Expertise
and insight
for the future

Desiree Leinonen

Ethics in AR-based B2C Marketing Communications

The urgent need for additional ethical rules in the field

Metropolia University of Applied Sciences

Master of Arts

Media Management

Thesis

8 November 2019

Author Title Number of Pages Date	Desiree Leinonen Ethics in AR-based B2C Marketing Communications The urgent need for additional ethical rules in the field 60 pages + 2 appendices 08 November 2019
Degree	Master of Arts
Degree Programme	Media Management
Specialisation option	Media Management
Instructor	Antti Pönni, Principal Lecturer

This thesis is about the ethics in Augmented Reality (AR) based B2C Marketing Communications, exploring the urgent need for additional ethical rules in the field. The aim is to justify the need for additional ethical code of conduct as well as for a regulating body in national (Finland) and international level.

The thesis explains the current state of the field and outlines an idea of the hypothetical future of AR-based B2C marketing communications. As AR is considered a rapidly growing field of technology and marketing communication campaigns have already been performed on the platform globally and by large brands, it is important and relevant to discuss the topic and raise awareness.

The thesis covers the found relevant acknowledged ethical concerns related to content and personalized content in B2C marketing communications and reviews their relation to the existing Code of Advertising and Marketing Communications by the International Chamber of Commerce (ICC). The ICC code was revised in 2018 to meet new technological advancements, and it does set the standards for ethical conduct for marketing communications but does not specifically cover all ethical questions related to AR-based B2C marketing communications.

The core findings of the thesis include the ethical concerns related to, for example, the consumers privacy, personal information, reality distortion and physical and mental safety. So much is still unknown about the possible effects and impact on consumers and yet a lot can be already acknowledged. It is said that AR can be a very immersive and persuasive channel for marketing communications; thus, marketers should be careful about not breaking the consumers' trust and pay attention to the ethical conduct.

The thesis addresses the relevant ethical concerns and their urgency, and claims that the existing ethical code of conduct is relevant but that additional ethical rules are needed. In addition, an official regulatory body that understands the technology and its possible content, is needed.

Keywords	augmented reality, AR, B2C marketing communications, ethical code of conduct, ethical concerns, future of marketing

Tekijä Otsikko Sivumäärä Aika	Desiree Leinonen Lisätty todellisuus (AR) B2C-markkinointiviestinnässä Alan eettisten säännösten kiireellinen tarve 60 sivua + 2 liitettä 08.11.2019
Tutkinto	Medianomi, YAMK
Tutkinto-ohjelma	Mediatuottaminen
Suuntautumisvaihtoehto	Mediatuottaminen
Ohjaaja	Lehtori Antti Pönni

Tämä opinnäytetyö käsittelee eettisiä säännöksiä ja käytänteitä lisätyn todellisuuden (AR) alustoilla toteutetussa B2C-markkinointiviestinnässä.

Tutkimus kartoittaa markkinan nykytilaa ja hahmottaa AR-pohjaisen B2C-markkinointiviestinnän hypoteettista tulevaisuutta. Lisätyn todellisuuden maailma on nopeasti kasvava teknologian kenttä, jolla edelläkäyvät yritykset ja brändit ovat jo toteuttaneet markkinointiviestinnän kampanjoitaan. Markkinan kasvaessa ja AR-markkinointikampanjoiden yleistyessä on tärkeää ja ajankohtaista tuoda aihe esiin ja kasvattaa tietoisuutta asiaan liittyvistä eettisistä kysymyksistä.

