could be seen in a 360 degree view when the iPad was turned to different directions (i.e. the respondent could see the backseat of the car when holding the iPad towards the back of them).

"Here you also get the idea that [the car] is really there even though it isn't when you get up and start going around the car. That is the fun part. Not so much what you can see [on the screen] but that you can look at it from different angles like it was really there. That is the great thing here. You could turn that kind of thing on a computer screen but here where you are physically located affects what you see." (F4)

Opposingly, the respondents felt dissatisfied if the device or content did not respond to their actions and the interaction was not smooth. Next, respondent F2 is interacting with the Silhouette application trying to view the glasses on her face:

"[Trying to target the application/glasses on her face for several seconds] Ok, this is not getting it at all. [Frustration]" (F2)

A similar reaction was evident when respondent F3 was interacting with the Nike sneaker:

"This is difficult because I can't get ahold of this so I could get [the shoe on the screen] to turn. Compared to the previous one [Viking] this is more difficult to use. (--) Here, the swipe function doesn't work on all parts of the screen." (F3)

Thus, in all of the interviews, interactivity was a highly visible part – in positive and negative terms – both through discussion and observation. This is mainly due to the nature of the technology; the haptic features of the technology "force" the user to physically interact with the advertisements and in this way the user is also directly interacting with the content they are seeing and playing with. In many of the interviews it also became obvious that interacting and playing with the content took the focus of the user somewhat away from the actual content. For example, in the Absolut advertisement, many of the respondents mentioned that they were not actually looking at the texts that were displayed but instead trying out the technology and wondering how it works. In the following quote, M2 is looking at the Absolut ad:
"That background confuses me a bit, I think [the focus on] the text gets less attention. The context that they are attempting to tell is left out because of the [focus] on the device." (M2)

The Absolut advertisement was the first one shown to all participants so there was a level of particular excitement and curiosity about the AR technology during this ad. A certain type of learning curve, which will be discussed in more detail later, was evident during all the interviews. Initially, the respondents were excited and interested in how the technology works (wow stage), which was followed by a stage of focusing more on the content, and finally the respondents came to a stage where they were wondering how this technology could be used in real-life, and what are its benefits and shortcomings (post-wow stage).

4.1.3. Participation experience

Active participation with the content and the creation of one's subjective experience was also highly visible in all of the interviews, and strongly linked to control and interactivity. Because of the nature of ARM, which is used via touch-screen technology, users undoubtedly participate actively in playing with the content and thus creation of their own experience. They interact with the content, learn how to control it (when possible), and thus apply active participation throughout the process. Therefore, many of the quotes and observations relating to interactivity, for instance, could also be used for active participation because the act of interaction is, in fact, the act of active participation.

Next is a quote by respondent F1 (playing with the Viking shoe) where active participation with the content as well as an active creation of one's personal experience becomes evident. The quote includes a lot of thinking out loud, which indicates not only that the respondent is interacting and actively participating in viewing of the ad, but is also highly focused and absorbed into its content.

"[Playing with the application for several seconds] Ok, so the bottom is actually in the... When I do this, I'm under the thing [pointing towards the AR marker with hand]. Whoa! [continuing to play with the shoe for several seconds]." (F1)

Thus, absorption (high level of cognitive concentration), which will be discussed under the cognitive responses section, is also strongly interlinked to active participation and interaction.
4.1.4. **Downloading an application**

The other main finding that was discussed in all of the interviews is the difficulty of having to download a separate application for each of the different ARM content. In fact, there were also respondents who were wondering who would download an application to view advertised material to begin with. This was not something that was asked from the respondents but each one mentioned this aspect in one form or another.

Some mentioned that the AR marker should be interesting enough visually, or give some kind of information that the consumer would want to make the effort of downloading an application to see what is hidden in the marker. Some also suggested that there should be one universal application through which all AR content could be viewed. At the moment, no such application exists to the knowledge of the author; each advertiser creates an application for themselves and only the markers created for that application function with it. In the following, F3 discusses this issue:

"Apparently you have to download a special program to do this, so that you can view these. You have to make some effort. (--) For me personally, it is really important to know how much effort does it take to get something and then to use it." (F3)

A similar notion was brought up by respondent M1:

"Why would someone go through the trouble of downloading it? For some people it could be [difficult]. If you compare this to traditional advertising, that's the problem. Even though it's a small thing to download an application, it can be too difficult. Traditional advertising is so passive, you just look at something for a moment." (M1)

Thus, some respondents, like M1, viewed this kind of advertising as a more active type when comparing it to traditional advertising. In this type of marketing, consumers would not only have to be active while viewing the ads (i.e. play with them) but also be active prior to seeing the ad (i.e. finding and installing an application).

4.2. **Cognitive responses**

This sub-section will look at the cognitive-related responses/observations received from the respondents; these responses relate to active thinking and judgments made about the experienced content. It could be argued that all of the responses are in a way cognitive-related (i.e. requiring thinking and mental effort) but here, the data that was chosen to be included is clearly thinking-oriented and not, for instance, behavior-oriented, like in the previous section.
During the data analysis phase, it was discovered that most of the data were categorized under the cognitive theme, meaning that a large part of the respondents' answers were in some way orientated towards cognition and thinking. A typical pattern in an interview was that the respondent would play with an application and then start thinking about the experience and different features relating to that particular application. Some of these responses were purely focusing on the device or the content, but many were also direct implications given to companies on how ARM technology could and should be used and/or improved.

4.2.1. Absorption of the respondents

Absorption into the content was a characteristic that was mostly discovered through observation. It was also discussed in some of the interviews where respondents were asked, for instance, if they felt like they were particularly focused on the content and asked to elaborate if they were or were not.

Absorption was mostly observed when the respondents were interacting with the device and the content. For a majority of this time, the respondents seemed highly focused on what they were doing; when they were asked questions, they would not generally raise their eyes from the iPad to have eye contact with the author but keep doing what they were in the middle of doing. When absorption and focus were discussed, many of the responses indicated that a large part of the respondents' focus was on the behavioral level meaning that they were focused on carrying out a specific task. In the following, M1 discusses the notion of concentration:

"You have to focus on this, it attracts your attention. I am focused on keeping this image visible [on the screen], not so much on the content." (M1)

Similar responses were received from the other participants as well. High levels of concentration were on how the technology works, how far from the marker could the iPad be moved from, how to maintain the image on the iPad screen etc. Many of the responses in relation to absorption were, in fact, quite heavily behavior-oriented. When absorption was observed, it seemed to be strongly connected to the user actively participating and interacting with the content. In the data analysis, the parts of the transcripts that were categorized under "participation" and "interaction" were also generally categorized under "absorption". This means that while the respondents were actively interacting with the content either playing with an application or
looking/reading its content, they seemed to be cognitively focused on it as well. This observation highlights the fact that absorption can be linked to carrying out a task and a level of goal-orientation, as it has been in literature.

In those advertisements, where there was not so much to do in the respondents’ opinion (i.e. the Pixar one where the character would only walk around in a circle when tapping on the screen), or when they had already seen many advertisements and were getting over the "wow factor", absorption into the content – as well as interaction with the content – would be easily replaced by a lack of interest, and even boredom in some cases. Respondent F5 discussed the notion that young consumers of today – the digital natives – are so familiar with technology and have high expectations that if these expectations are not met, they might lose interest quickly:

"I don't think the content here is so interesting [while viewing the Viking shoe]. Then again, we live in a digital age and we're so spoiled like 'oh I've seen this before'. [We feel] so entitled." (F5)

4.2.2. Perceived vividness

Vividness is a characteristic that was only brought up in the interviews through discussion; it is something that is very difficult to observe from facial expressions for example. Vividness-related discussions related both to the quality of images (sensory depth) and the range of sensory breadth within the technology. At times, the discussion was originated by the author by asking related questions, and at other times the respondents naturally discussed, for instance, the element of combining touch with sound and images (e.g. sensory breadth; combining multiple senses to the experience of the medium/content).

Most often when discussing vividness, the respondents discussed the quality of the images that they were seeing and how that affected their experience of that advertisement. The quality of the images was discussed from many angles; there were experiences ranging from excellent to very poor between the respondents and between the different contents. Most often the good quality experiences came with images that were realistic looking, especially if the image was of a real thing like a shoe. The Viking shoe commercial was for the most part thought of as the highest quality out of the six advertisements used in this study. In the following quote, respondent M1 discusses the quality of the Viking shoe ad:
"This looks realistic. (--) It has been modeled really well. What is interesting here [looking at a boot] is that it is so tall, that you get a sense of depth from the picture. (--) This resembles a real shoe in a real store." (M1)

Even though all of the respondents found AR technology to be exciting on a general level, most of them mentioned that the majority of the ad images shown to them looked elementary. The most often used phrase was that something looked digital, fake, or too simplistic compared to the product in the real world. This was mentioned often in relation to the Nike, Silhouette and Mazda advertisements. Next, M3 discusses the Mazda ad:

"Well, I think this is really awful to be honest. The tires look like they are a pixelated mess and they all look the same." (M3)

Respondent F3 got a similar feeling from the Silhouette glasses ad:

"I don't think these glasses look real. They have a kind of a digital feeling. (--) the surface of the glasses doesn't look real even though you can get a sense of the model and how it fits your face." (F3)

When discussing realism of the images, there was a divide between the respondents. A majority of the respondents mentioned that the images should look realistic and also be in their real size (i.e. the 3D image should be of similar size than the product in the real world). For example, there were respondents who found it odd that suddenly there was a car in front of them on the table, which was something from the real world represented in an unreal size, such as respondent M2 discussing the Mazda ad:

"This is somehow really bad. It's a ridiculous thought that there would be a sedan car on your table. I get a toy-like feeling." (M2)

Some, however, liked the surprising element of seeing something unexpected in front of them. For them, the digital image on the screen was a digital image, and they did not consider that it would have had to be in its real size because it was not a real thing to begin with.