Opinnäytetyössä käydään läpi tutkimustyössä löydetyt asiaankuuluvat noteeratut eettiset huolenaiheet suhteessa sisältöön ja personoituun sisältöön B2C-markkinointiviestinnässä. Lisäksi tutkimuksessa tarkastellaan kyseisten huolenaiheiden suhdetta olemassa olevaan Kansainvälisen kauppakamarin (ICC) eettiseen säännöstöön (ICC:n markkinointisäännöt 2018). Kauppakamarin eettistä säännöstöä päivitettiin vuonna 2018 paremmin vastaamaan teknologian jatkuvaa kehitystä, ja se onnistuneesti asettaakin pohjan nykyiselle markkinointiviestinnän eettiselle toiminnalle. Säännöstö ei kuitenkaan vielä kata nimenomaisesti AR-markkinointiviestintää eikä ole sellaisenaan riittävä palvelemaan tulevaisuuden markkinointiviestinnän laajaa kenttää.

Eettiset huolenaiheet, jotka koskevat erityisesti kuluttajien yksityisyyttä, henkilökohtaisia tietoja, todellisuuden vääristymistä sekä fyysistä ja henkistä turvallisuutta, ovat opinnäytetyön löydösten ytimessä. Lisätyn todellisuuden mahdolliset vaikutukset ovat vielä osittain tuntemattomia, mutta toisaalta useita asianhaaroja voidaan jo määritellä ja ennakoida. AR-pohjainen markkinointiviestintä voi olla erittäin immersiivinen ja vakuuttava kokemus kuluttajalle, jonka vuoksi markkinoijien tulisi kiinnittää erityistä huomiota eettiseen toimintaan sekä noudattaa varovaisuutta, etteivät riko kuluttajien luottamusta.

Opinnäytetyö tuo esiin AR-markkinointiviestinnän ajankohtaisia eettisiä huolenaiheita sekä väittää, että ICC:n olemassa oleva eettinen säännöstö on pätevä, mutta että lisäsääntöjä tarvitaan kiireellisesti. Lisäksi markkinalle tarvitaan jokin sääntelevä taho, joka ymmärtää kyseessä olevaa teknologiaa ja sen mahdollista sisältöä.

Avainsanat	lisätty todellisuus, AR, B2C markkinointiviestintä, eettiset säännöt, eettiset huolenaiheet, markkinoinnin tulevaisuus

Content

Appendices

Appendix 1. Interview questions: Tom Wright, Head of Production and Technology at Miltton Oy. Interview took place in Helsinki, Finland in September 2019, in a face-to-face meeting.

Appendix 2. Online Survey. Survey took place online in September 2019.

List of Terms and Abbreviations

”AR” refers to Augmented Reality in short. It is a technological invention that combines the real and digital (or virtual) world in to one real-time media experience through AR-device.

“B2B” refers to business to business in marketing commutations. The term is used in situations where a business aims to sell its products or services or ideas to another business.

“B2C” refers to business to consumers in marketing communications. The term is used in situations where a business aims to sell its products or services or ideas to the consumers.

“Hardware” refers to the physical parts of a computer and related devices. In relation to augmented reality, hardware refers to any physical AR gadgets such as AR glasses, screens and lenses.

”HMD” refers to head-mounted display in short. It is a display device worn on the head or as part of a helmet. It is the starting point and primary component of virtual reality and augmented reality headsets.

“Software” refers to a set of instructions or programs instructing a computer or related device on how to work. In relation to augmented reality, software refers to, for example, AR applications.

“Traditional marketing communications” refers to marketing communications performed on platforms such as social media, television, radio, billboards and magazines.

“User”, “End User”, and “Consumer” refers to the people that consume marketing communications willingly or unwillingly, and who use the devices to view marketing communications or are in other ways involved in the use of AR related hardware or software.

”VR” refers to Virtual Reality in short. It is a technological invention where a user is immersed in a fully virtual world inside a VR headset.

1 Introduction

This thesis was written out of my professional passion towards future media opportunities and technologies and narrowed down to one specific related topic called ethics in augmented reality based B2C marketing communications.

I'm interested in how the ordinary people will experience the world and media through augmented reality in the coming decades, and what opportunities it will create for B2C marketing communications. It is clear that the digital world is evolving fast and technologies are developed quickly and constantly. My strong belief is that, sooner or later, we will start to experience the world around us through a contact lens that supports augmented reality technology and content.

Originally, I wanted to find out if ethical rules were necessary in augmented reality based B2C marketing communications, but during my research I realised that this question was quite irrelevant because ethical rules already exist for B2C marketing communications in the more traditional media (e.g. on television, social media, out-of-home marketing and print). Therefore, the same rules apply for augmented reality based B2C marketing communications. However, there may be a need for additional ethical rules when it comes to augmented reality.

Thus, the hypothesis of the thesis is that ethics are as necessary in augmented reality based B2C marketing communications as they are in any B2C marketing communications, but it is possible that the existing rules do not cover all the questions raised by augmented reality. Therefore, the research question of this thesis is whether additional ethical rules are needed when B2C marketing communications are performed on augmented reality platform.

The future prospects of augmented reality are fascinating and promising, but also somewhat frightening. BBC reported that augmented reality market could be worth $162 billion by 2024 and as we speak, companies like Apple and Google are taking considerable steps in developing the technology (McEvoy 2017). It is also said that augmented reality would be a three-dimensional cousin of the Internet and is likely to travel a similar path from novelty to over-hyped panacea and threat to massive utility and foundational infrastructure (Suarez 2013, xv).

Augmented reality applications and content are already available for the consumers through smartphone applications even though the medium has not yet mainstreamed due to its quality requirements as well as reach and cost of both device and content. A number of B2C marketing communication activities have been successfully executed through the platform on a global level and more and more of early adopters are taking the step into this new way of communicating their messages to the consumers.

Blending real and virtual world is already here, and I believe it will continue to grow and eventually take part in our everyday life. When this happens, the social trust and ethics that bind societies will be tested even as our own capabilities are expanded by the usefulness of augmented reality (Suarez 2013, xvi).

2 Research Methods and Structure

In order to understand the new form of B2C marketing communications and the ethical questions related to it, I will first have to define [and explain] the three key terms of the thesis: augmented reality, B2C marketing communications and ethics. Furthermore, I will discuss the existing Code of Advertising and Marketing Communications by the International Chamber of Commerce (ICC) that set the standards of ethical conduct for marketing communications.

After this, I will be able to explain how augmented reality can be used in B2C marketing communications and then explore the actual research question “are additional ethical rules needed in augmented reality based B2C marketing communications”. On the basis of my visions and insights on the topic I will outline an idea of what the future of augmented reality based marketing communication experience could be and what ethical challenges it may pose to the marketers. The outlined idea will show that the research question is truly relevant and even inevitable in the subject matter.

The thesis is based on existing research and articles, and the conclusion of the thesis is supported by one expert interview and a survey. The thesis is based on empirical research methods and the interview has been executed as qualitative focused interview (Appendix 1) in October 2019 in a face-to-face meeting with Tom Wright, Head of Technology and Production at Miltton Oy.

The survey was targeted for relevant professionals and ordinary consumers in order to get a wider understanding of the prevalent opinion on the thesis question. This way it was possible to gather more information and opinions in order to answer the research question in depth as the available readings alone might not provide broad enough knowledge on the matter as the topic is relatively new and not yet studied in a large public scale.

The thesis excludes all ethical questions related to any other aspect of augmented reality based marketing communications except for content and personalized content in B2C marketing communications even though some findings may also apply to other aspects of marketing communication strategies, market research and data analysis or other measurements. Also, all aspects of the technology's effects on an individual (physical or mental) cannot be covered in this thesis due to the novelty of the subject and unknown scope. This theme delimitation is done solely due to my expertise and interest base as a Producer of B2C marketing communication content and not because the other subjects or perspectives would be more or less important that the other.