"That's the fun part here. There's a new Mazda on my couch." (F4)

There were also respondents who did not pay attention to having something "located" in their real environment or they thought there was not anything exciting about it; it was merely there in front of them. In relation to the breadth of sensory dimensions, most of the respondents enjoyed having the touch function being an important part of
the interaction with the content. Most, however, wanted to incorporate even more touch into the process. It was observed that touch varies between different levels; touching the screen of the device cannot substitute touching the real product. Most of the respondents wanted to touch, for instance, the Viking boots because they looked realistic and they appeared to be in front of them because they were in a 3D format on the iPad screen. Also, in the Mazda ad, when looking at the interior of the car, which was also mentioned by most to be of very high and accurate quality, the respondents wanted to touch parts of the interior, like to press buttons.

"What's missing here is if I wanted to click on something or do something here [in the interior]. It would be fun if you could see your hand [through the screen] and you could click on something in the car. It would add more interaction." (M2)

When discussing different sensory stimulation, all of the respondents were missing sound in the applications (none of the advertisements included sound). This became evident especially with the Pixar ad which was the only one to feature a living creature. Respondents would have liked to have had the ability to make the character talk, laugh, or to even tickle or touch him other than to just tap on the screen and make him walk around, which is currently the only interactive function in the application. Next, respondent F1 is discussing the experience with the Pixar ad:

"You could get to know the characters of a new movie for instance. They could make him do something else and tell you a little story. Can they do sound? (--)[If not] then they could add some text bubbles or something." (F1)

Respondent M3 discussed a similar notion:

"This is a little empty. He just walks around. There should be more idea to this. (--)[If this was related to a Pixar movie, for example, he could do something characteristic to that particular movie. Also, some kind of a sound thing would be nice." (M3)

When having discussions about adding sound to the applications, many of the respondents started thinking about different ways in which sound could be used. Some mentioned that the Absolut ad could incorporate music or the sound of the wind into the images of the Swedish nature, and the Mazda ad could include the hum of an engine. Respondent M2 sums this up in the following quote:

"If you think about this as an experience, you know, you can't add flavor or a direct touch with the product or smell, but you can add sound and movement. That would already add much more to this." (M2)
4.2.3. **Brand connection**

Like mentioned earlier, all of the chosen content was branded to include a brand connection to the experience to see if it had any impact on the consumer experiences. Before showing the respondent a particular AR ad, they were asked what they thought of that brand. This was done to get an idea what kind of an image the respondent had of that brand. Throughout all of the interviews, the respondents had very similar ideas about the brand images.

Absolut Vodka was most often described as "Swedish", "young", "fresh" and "cool". The respondents also had a strong recall of the bottle and the blue font that the brand uses. Viking and Silhouette were brands that nobody knew from before. With Silhouette, guesses were made that it is a brand for plastic surgery, hair care products, and make-up. Mazda was seen by most as a middle class car, similar to Toyota and other Asian car manufacturers. It was also seen as a somewhat outdated brand and not a very exciting one. Pixar was thought of as a pioneer in digitally animated movies; it was also associated with excellent quality, clever ideas, and Steve Jobs. Nike was mentioned to be one of the biggest sportswear manufacturers in the world with middle level quality products. Most of the respondents remembered Nike having a better brand image when they were younger; respondents said that it was a very cool brand "back in the day" (respondent F5) with Air Jordans and other nostalgia-evoking products.

However, even if almost all the brands had a brand image of some kind in the respondent’s mind, the brand seemed to play a small part in the overall experience of ARM. There were relatively few mentions about the brands during the discussions about the ads. The only occasions when brands were brought up were times when the advertisement was noticeably different from the perceived brand image and the associated quality perceptions. For example, the character associated to Pixar, which was universally thought of as a company with high quality standards, was discussed as being oddly poor quality compared to what the respondents were used to seeing from the company – naturally this was due to the fact that this ad had been branded by the author and the content was not, in fact, made by Pixar. Next, respondent M3 discusses his ideas about the Pixar ad:

"This character is a little disappointing since we’re talking about Pixar here. I would’ve imagined that this would be of a higher quality." (M3)
A similar pattern was obvious with the Nike advertisement. As Nike was seen as a huge corporation, some respondents wondered how a company with a big marketing budget could produce something of such low quality, such as respondent F5:

"Is this really Nike? (--) The 3D images for a company with a huge marketing budget. I expected more." (F5)

The only advertisement where the actual content – as opposed to the execution of the content – and the feel of the ad was discussed was the Absolut Vodka ad. There, some respondents thought that there were elements that did not fit into the brand image they had of the company. In the following quotes, respondents M2 and F4 discuss the issue:

"I'm surprised about the content considering what the bottles look like. I'm surprised that this has such a romantic or that kind of a feel. I would have expected something a little more 'out there'. This content is quite traditional." (F4)

"If you think about the freshness that is associated to the brand then I think that this one has a quite dark tone. This is much more rough, a lot of metal is used. (--) The whole palette is dark. I don't really get a positive feeling from this, it sort of an end-of-the-world theme [laughs]. My image of the brand is different." (M2)

When looking at other brand-related comments, some respondents mentioned that they received an enhanced experience of the brand either because they thought the ARM ad was well made, or simply because the company had decided to use AR technology, which was perceived to innovative and forward-thinking.

"[The use of AR] gives a good picture of the company; they're moving along and using the technology that's out there." (F1)

Some thought that using this technology could also be a risk for a company and its brand, if done poorly (either content-wise or in regards to the execution of the ad) such as respondent F3:

"I see that this [technology] can also in a way be risky from the marketer's perspective. If the content is poorly produced then I feel like it could quite radically affect my view of the brand. If the application doesn't look and feel good, then maybe the real product won't look and feel good either." (F3)

Also, due to the fact that AR technology is quite demanding in a cognitive and behavioral way (having to focus on the content both mentally and physically), it was suggested that the focus of the consumer might not be on the brand but instead on the surrounding elements. M1 describes this in the following:
"The danger exists here that the user’s focus is on something else than what the marketer would want it to be on. But then again, I will probably remember this experience at least, even if I didn’t remember exactly what was in those ads." (M1)

Overall, brands played a seemingly small part in the overall experience of the respondents of this study; technology and interaction with the content were the elements that took up the most interest. This becomes obvious when considering the advertisement that was seen as the best – both in execution and content – by the respondents (the Viking shoe). The Viking brand was unfamiliar to all respondents prior to the interview but it was the most liked. This indicates that the ad did not have to have a strong brand image to be thought of as a good AR advertisement.

4.2.4. Considerations about AR markers

An important consideration that was made by almost all of the respondents had to do with the AR markers that were used as the signs where the camera of the iPad was directed at to get the image on the screen of the device. The markers, which can be found in Appendix 1, were all different in their appearance; the Mazda ad looked similar to a black-and-white QR code whereas the Viking shoe marker was a detailed picture of the ground with a shoe print in the middle. The discussions where the marker was mentioned were mainly on the connection between the marker and the digital image, as well as on the appearance of the marker. Three main themes arose from the interview data, which were: 1) the marker's ability to communicate where AR is located, 2) the marker's ability to raise interest in what can be seen when looking at it, and 3) the connection, or disconnection, between the marker and the digital content.

The marker as a theme was not originally included in the interview guide so it was somewhat unexpected that the respondents all mentioned some aspect about the it. One of the most frequently mentioned themes was the marker's ability, and responsibility, to indicate where AR is located. Often, the marker is the only way to know that a magazine image or an advertisement at a bus stop includes an augmented reality element. Thus, the respondents found it important that the marker would be informative enough so that people would know to look for AR in it.