Furthermore, I think that the ethical question has at least two different aspects; one that especially concerns the developers of the technology and another that also concerns the marketers. The developer related matters should discuss what the technology allows marketers to do, and the marketer related matters should discuss the content than can be created and consumed through the technology. That said, the marketers should still be aware of the possibly unethical features that augmented reality technology may allow for their marketing communication content.

The fact that there are in a way many sets of ethical levels makes it challenging to write this thesis. There is the technology and data, and there is the content. Then there is the consumer, passers-by and the environment. There are the cultures, values and religions that differ globally and nationally. And the physical, mental and societal aspects should not be forgotten. This immersive and persuasive way of marketing can affect the consumers in many ways; therefore, there should be some level of national (Finland) and international regulation for it.

Lastly, this thesis is merely focused on B2C (Business to Consumer) marketing communications rather than B2B (Business to Business) marketing communications as I find the ethical questions more pressing and relevant for the first target group.

3 Definitions of Key Terms

In this chapter I will break down the three most important terms for this thesis. Defining augmented reality is vital as not all readers yet understand the concept of this new technology. Further, it is important to define B2C marketing communications as the term can be confusing even within the field of profession, and lastly it is important to understand what is meant by ethics in order to find the answer to the thesis research question.

3.1 Augmented Reality

Augmented Reality, also referred to as AR, is a technological invention that combines the real and digital (or virtual) world into one real-time media experience. It is a variation from another technological invention, Virtual Reality (VR), which completely immerses the user inside a synthetic environment (Azuma, 1997, 2; Kipper & Rampolla 2013, 1).

Virtual reality and augmented reality have both come a long way since these high-end technologies were invented over 50 years ago. The first version of VR technology was invented in 1950s and the first version of AR technology in 1960s. The first AR prototypes (Figure 1) were created by computer graphics pioneer Ivan Sutherland and his students at Harvard University and the University of Utah. The prototypes used a see-through head-mounted display (HMD) to present 3D graphics. (Krevelen 2007, 2)

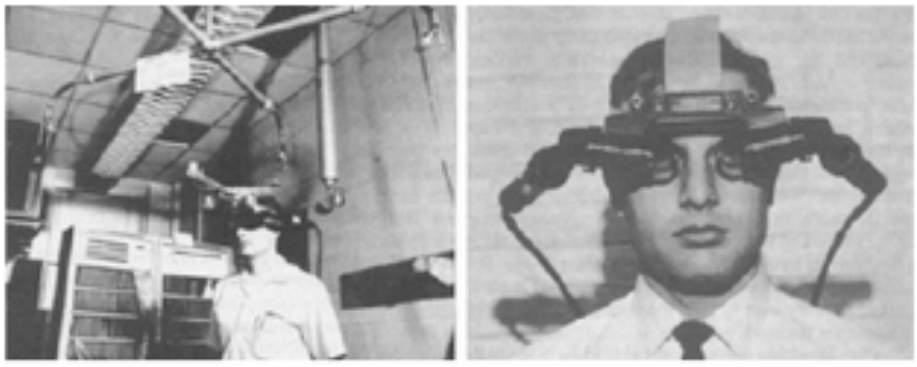

Figure 1. The world's first head-mounted display in 1960's (Krevelen 2007, 2).

VR and AR technologies have evolved quite in parallel, but VR technology has developed faster and got through to the market sooner because its technological standards are not as high as in AR technology (Krevelen 2007, 2). AR has more significant hurdles

to overcome than VR, including challenges in display technology and the real-time processing and calibration of the real-world physical environment (Goldman Sachs 2016, 5).

Ronald T. Azuma, Doctor of Philosophy and pioneer of AR, explains that in VR experience, the user cannot see the real world around him or her while immersed inside the VR headset. In an augmented reality experience, the user is able to see the real world around him or her, with virtual objects superimposed upon, in interaction with or composite with the real world. (Azuma, 1997, 2)

Technically in a true augmented reality experience three characteristics should always be present: it combines real and virtual information, it is interactive in real time, and it operates and is used in a 3D environment (Kipper & Rampolla 2013, 3).