Also, some of the respondents paid attention to the fact that the marker should be interesting and appealing to get people to download an application to view it. Next, respondent F4 talks about the marker:
"Yes [the marker should be interesting] because it is the first thing that you see. So that you make the effort of getting your phone out, starting an application and seeing what's hiding in it, it needs to appealing. (...) This technology is probably going to get more popular and you don't have the time to look at all of these, so you have to be selective. And I think you select one that looks interesting." (F4)

Respondent F5 discusses a similar notion:

"[It's important what the marker looks like] because it gives you a hint about what you'll find on the site and it kind of justifies the time spent on it." (F5)

A problem relating to the unfamiliarity of AR technology was also discussed. There were respondents who were considering the fact that they would have not recognized, or even known, that the markers that were presented to them included AR advertising if it had not been explained by the author. Most of the markers used in this study were simple pictures where no explanation of the AR content was included in the actual marker (the user instructions were mostly located in the application and not on the marker). Many of the respondents found this odd because a regular consumer would not understand a picture without further explanation to include AR. A reference to QR codes was also made. Many of the respondents thought that QR codes do not look good and that the markers used in this study were more interesting in appearance. In fact, many of the respondents did not link the AR technology in this study and QR codes together even though they are both considered as augmented reality technology.

However, the benefit of QR codes was discussed to be the fact that they are something that is already recognized by people; the appearance, albeit simple, is something that tells the viewer something (i.e. that there is additional information hidden in the code).

In the following quote, M2 discusses the appearance of markers:

"I think it would be good if there was something in [the markers] that would help people recognize them as markers. Like a QR code. (...) Or I think the marker should be made into the logo of the brand, so that that would be the format used in these." (M2)

Another consideration made by some of the respondents was that not only should the marker be informative about where AR technology is located, it should also be interesting enough to get a person to look at it. Respondent F1 discussed the idea of a treasure hunt:

"Maybe some people want to download the app just to see what it hides. It's like a little treasure hunt. You have to do something to see what's behind." (F1)
Almost all of the respondents also mentioned that the marker and the digital content should have some kind of a connection. The strongest connection was found to be in the Viking ad where the 3D image of a shoe, or seemingly a real shoe, "rose" from the shoe print on the marker. The negative impression between the marker and the content came when a clear, comprehensible connection between the two could not be found or that it was not easy to understand. For example, in the Nike ad, the marker was a picture of a sneaker but the sneaker that appeared on the screen of the iPad was a completely different one. F4 discusses this issue next:

"Now I just get some shoe here [on the screen] and actually it could be anything because it has nothing to do with the shoe on the marker. Like a table could come out, or a ball." (F4)

Respondent M3 considered the issue of marker/content connection frequently throughout his interview and came up with different suggestions on how the connection could have been increased in the ads shown to him. Next, he talks about the Nike ad where the user could customize a shoe using AR:

"I don't think there's any kind of connection between the marker and the content. I think there should be some kind of an image relating to customization. Like a picture of a jar of paint or something, not just a shoe. Like that [the marker] would be missing the shoe but all the customization equipment would be there and when you look at it with the device, you see the shoe in the middle of it. (M3)

Thus, even though the marker was not something that was considered prior to the interviews to be a highly important issue, it received extensive attention from the respondents underlining the fact that it is often the first connection to AR that a person has and should be made informative and appealing in appearance.

4.2.5. Considerations about content

Considerations that the respondents made about the content came in many forms during the interviews. In the data analysis phase, these considerations were connected under the cognitive theme because they were clearly things that the respondents thought about carefully after they had seen the advertisements. As the experience of the content as well as the device is at the heart of this study, a large part of the interview transcripts fell under this sub-section.
First, when examining the interview results, it became clear that the respondents mentioned the notion of getting a reward from the content. This meant various different things for different respondents but the unifying idea in this sub-section was that the respondents were looking for some kind of added value in what they saw or what they were doing. The added value could be fun, for instance, such as respondent M2 mentions about the Silhouette application:

"This is actually quite fun, like taking pictures of yourself [with the glasses shaped oddly]. (--) I would use this as an application for social entertainment, for fun. If that was [Silhouette's] goal then they have succeeded." (M2)

Respondent F3 discusses the issue along similar lines:

"I don't think these kinds of advertisements are the most informative type of ads. I think they have more entertainment value." (F3)

Thus, added value for the respondents could be fun, being entertained, or getting to design a shoe. Rewards were also something that was wished for such as designing a cool and unique sneaker and having the ability to order it online straight away. Often, considerations about the added value or benefits had to do with the nature of the technology; in other words, as the technology was seen as effort-requiring of the user (i.e. to be active), it was also thought of as something that should reward the user in some way.

"You demand something of the consumer. [The result] should then be something that benefits you in some way." (F1)

Another consideration about the content that was often mentioned was the notion of digital advertisement being located in the real world. Most of the respondents felt that with AR technology and hand-held devices, the content came physically close to them compared to more traditional media outlets such as TV.

"I think this is a lot of fun [looking at the Absolut Vodka application]. It's innovative. I like the fact that this brings a connection between the physical world and the digital world. (--) I could have a physical product in my hand, like a real Absolut bottle, and I could connect the digital world to it by using that device. They go together more seamlessly. (--)" (F3)

When looking at the Nike sneaker, the same respondent continued to say:

"You feel like you are actually closer to the product in the ad than you really are." (F3)
Respondent M1 acknowledged the presence of the iPad:

"It feels like it is closer when you compare it to a mouse and a computer, this experience is somehow more intense. It probably has a lot to do with the fact that you can bring the device close to you, without having a keyboard in the middle." (M1)

In addition to being able to feel a close proximity to the content – which was mentioned by a majority of the respondents – another issue that was brought up was the disconnecting or unreal nature of the content. Some respondents mentioned that while viewing the advertisements, they felt a certain level of disconnection from their surroundings and the real world. For some, it was perplexing to grasp the idea that the product was there on the screen of the device and in a way really there, but in fact, it was only a digital reflection coming from the AR marker. Many of the respondents were observed waving their hand in between the iPad and the marker, as if they were trying to touch the product that was seemingly coming out of the paper.

"It is sort of strange that your reality changes, you feel surreal. You have to look if it’s actually there or not. (-- I sort of think of a sci-fi TV show when I see these." (F4)

Due to the fact that many of the respondents felt physically close to the content, they also discussed that the content should always be accessed free-willingly by the consumer. That is to say, that such content should not be forced to be looked at because it could easily feel too imposing for the user.

"I would never want this to go to a place where my mobile phone would register signals all the time, for example when walking around down town, and open up 3D images around me. I think this kind of thing should always be voluntary. (-- It would be great if an ad could first raise someone’s interest and then get them to look at the AR thing because it’s so clever. It would come from a voluntary place. Otherwise this is just another way to force people to look at advertising they are not interested in." (F3)

Respondent M2 also talked about the relationship between the user and the content:

"With this kind of advertising, the opportunity and the challenge is the fact that you get to go so close to the user, in their personal space. The relationship between the user and the message is delicate and needs to be respected, it’s a whole different thing than TV for example. (-- If the experience is somehow imposing, then you can immediately think that this is a negative thing." (M2)

Trust in the content was also something that was brought up by many of the respondents. Trust had to do mainly with the ability to trust the digital image. In other
words, respondents mentioned that they had a hard time trusting that the Nike shoe, for instance, would look the same in real life than it did in the digital image. A similar notion was discussed with the Silhouette advertisement. Hence, especially in those advertisements, where the content appeared "digital" and not realistic looking, discussions were connected to how the product would look like in real life and could it meet expectations.

Another consideration about the content had to do with the usability of it, in particular getting instructions on how to use the advertisements. As augmented reality as a technology and the iPad as a device were new to almost all of the respondents, they all mentioned that they would have liked to have more instructions, or even a short video, in the beginning of an ad to clarify what to do with the content. Most of the respondents thought that in general the instructions given were too brief or disappeared from the screen too fast. Also, some of the respondents mentioned that the content in almost all of the advertisements did not indicate strongly enough what the brand in the advertisement was. Next, respondent M3 discusses the Pixar ad:

"The marker looks like it could be advertising beer, or olive oil. Then all of a sudden there's this green creature here. So there's no connection, no brand mention, no instructions." (M3)

Most of the respondents mentioned that the content should tell some kind of a coherent story and be linked to other advertising and the brand image of the company. If the advertisement was not linked to other related messages from the company the respondents felt like the ad was "loose" and disconnected. For example, the Pixar advertisement had nothing but the green creature which left the respondents looking for a connection to a movie or even some text to explain what the creature was – naturally there was no connection because it was not really a Pixar ad. Also, respondent M2 was looking for the brand connection in the form of a call-to-action function. In other words, only the Silhouette and Absolut Vodka advertisements had some kind of a follow-up link that would guide the user to the corporate website. M2 was looking for the ad to guide him somewhere, like to the closest car dealership with the Mazda ad, but he felt that in none of the ads this was done properly (if it was done at all).

4.2.6. Respondent’s ideas for using AR

Cognitive considerations made about the overall AR experience range through various issues as can be seen from the previous sub-sections. Another trend, and the last one to
be included in the cognitive responses section, was the different ideas about how AR could be used that the respondents came up with mostly on their own. Next, quotes regarding the innovative use or AR have been included:

"One thing that could be quite fun was if the application could take a picture of you and design glasses that would best suit your face, like customized glasses." (M2, while viewing Silhouette ad)

In the following quotes, respondents F5 and F4 discuss their ideas while viewing the Viking shoe advertisement.

"I think another level would be to interact not only with the product but also interacting with our interest. In this case, not only the product but what you can do with it in the woods or ideas for hiking, mixing that kind of project with the product. I think that would augment your reality in a real sense that it would help you do things you're already doing or things that you would like to do." (F5)

"It came to mind about these shoes, especially because these are so feature-oriented, that it would be nice if the shoe would sort of step straight into the shoe print. (--) With hiking shoes, the functionality of the shoe is so important so adding a feature like that here could be quite fun." (F4)

Next, respondents M3 and F3 talk about their ideas in relation to the Pixar ad:

"I think it would be interesting, since he is in this environment without a digital environment of his own, that it would be utilized. Like he could recognize you and he could touch you for instance." (M3)

"This brings to mind movie posters that are for the most part two-dimensional. This could be used in a poster, like a creature would literally walk out of the poster if this technology was applied there." (F3)

Thus, as can be seen from this section, the AR content used in this study was able to bring up various cognitive-related responses among the respondents including appearance-related issues, usability-related issues, issues relating to the marker-device connection, and many other things. The next section will focus on looking at the affective-related responses (i.e. responses having an emotional connection).

4.3. Affective responses

This section will look at the third response type that was discovered from the interview data. Here the affective-related data, both spoken and observed, have been included.
The most obvious emotion-relating response that was detected in almost all of the interviews was something being fun or funny. This was detected by noticing the respondents smile or laugh at something or explain how something was fun/funny in their opinion. Other emotion-related responses, that were discussed briefly in the previous sections, were frustration, surprise, and in some cases boredom with the content. The affective responses were mostly observed when the respondents were interacting with the AR content. If an emotional reaction was highly observable, the respondent was asked to explain their reaction in more detail.

Most of the "funny" reactions came from the Silhouette advertisement. The glasses in the application made almost all of the respondents laugh because they were often too big, too small, or crooked on the respondents face. Also, the fact that this was the only application that used the respondent as an integral part of the AR experience, made the respondents laugh; it was simply funny that there was something on their face all of a sudden. Respondent F4 explains her feelings about the Silhouette ad in the following:

"This could provide a lot of entertainment on a night if you were having people over and you could try these on. And then if you could save pictures of yourself somewhere because [the glasses] seem to go all over the place on your face [laughs]." (F4)

When something was funny in the content, it seemed to be mostly associated with something being wrong or there being a malfunction in the application. When something was fun, on the other hand, it was mostly associated with doing something fun with the content or the content being able to offer a fun experience, such as designing your own sneaker. In the next quote, F1 discusses the Silhouette ad:

"It's fun and it's beneficial. I like that because that's going to make people get the app." (F1)

Surprise was another emotion-related response that was noticed in almost all of the interviews. Especially in the beginning of the interviews when the respondents were seeing AR content for the first time, they were very surprised about how it looked and how the technology had been made. Those respondents who had seen AR content before, did not express surprised emotions. M1 talks about the element of surprise next:

"The technology is the big surprise here. It's interesting that that little square [Absolut Vodka marker] is enough to do this, that it doesn't a code or something. I was under the impression that this kind of technology would require a more complicated code." (M1)
Surprise is an element of the learning curve which will be discussed in more detail in the next section. Frustration, which was referred to earlier, was also a noticeable emotional reaction in most of the interviews. At some point, all of the respondents seemed to feel frustration. It had mostly to do with the device or the content not responding to whatever action the respondent wanted to take. Thus, frustration was tightly connected to interactivity and control.

Boredom was also something that was noticed in all of the interviews as an emotional reaction towards the content. Boredom was something that was mostly noticed through discussions; throughout the interviews the respondents were seemingly interested in playing with the applications and absorbed by them but they could also mention simultaneously that they were actually feeling a level of boredom with a specific ad. Boredom most often came from using applications that appeared too simple; in other words, the applications lacked functions that could have maintained a level of interest for an extended period of time or the application did not work properly. Boredom was also noticed mostly towards the end of the learning curve.

"You would like to do something else with this character but what can you do? Other than make him walk around in a circle. Maybe this could be fun for a child, like to take his/her pet out for a walk." (M2)

4.4. Observed AR experience learning curve

In this section, explanation about the observed learning curve is included. The curve was something that was initially observed during the interviews and later confirmed in the data analysis stage.

The learning curve here refers to a specific pattern than was observed with the respondents in regards to their behavior, thoughts, and emotions. The curve in its entirety was observed mostly with the respondents who were not familiar with AR technology; those respondents, who were familiar with the technology, were mostly placed towards the end of the curve. Next, an illustration and a more detailed explanation of the curve are included in Figure 3. The curve is titled as a learning curve because it displays a certain learning pattern that was evident during most of the interviews. In other words, as the respondents “learned” more about the technology and the AR content, their behavior and thoughts seemed to be changing.
2) CONSUMPTION STAGE
Looking at the content more closely, examining the ads more closely, thinking about what is actually in the content, and how it is presented

1) WOW STAGE
(i.e. wondering how the technology works, surprised, fascinated with the content/device)

3) POST-WOW STAGE
(less interest in how the technology works, thinking about ways to improve the technology/content, criticizing the content, thinking about the future potential of AR)

CONTROL
ABSORPTION
VIVIDNESS
INTERACTIVITY
PARTICIPATION

BEHAVIORAL
RESPONSES

AFFECTIVE
RESPONSES

COGNITIVE
RESPONSES

Figure 3  Observed AR experience learning curve
Figure 3 displays a multi-leveled illustration about the respondents’ AR related learning curve that was observed in all but two interviews (respondents M2 and M3 who were located directly towards the end of the curve). The thick blue line in the middle of the curve marks the overall experience of the respondent. The experience was seen to be a 3-step process: first, what is labeled as “the wow stage” was observed. During this stage, the respondents seemed to be surprised and fascinated about the technology, and also about the 3D content. The Absolut Vodka and the Viking shoe advertisements belong to this stage because they were the first two ads shown to the respondents. This stage is characterized mostly by affective responses (marked with a thick red line) such as joy and being surprised, as well as behavioral responses (marked with a thick green line), such as controlling and interacting with the content and actively taking part in the experience by playing with the applications. At this stage, also some cognitive responses were evident, such as thinking about how the AR technology works (marked with a dashed blue line). In the figure, those connections that were observed but were not strongly evident have been marked with a dashed line (e.g. the connection between the first stage and cognitive responses). Strongly evident refers to a characteristic being one of the dominant characteristics at a particular stage.

The second stage, which is referred to as “the consumption stage”, is characterized by more active thinking about the content itself, as well as the iPad as a device and the medium through which the content is presented. This stage is mostly cognitive-oriented meaning that after some of the “wow factor” had passed, the respondents started thinking about the advertisements in more detail. While they were thinking about the advertisement, they were also considering behavioral elements (e.g. having to hold the iPad) while they were actively interacting and controlling the content and the device. In the first stage, most of the respondents were quite enthusiastic about the new technology; in the second stage, their reactions started to be more neutral and even slightly negative (e.g. signs of boredom and looking for more depth in the content). Due to the fact that signs of affective responses were evident but not strong at this stage, a red dashed line was included in the figure to make a connection between affective responses and this stage. The Nike and Silhouette ads are seen to belong mostly to this stage.

The third stage, labeled as “the post-wow stage”, came after the consumption stage. Naturally, the respondents were still consuming the advertised content but at this stage it became somewhat obvious that the initial “wow-factor” had passed and the
respondents started to be critical towards what they had seen. They also started to think about improved or other ways of using AR in advertising. The Mazda and Pixar advertisements belong to this stage. The third stage is mostly characterized with cognitive responses, as the respondents were reflecting on what they had seen in all of the ads. It is also characterized by affective responses because at this stage responses such as boredom and frustration became most evident. Some behavioral elements were also present at this stage. These elements were, however, weaker in the connection to the overall experience because it seemed that the respondents were getting bored with what was mentioned by respondent M2 as “elementary level of execution in the ads”. That is to say, that the respondents’ desire to for example interact with the content was weakened because they were losing interest in the content. This was mainly due to the perceived elementary level of the AR ads but also because of malfunctions and the limited amount of actions one could take with the content (e.g. make the Pixar character walk around but nothing else).

In the figure, the five original experience-related characteristics are placed in the middle with a dashed blue line underneath. This line indicates that all of the characteristics were present throughout the respondents’ experiences but the connection that these characteristics had with the experiences varied. This means that there were times when a specific characteristic was strongly connected to the experience; for example, in and between the “wow stage” and the “consumption stage” interactivity, participation, and absorption were strongly connected to the experience. The respondents were actively interacting with the content, and being notably absorbed into it. In the “post-wow stage” on the other hand, interaction with the content was getting less interesting for the respondents which means that interaction did not have as strong of a connection to the overall experience as it did in the beginning. This is why these characteristics are depicted with a dashed line; at times they appeared stronger and at other times weaker.
5 CONCLUSIONS

In this chapter, the conclusions about the main findings of the study are presented. This chapter will also include a discussion into the connection between the theoretical section and the empirical study. Conclusions will be made on what was in line with the characteristics that were discussed in the theoretical review and also on what was surprising or not in line with the theory.

As became evident from the previous chapter, the results of this study are manifold in nature; in other words, digital natives experience augmented reality marketing on multiple levels through behavior, thinking, and emotions. Thus, it is suggested that the results should not be studied as conclusive findings but rather as insights into the world of individual experiences and how these insights can be connected to existing research.

5.1 Behavioral findings

This section looks at the behavioral findings of the study. Many of the experience-related characteristics that were discussed in the literature review fell under this category during the data analysis stage. The first characteristic that was discussed in the previous section was control; it will also be discussed here first. It will then be followed by examination into the interactivity and participation-related findings.

5.1.1 Control in ARM

In the literature review, control was discussed as an inherent part of the digital environment with the ability to offer internal pacing for the user, allowing the consumer to search and read information at their own convenience, and giving the consumer the opportunity to use bricolage (i.e. manipulate objects around a person’s immediate environment). Control was also discussed as a highly subjective state of mind residing in the perception of the individual.

In the empirical study, control was discussed from multiple different angles. These related to the touch function, being able to be in control of what was coming next, being surprised about the level of control, not being satisfied with the responsiveness or the level of control of the content or the iPad as a device, and feeling a lack of control or a superficial sense of control. Thus, the discussions relating to control were as multifaceted as there were respondents and unique opinions.
However, control in ARM was seen to include many of the notions that were discussed in the literature review. For example, to idea of being able to control what was in front of the respondent and what was coming next relates directly to internal pacing which was discussed in the literature review as the process of information transfer which is controlled by the receiver as opposed to the sender. Clearly in ARM, the receiver is the one who controls the pacing of the information they receive, mostly through the touch function. The sense of being in control and getting to pace things in one's one way were seen as some of the most distinguishing, and in many cases best aspects about touch-function ARM.

Furthermore, in the literature review, it was mentioned that the Internet as a medium allows consumers to search for and read information when it is most convenient for them. This is also evident in ARM. The user can download an application and look at an ARM advertisement whenever they want to – and in particular if they want to. This highlights the fact that ARM gives the user many ways to be in control.

Bricolage was also discussed by some of the respondents. One respondent mentioned that as AR develops as a touch-function technology, it would be fascinating if the whole structure of websites and digital applications would change to users being able to swipe webpages and features on pages on top or next to each other forming views that would best suit that user (as opposed to the "tree-type view" on how websites are constructed typically).

In the literature review, control in the digital environment was mostly discussed as the opportunity to do and control various things in the online space whenever it is most convenient for the user. However, there were no in-depth considerations in the review made about the facts that could hinder the sense of control. In the empirical study, it became evident that the sense of control could disappear quite easily if there were difficulties in using the content or the device that presented the content. Simply the existence of control-enabling features is thus not enough; they need to also respond to all the user actions rapidly.

Moreover, in the empirical study different respondents seemingly enjoyed different levels of control. Some respondents felt immediate frustration if there were any problems in controlling the iPad or the presented content (i.e. if the digital images flickered). Others were more conservative in their reactions expressing levels of frustration after playing and trying the applications for a longer period of time. This
highlights the subjectiveness of control as an individually perceived state that can easily be affected by poorly working technology as well as the personality of the user. There were no respondents in this study who would have enjoyed or would have had positive feelings towards the lack of control; it was a noticeable cause for frustration for all. Due to the fact that AR as a technology is still somewhat elementary in most cases, there were many malfunctions and errors with the content that affected the perception of control negatively throughout all the interviews. All in all, control being a highly subjective state was discussed in the literature review and thus confirmed in this study.

5.1.2. Interactivity in ARM

The second characteristic that was discussed in the data analysis section was interactivity. In the literature review, interactivity received extensive focus as it is seen by the author as one of the most distinguishing features of the online environment. Interactivity was discussed to exist between humans, humans and messages, and humans and machines. In marketing, the most important interaction was seen to exist between consumers and marketed messages. Interactivity, like control, was also seen as a subjective state of mind enabled by the marketer but experienced by the consumer (i.e. the notion of perceived control). Interactive digital marketing was discussed mainly through the modified model of Interactive Advertising by Rodgers and Thorson (2000). In Figure 2 (see page 25), the advertiser-controlled and the consumer-controlled aspects of the Internet were discussed.

In the empirical study, the notion of interactivity was mainly connected to the behavior of interaction. That is to say that the respondents talked less about the psychological elements of interaction than of the behavioral elements of it connected to AR technology. Interactivity was a highly "hands on" characteristic in this study. Most respondents talked about interacting with the iPad as a haptic device and with the content that was used by touching and moving it around with fingers.

Thus, the discussion about interaction in the literature review and how it was discussed in the empirical study varied to a degree. What is in common between the discussions is that interaction, like control, is a subjectively perceived state which is perceived differently by different individuals. This was mentioned in the literature review as perceived interactivity and also observed in the empirical study. What is in common between individuals is the simple fact that interaction exists; in the empirical study, two-way interaction in all interviews existed between the participant and the iPad.
(referred to in the literature review as human-machine interaction), and the participant and the marketed message (human-message interaction). However, how these interactions were perceived and discussed varied from interview to interview.

The Interactive Advertising Model, which was discussed in the literature review, could also be applied to augmented reality marketing. In ARM, the advertiser is the one who controls the structure of the AR content and the consumer is the one who experiences the content. This experience is presumably affected by certain functions and information processes that happen prior to seeing the advertisement. During and after the advertisement has been experienced, the consumer forms certain outcomes towards it, such as saying they did not think the AR technology was working or that their image of the brand was enhanced because the company had incorporated AR technology into their advertising. The steps taking place prior to seeing an ad were not highly focused on in this study; the focus was mostly on the looking at the structure of the ads and how the consumer outcomes were formed and what they included.

Overall, as augmented reality technology, especially the kind that incorporates touch, is still new, it became obvious in this study that the physical part of the interaction took up a large part of the respondents’ attention. The act of “doing something” with advertisements is still relatively new so it is understandable why the action of doing took up more attention than perceived interaction with the marketed message, especially in the beginning of the learning curve. Naturally, when an empirical study involves observation, the act is what is observed and not the mental processing of the participant.

Thus, there was more discussion about interactivity as a psychologically perceived state in the literature review than there were observations/recordings of it as such in the empirical study. This does not mean that interaction would not be significant in a psychological way but that its main contribution to this study came through behavioral findings; the respondents were more focused on interaction through action rather than cognition. Consequently, in this study the most visible part of interaction was, in fact, consumer-machine interaction which was not thought of as important as the other forms of interaction in the literature review.

It is difficult to say exactly why this was the case. One of the underlining reasons could have been the fact that it was the first time for most of the users to use an iPad. However, not all of the interaction-related discussion had to do with interacting with
the device; there were also conversations about the interaction with the content. Discussions were had, for example, how the physical interaction with the content could take attention away from the marketed content.

To conclude, on the one hand the touch and the interaction that the respondents had both with the content and the iPad were some of the most exciting elements about AR technology; many of the respondents felt like they were actually closer to the advertised content, almost like it was a real thing, especially if it was made to look realistic. On the other hand, consumers that are used to receiving advertising in a passive way (e.g. TV), could find extensive levels of interactivity quite arduous.

5.1.3. Participation

In this study, participation was seen as a characteristic closely related to interactivity, both in the literature review and in the empirical study. In the literature review, participation was discussed as a characteristic that exists on an active-passive continuum. It was mentioned that in an AR setting the consumer can be considered as highly active because they are actively involved in the process of creating their personal online experience by playing and tinkering with applications.

In the empirical study, participation was strongly linked to control and interactivity, and it was categorized under the behavioral responses section. Again, such as with interaction, participation was mostly action-oriented, which means that it was observed mostly on a behavioral level as opposed to a cognitive level. Naturally, observation of behavior was easier than observation or even discussion about participation on a cognitive level. The part of active participation that had a cognitive link was absorption, which was observed in the empirical study multiple times. In other words, while actively participating and interacting with content, the respondents seemed also highly absorbed into what they were doing.

Thus, the discussion about participation was somewhat broader in the empirical study than what it was in the literature review. The review discussed participation mostly on the active-passive continuum whereas participation in the empirical study was focused not only on notion of activity but also on the characteristics that participation could be linked to, such as absorption.
5.2. Cognitive findings

This section includes the conclusions on the most significant cognitive findings of this study. As some of the findings that were discovered were not included in the literature review, sections where these findings are discussed may not have references to related literature. Thus, in these chapters only the empirical findings related to this particular study will be concluded.

5.2.1. Absorption in ARM

Absorption is one of the characteristics that were seen to have a strong connection to psychology in the literature review. Absorption was discussed to be a state where a person is cognitively focused and involved in the content presented to him/her. Absorption was also seen to have a strong connection to goal-orientation and completing a task at hand. There was also a study that was referred to where absorption was linked to the feeling of flow (Rodriguez-Sanchez et al 2011).

In the empirical study, absorption was mostly an observable characteristic. As the advertisements presented to the respondents often required them to actively perform a task, high levels of absorption were observed, especially when the respondents were trying to find out how something worked or try to make something happen (i.e. active participation and interaction). Thus, also in this study, absorption could be linked to completing a task as was discussed in the literature review. The goal-orientation and wanting to complete the task at hand were the most evident connection between this study and the literature review.

In the discussions had with the respondents about the focus on the content, they often mentioned that they were focused on a behavioral level; that is to say that they were focused on doing something rather than, for example, reading a text in an ad. This behavioral element was especially evident in the beginning of the learning curve where the action of doing something rather than focusing on content received most of the attention from the respondents.

Absorption was an element that was somewhat contradictory in the empirical study. Absorption and high levels of focus were observed throughout the study; with some advertisements absorption levels were higher (e.g. Absolut Vodka and Viking which were the first two ads shown to all the respondents) whereas with others levels were lower, especially after the respondents had seen many ads or thought that an ad was
simple or uninteresting in its execution. Even though absorption was observed throughout the interviews, it did not always refer to positive feelings. At times, the respondents seemed highly absorbed into a particular content, such as the Pixar character, but were simultaneously saying that it did not interest them highly. There were also times when the respondents seemed cognitively focused but then said that something was very low in quality in their opinion. Thus, it was important that absorption was both observed and discussed. It seems that the cognitive-involvement – having to actively play with the screen to see and interact with an ad – maintained a level of focus with the respondents but focus did not always mean that the content was good or even functional in their opinion (i.e. the respondents could at times be focused on, for instance, how poorly something worked).

Overall, the discussion in the literature review was mostly focused on what absorption is in general whereas in the empirical study it was connected specifically to the presented ARM content, such as the respondents being absorbed into what the Viking boot looked like from different angles. Therefore, the information received about absorption in the empirical study was in line with the findings of the literature review but it was more in-depth in nature and highly focused on the characteristics of the particular AR advertisements used in this study.

5.2.2. Vividness

Vividness was discussed in the literature review as an element that explains how a digital environment is able to provide information for the user. It was included in the study because it was seen as an important characteristic that affects digital user experiences due to the fact that it relates directly to what kind of information the user's senses receive. In the review, vividness was mostly examined through two distinct features: breadth and depth. Sensory depth was discussed as the quality of digital images whereas sensory breadth referred to the range of senses that were involved while using particular digital content. It was stated that in order to enrich the user experience, vivid information on, for example, websites should appeal to multiple senses.

In the empirical study, vividness was an often mentioned characteristic by the respondents. The discussions had to do mostly with the quality of the images that the respondents were seeing; also, there were discussions where the notion of senses was brought up. The quality of the digital images that were presented to the respondents
had a seemingly significant effect on their experiences. This was the case especially when an image was very good or very poor in appearance.

Those images that the respondents found to be of good quality, were impressing and evoked questions about how such images were made, and how it was possible that they "came out" of a simple piece of paper (the AR marker). When the quality was perceived to be low, no such questions arose; it was found mostly bothersome that in the current digital age a company would produce something of such elementary quality. It became obvious that in regards to quality, the respondents had high expectations and were easily disappointed if something looked "fake" or "digital" – characteristics mentioned by the respondents. It was mentioned by some that it is better to do a simple thing well than a complicated thing poorly. In regards to sensory breadth, most of the discussions had to do with a sensory element missing in the ads. For example in the Pixar ad, almost all of the respondents mentioned that they would have liked to hear sound coming from the character.

All in all, the discussion about breadth and depth that was included in the literature review was supported by the findings of the empirical study. The respondents were looking for sensory depth in the quality of the images they were seeing as well as sensory breadth by wanting to include more senses, mostly hearing and more touch, into their ARM experience.

5.2.3. Linkage between brands and AR

In the literature review, brands were discussed mostly in relation to the brand experience. The brand experience was defined as the internal and behavioral consumer responses evoked by brand-related stimuli. Experiences related to brands were seen as more holistic approaches to brands than for example brand attitudes or brand attachments. Brand experiences were discussed to vary in strength and intensity between brands and between consumers; furthermore, such experience could exist both in off and online spaces. Experiences with brands were also connected to narrative psychology where individuals arrange all life events into a story format (positive and negative experiences with specific brands).

In the empirical study, brands were approached by asking the respondents their images of the brands prior to seeing their AR advertisements and how these images were connected to the content that they were seeing. Brands were not discussed in the same
quantity with all the respondents; some talked about branded elements much more than others. This was evident especially if the advertised content was in some way different than the image that the respondent had of the brand (the narrative context). Particularly if the quality of the ARM content was lower than what was expected of that brand, there were respondents who would talk about and wonder this for extensive periods of time.

Overall, there was a strong link that was discovered to exist between brands and ARM. As augmented reality marketing is seen to be an experiential way of advertising, it can easily be connected to the brand experience or the “story” that an individual has formed about a brand through various brand-related stimuli with the brand. Even though there is a strong “wow” element still linked to AR technology, it became evident that the respondents in the empirical study were able to see past the “wow” and assess the AR content in relation to their previous knowledge about the brand. Furthermore, if the AR content was highly different of the image the respondents had of the brand, it created confusion and made the respondents wonder if the technology had merely been used for technology’s sake and not to support the brand.

5.2.4. AR markers

The discussion about the AR markers was not strongly focused on in the literature review other than a short reference to it in the chapter about augmented reality (Chapter 2.2.). However, the discussion about the markers and the way to detect AR technology was evident in all of the interviews in the empirical study. The extensiveness of how this subject was discussed was somewhat unexpected for the author.

Especially now that AR and its ability to add a digital "layer" to the real world are still a new phenomenon, it was widely discussed how would people know where to find augmented reality technology. Furthermore, if AR was used with the help of paper markers how would people know something like that could be read with a hand-held device and an application.

Universally, those AR markers that were well-made, interesting looking and had some kind of a connection to the product – such as the Viking shoe print – were the most liked by the respondents. However, there were also respondents who thought that even though the marker might look interesting, it might not tell enough information for the user to understand that it is actually hiding AR content. A simple QR code resembling
image, although simple, was more understandable for most of the respondents as these types of codes are more widely used at the moment.

Even though this issue might seem quite basic, it is important to consider. Augmented reality as technology involves encouragement towards active participation which means that there must be something in an advertisement that would be interesting enough for the user to start viewing and playing with it. A clever or a surprising element in the marker, as was discovered in this study, is a factor that can give satisfaction to the user as they are positively surprised about something unexpected happening in front of them. This is also something that could make them share such content. There were respondents in this study who thought, for instance, that the Viking shoe ad was interesting and surprising enough (a digital shoe popping out of a shoe print on a piece of paper) that they would share it with their friends and colleagues.

5.2.5. Implications for ARM content

In relation to the ARM content, the empirical study revealed certain unexpected considerations. Naturally, because these were not revealed until the empirical study, they were not discussed in the literature review.

As the respondents were exposed to the content for a considerable period of time, they had time to cognitively reflect on what was presented to them, both in positive and negative terms. The first idea that was included in the data analysis chapter about the content considerations was the fact that the content should somehow reward the user. Because AR demands something of the user, both in terms of having to do something to get it and to see it as well as having to focus on it, it should not underestimate the user but to reward them.

Another aspect that was mentioned was the fact that AR has the ability to bring digital images into the real world and seemingly close to the user. 3D images are "constructed" on top of flat print out images or on the face of the user (like in the Silhouette application) and they are held close as the hand-held device – in this case the iPad – is physically close to the user in their hands or on their lap. There is no mouse or a keyboard that would create a physical barrier through which technology is used; it is simply right there. This has both positive and negative effects. By getting close to the user, the technology has the ability to offer more realistic experiences. It can also be fun
and make the impossible possible in a way, like having a new Mazda on your couch, as one of the respondent’s mentioned.

Attempting to look realistic and being so close to the user, however, it can also easily display faults that the user can spot quickly. One of the respondents discussed the fact that a digital-looking shoe on a computer screen with a mouse is just a digital-looking shoe; it looks somewhat expected. An AR shoe, however, that attempts to look realistic and is touchable by fingertips looks easily more fake because it is there in 3D right in front of the user and mistakes and technological shortcomings are easy to spot. Also, users tend to be at least somewhat absorbed physically and mentally into the content which can make it even easier to notice mistakes. Thus, especially when creating content that appears to look like something in the real world, these aspects need to be taken into consideration.

5.3. Affective findings

This section includes the conclusions on the third main category, affective findings, that was discovered in the empirical study.

5.3.1. Emotions

In the literature reviews, emotions were a characteristic that was not discussed in a section of its own and it was not included in the pre-identified experience-related characteristics. Emotions were, however, frequently observed throughout the empirical study which means that these affective responses were an integral part of the user experiences.

The respondents were observed and recorded having many different types of emotions in their interviews. The typical pattern was, especially with those respondents who were not familiar with AR technology, that they were enthusiastic and curious about the content in the beginning the interview. As the interview progressed, these emotions seemed to disappear to a degree and were replaced by more critical thinking towards the content. At times, if something was funny, the respondents would express joy or laughter. Also, there were times when the respondents were observed being surprised and often towards the end of the interviews, the respondents expressed signs of boredom.
Thus, emotions can be described as an integral part of any experience, also those with digital marketing content. For an observer, emotions can help to discover feelings and thoughts that the respondent might not always say out loud. For example, in the empirical study, there were some respondents whose recorded responses were relatively conservative but the observed emotions revealed that they were, in fact, quite frustrated at the same time.

Due to the fact that emotions were not highly focused on prior to the empirical study, measures to evaluate them were not included in the study. Thus, it is difficult to conclude the exact effect the respondents’ emotions on the overall experience; it can merely be stated that emotions were significantly present in all of the interviews and that they ranged from joy to boredom and frustration. Concluding previous studies, Garbarino and Edell (1997) note that there can be varying evaluations of a specific stimulus that relates to, for instance, the associated cognitive effort. In those cases where cognitive effort is required towards a stimulus that is high in incongruity (i.e. not in keeping with what is logical), more negative affect is generated because the person needs to use greater effort to categorize the stimulus (Garbarino and Edell (1997:149). This could be one of the underlying reasons why the respondents in this study expressed negative affect such as frustration toward the content. The stimulus used, digital ARM, was new to almost all of the respondents, it required relatively high levels of cognitive effort, and there were problems with its functionality which together could have resulted in the presence negative affect.

5.4. The learning curve

The learning curve is the final characteristic that will be concluded in this section. The learning curve, such as emotions in the previous section, was something that was not discussed per se in the literature review as it was a pattern that was not discovered until the empirical study.

The learning curve, however, displayed an element about ARM that has already been discussed by some authors (e.g. Clawson 2009) which is the hype/post-hype phenomenon related to using AR technology in digital marketing. In other words, ARM is a much hyped about phenomenon because of its novelty value and the ability to create the “wow” factor. However, attention is starting to turn towards what is coming next, i.e. what kind of added value does ARM give in digital marketing.
The learning curve discovered in the empirical study highlighted the fact that with consumers this process is already evident. A consumer who has never seen ARM before is in general excited about it when they first see ARM but can already be bored about it after seeing five or six AR advertisements. This would indicate that the novelty value of the technology can wear out quite rapidly. Thus, considering the next step in ARM is important for both academics and marketers.

5.5. Implications

In this section, the implication of this study will be discussed. First, the focus is on the theoretical implication which is then followed by the managerial implications. After the implications section the limitations of the study and suggestions for further research are included.

5.5.1. Theoretical implications

As was mentioned earlier, the use of augmented reality in digital marketing is a highly under-researched topic mostly due to its novelty within the paradigm. This study was aimed at looking at user experiences with ARM by examining it through pre-identified characteristics.

To conclude, the pre-identified experience-related characteristics were seen as valid in this study; they were integral parts of the experiences of the participants as was anticipated by the author. Most of the aspects discussed in the theoretical section were also present as such in the empirical study, such as: vividness taking place on two levels (breadth and depth); interactivity, control, and participation being highly subjective states; ARM content enabling control through internal pacing; and, absorption being linked to task completion. However, in the theoretical section, many aspects were discussed on a more general level relating to digital marketing whereas in this study these aspects were identified as having many ARM-specific tendencies (e.g. facts hindering control in ARM that were not included in the theoretical discussion).

Therefore, there are a few theoretical implications that this study has to offer. Firstly, it is noted that even though digital augmented reality marketing is tightly connected to other forms of digital marketing, it has certain specific characteristics of its own. Augmented reality marketing can therefore be examined by using relevant theory from other similar digital marketing techniques but it must be acknowledged that such
theory most likely cannot take into consideration all of the ARM-specific characteristics. Experiences with ARM are highly subjective, as are all experiences that are affected by e.g. how well the technology works, how relevant the content is for that particular user, is the content/technology able to capture the attention of the user, how easy it is to use, how can it be accessed etc. All in all, it is important to consider that there are aspects that can enhance but also hinder the overall experience that a user has with ARM content.

Another theoretical implication of this study is that consumers can experience ARM on three different levels (behavioral, cognitive, affective) – often simultaneously. To the knowledge of the author, this is something that has not been studied in marketing literature before. Also, the participants in this study expressed a specific learning curve towards ARM content implying that the novelty value of the technology can be easily and quite rapidly outworn. This is also a novel addition to existing ARM literature.

5.5.2. Managerial implications

The most comprehensive contribution of this study is the managerial implications that were discovered particularly during the empirical study. Quite many of the implications are direct suggestions made by the respondents which make them valuable information for all marketers designing digital content, especially for young, digitally-savvy consumers.

Firstly, an element that was discovered throughout the empirical study was that AR content should not be made for the sake of the technology but it should always be in line with the image of the brand and keeping the user in mind. Even though there is still a strong wow-factor connected to AR as a technology, it does not take away the fact that especially digital natives expect high quality digital content and are able to detect if the ARM content does not go together with the perception that they have of the brand. The overall brand experience may thus be affected negatively if a company decides to use ARM only considering the wow-effect without thinking about the content in more detail. As one respondent mentioned, advertising should never underestimate the consumer.

Furthermore, in relation to the digital content, it became obvious in the empirical study that as AR was seen as a technology that comes "close" to the user, it should also somehow be life-like. In other words, realism was a sought-after quality. As for example
the Viking shoe was in 3D in front of the respondent, it appeared to be almost like a real shoe so some respondent wondered if it could be touched or even moved like a real object. Therefore, it is hypothesized that if even more sensory breadth than images and screen touch could be added to AR technology, it might have the potential to such make advertising realistic and potentially more exciting for consumers. In addition to touch, many of the respondents were missing sound in the applications.

In regards to control, developers of augmented reality marketing should keep in mind that a diminishing or a lack of the sense of control can easily bring up negative emotions and frustrations amongst consumers. Consumers need to be able to control not only the digital device through which content is presented but also the content itself. Thus, the content should not attempt to beyond those digital means that can be enabled; in other words, if technology or budget does not allow for the development of complicated ARM content, it is better to stay within limits where easily controllable content is producible. For example, the Viking shoe ad that was used in this study, was relatively simply in content. It was, however, well-produced and easily controllable that made it pleasurable to use which was an element mentioned by almost all of the respondents.

Interactivity, as an integral part of the online environment, needs to also be considered. By using interactivity, marketers have the ability create digital experiences that are too cognitively involving by demanding the user to have to actively control the medium and have two-way interaction with the content. This forces the user to be cognitively active and make choices, which is true also in ARM. The consumer must download an application and interact with it, which might too much mental processing than what consumers would be willing to do for the sake of advertising. In the empirical study, the respondents did not have to go through these steps; instead, they were brought directly to the point of interaction with the content. However, even this did not diminish the fact that there were respondents who wondered if they would be willing to invest an increased amount of time to interacting with advertisements which is an important consideration to be made by marketers.

The AR marker was also discussed to be an important part of the ARM experience. When creating AR markers, the user should be taken into account and the marketer should try to attempt to create something memorable and clever for them. On the one hand, creating interesting content could potentially have a positive effect on the consumer's holistic experience about a brand and enhance their brand image. On the
other hand, taking up the consumer's time and offering them very little in terms of interesting content could lead to the opposite. The consumer might feel disappointed, and even betrayed, as one of the respondent's in this study stated, about having to view content where the user, and their experience have not been fully considered.

Moreover, not every consumer is going to be interested in augmented reality marketing nor will every AR marker, even if it was well-made, be able to attract the attention of everyone who looks at it. However, now that there is still wow-element about AR as a novel technology, it is suggested that companies should take advantage of it by creating clever and enhancing experiences for consumers; furthermore, technology should not be used for technology's sake by creating just any type of AR content, but it should be used in a way which takes the user into account (interesting appearance, well-functioning technology, ease of use etc.). The content should also be in some way beneficial or useful for the user. Marketers need to thoroughly consider the customer when designing digital content and understand how the customer might perceive and experience content. The consumer should also be educated about how to use AR applications and to make them as easy as possible to access and to use. Technical difficulties seem to play a major role in negative emotions about ARM; it is not beneficial for a brand if its AR advertising is remembered because of its poor functionality and not because of its exciting content.

As was mentioned in the introduction chapter, this study is aimed at investigating consumer experiences with ARM in order to examine how ARM could avoid falling into the “cluster-bomb” category and be used in a way in which it would keep the user in mind. One of the most important considerations is the fact that ARM should strive away from the cluttering effect of online marketing. Augmented reality as a technology has the potential of creating unique 3D experiences that can be inserted into interesting and unexpected locations which enables it to incorporate the quality over quantity approach. This is something that should be aimed at when using this kind of unique technology. In other words, it is suggested that AR should not be used in every web page and online banner but instead it should incorporate the element of surprise and be curiosity-evoking (e.g. placed somewhere unexpected; the idea of a treasure hunt). By being unique not only in content but also in how and where it can be discovered, it could make consumers remember experiences with such content more strongly. Also, by approaching ARM in such a way, it could appear less “forced” on the consumer when
they would have the control of when and how to see it; it could potentially also increase the willingness of consumer, especially digital natives, to share such content.

To conclude, in today’s online world, the digital native generation shares many of their experiences off, and especially online, through various social networks. Thus, it is important for marketers to understand the electronic word-of-mouth that consumers in this generation are likely to generate. It is suggested that interesting and exciting AR content, especially now that there is still a certain hype surrounding the technology itself, could easily be shared by young consumers online. In the empirical study, this was asked of the participants and almost all expressed that they would share or show the most interesting applications to their friends. Thus, ARM, if managed with the user experience in mind in regards to content, accessibility, appearance, and usability could potentially increase electronic word-of-mouth regarding a brand. Due to the fact that consumers tend to value opinions of their peers over direct marketing and use their social connections when, for instance, making purchase-related decisions (Chu and Kim 2011) it is crucial to consider what kind of effects WOM and eWOM have on a brand. In the future, after the initial hype about AR has passed, marketers need to also consider how to sustain the interest of the users by e.g. creating content that is in some way useful for them.

5.6. Limitations and further research

The research approach used in this thesis is a qualitative one with a rather small sample which means that the generalization of the results is not possible in a similar way as it is in a quantitative, numerical and standardized study (Saunders, Lewis, and Thornhill 2007:472). Considering the aim of the study, the sample population in the research is limited. This means that due to the fact that the sample consisted only of young adults who are familiar with technology, this sample is not representative of all consumers even though the theoretical section discusses general consumer-related theories. Also, the sample population is limited to consumers residing in Finland.

The study aims to examine consumer experiences with digital augmented reality marketing. These experiences, however, have not been studied merely as they are but through pre-identified characteristics. By examining the experiences through these characteristics potentially imposes some limits to the authenticity of the experiences. In other words, had the author not focused on, for example, interactivity, the study participants might have not paid attention to this characteristic at all as their focus
could have been on something else. However, even though there were certain characteristics that were used as the basic framework, the author attempted to achieve a higher level of authenticity by giving the respondents many chances to discuss issues freely through open-ended questions and probes.

In regards to the content chosen for the empirical research, it was somewhat limited in regards to brands and the technology available. In other words, in the empirical research, only digital applications that were available at the time of the study could be used regardless of their quality. Some of the applications were not of the highest quality but were chosen because they represented different types of augmented reality marketing. Also, all of the ARM advertisements chosen were product-related, meaning that no service-related applications were used in the study. Like mentioned earlier, the Pixar and the Nike advertisements were not made by these companies. They were labeled as these brands by the author prior to the empirical study. The fact that artificially branded ARM content was used in this study must be taken into consideration when examining the results, especially because both of the brands are highly known and have quite specific brand images (as became apparent in the empirical study). Thus, the respondents might have approached the ARM content labeled as these brands differently than brands that they did not know from before and expect, for example, a higher quality from these specific advertisements. Even though the brand connection between the AR content and these brands was fake it helped to understand the gap between consumer expectations of a popular brand and the related ARM content. In other words, if the image of the brand is that of high quality or a large marketing budget, and the execution of an AR ad does not adhere to this image, a gap is formed.

Moreover, quite many samples of ARM advertising, all together six, were chosen for the empirical research. This amount could have been limited to four, which presumably would have been enough to gather a sufficient amount of data from the respondents in regards to their user experiences. Some of the interviews ended up being approximately 1,5 to almost 2 hours which resulted in an extensive amount of transcribed data and material for the content analysis. Multiple brands were chosen, however, so that the empirical data would not be biased toward only one brand. The inclusion of six advertisements also enabled the observation of the learning curve to take place.

The chosen empirical study content included general marketing content meaning that not all the AR applications chosen displayed a direct advertisement. Some were more
directed at displaying a product, such as a car, whereas others were more like traditional advertisement, such as displaying a shoe collection in a magazine-ad type of way. In general, the available AR content was either entirely brand-related (with an obvious brand connection) or there was no brand-relation at all (applications with unbranded products; mostly intended for entertainment purposes such as trying on a new hairstyle). Because the focus of this thesis was to look at experiences with marketing that uses AR technology, the applications that had a clear brand relation were chosen as the content to be included in the empirical study.

In reference to the collected empirical data, it must be noted that even though the attempt of the researcher was to gather data in an open and phenomenological way without many restrictions, this was not fully possible. All research typically includes some limitations; in regards to this study, the probe questions and the pre-determined categorization of experience-related characteristics can be seen as limitations to being able to record entirely limitation-free data of digital consumer experiences. Also, the pre-selected ARM advertisements could limit or have an effect on the participant responses; if the participants could have chosen content that was highly interesting for them, their subjective experience could have been different.

Due to the data collection being monitored and recorded, the participants were focused solely on the presented content for the duration of the interview. This could have an effect on some of the characteristics discussed in the data analysis section, such as focus and absorption, for instance. The participant was focused on the content presented to them because they had to be for research purposes. The participant might have also spent a prolonged time with the advertisements than they would in normal life due to being participants in a study.

During the transcription phase of the data analysis, it was noticed that some of the probe questions and discussion had during the interviews were influenced by the researcher's positive bias towards the research topic. This was true especially in some of the first interviews. This seems to be a common problem with ARM research, e.g. Bulearca and Tamarjan (2009) reported the same problem in their research.

The empirical study was carried out with the help of an iPad tablet computer; in other words, ARM content was shown to the research participants by using only this device. However, none of the participants owned an iPad, and the majority had never used one prior to this study, which is something that needs to be taken into account as a
limitation. The iPad was chosen by the author as the data presentation device because of its ability to show ARM content on a large screen and give the participant a big enough screen to test the content’s interactive features and see the potential vividness of content. It must be noted though, that all of the content used in the study, could also be viewed on a smaller screen, such as with a smart phone.

5.6.1. *Suggestions for further research*

This is a qualitative study that brings forward aspects and thoughts of individual consumers. As was mentioned in the beginning of the conclusions chapter, the findings of this study should not be studied as conclusive but rather as insights into the world of individual experiences and how these insights can be connected to existing research. As this is a somewhat broad take on the topic, it is suggested that further research would focus on one or two of the ideas discussed in this study and that a quantitative study would be carried out. This would be beneficial to get results that could be generalized and offer more statistical relevance.
REFERENCES

ABI+Research+Anticipates+%E2%80%9CDramatic+Growth%E2%80%9D+for +Augmented+Reality+via+Smartphones. [Accessed 22 March 2012]

AR content for Absolut Vodka in Appendix 1.


AR content for Mazda in Appendix 1.


AR content for Nike and Pixar in Appendix 1.


AR content for Silhouette in Appendix 1.
1) http://www.onlineprnews.com/framework/uploads/4f51c8eb3d0f04249cd bdd48b9e0d675.jpg. [Accessed 1 April 2012]

AR content for Viking in Appendix 1.


APPENDIX 1   ARM CONTENT

1. Absolut Vodka AR marker and the iPad view (one of 6 frames)
2. Viking AR marker and the iPad view

![Viking AR marker and the iPad view](image-url)
3. Nike and Pixar AR markers and the iPad views (branded by the author)
4. Silhouette iPad view (no marker)
5. Mazda AR marker and the iPad view
APPENDIX 2  INTERVIEW GUIDE

PART 1: Preliminary questions

- Are you familiar with the term "augmented reality"?
  * Have you ever heard of augmented reality before?
  * What do you know about augmented reality?

PART 2: General questions relating to the six AR advertisements (probes have been marked with *), asked individually during each advertisement

- What do you know about this brand from before?
  * What is your image of the brand?

- Could you please explain what you see on the screen?
  * Could you specify what you mean by...

- How do you experience the content?
  * What kind of thoughts does this content bring up?
  (**Additional probe questions according to individual responses)

- What does it feel like to have the touch-function incorporated into the ad?
  * How does the touch-function feel in this context?
  * How do you experience this kind of touch-screen technology overall?

- What do you think of the appearance of the advertisement?
  * How would you describe the quality of the images?

- Do you feel like you are incorporating multiple senses during this experience?
  * How does it feel to incorporate multiple senses into this experience (touch, sight)?

- How would you describe your level of concentration on the content?
  * Would you say that you more focused on the content or the device or on both simultaneously?
  * Why do you think you are/aren't focused on...
- Do you feel like a sense of control exists with this type of content?
  * Do you feel you are in control of what is happening?
  * Could you specify why do/don't you feel like you are in control?
  * What does the sense/lack of control feel like?

- Do you feel like interaction between you and the content exists? Please specify.

- Do you feel like interaction between you and the device exists? Please specify.

- What does the interaction with the ad feel like (if it exists)?

- How does this content relate to what you know of the brand from before?

- Is there something in particular that you like about the ad?

- Is there something in particular that you don't like about the ad?

**PART 3: Concluding questions**

- What did this experience feel like overall?
  * Please specify what you mean by...
  * Was there an advertisement that you liked/disliked in particular? Please explain why.

- Would this be something you would share with your friends/colleagues/peers? What would make you share this kind of content?

- Where do you see ARM going in the future?

- Do you have any other concluding thoughts?