Kipper and Rampolla (2013, 5) have created three category lists of the core components and platforms that are needed for experiencing AR in both fixed and mobile environments. The lists are presented in Figure 2 below.

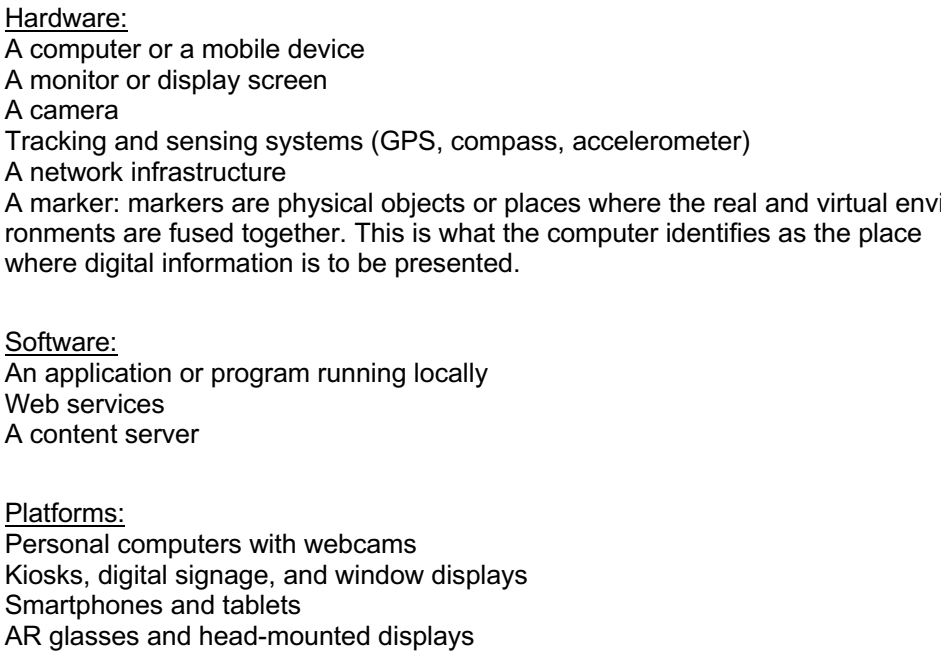

Figure 2. Hardware, software and platforms of AR experience (Kipper & Rampolla 2013, 5).

To demonstrate the VR and AR user experience further, Figure 3 depicts the use of virtual reality and gives a better understanding of what the experience means in comparison to augmented reality experience, depicted in Figure 4, through a smartphone application.

Figure 3. Demonstration of virtual reality (VR) experience with HTC Vive VR headset (Wikipedia 2019a).

Figure 4. Demonstration of augmented reality (AR) experience through a smartphone application (Harris 2017).

With the presented figures, it is easier to understand that virtual reality is the complete immersion into a digital world either based on a real model or completely fabricated model (Kipper & Rampolla 2013, 22). The technology is most familiar to the consumers in the gaming industry but used more widely, for example, in flight simulations, medic training, vehicle simulations and other industrial fields.

Unlike virtual reality, augmented reality is meant to supplement the reality, rather than completely replace it (Azuma, 1997, 2; Kipper & Rampolla 2013, 1). Kipper and Rampolla (2013, 22) explain that augmented reality is a blending of the digital information within a real-world environment and that it allows the user to see both, the real world and the virtual objects in the same space. They suggest that AR could be thought of as the "middle-ground" between the completely synthetic and completely real (Kipper & Rampolla 2013, 1). Azuma (1997, 2) states that ideally, it would appear to the user that the virtual and real objects coexisted in the same multidimensional space, similar to the effects achieved in the film "Who Framed Roger Rabbit?" made in 1988 (Figure 5).

Figure 5. Image capture from the "Who Framed Roger Rabbit?" movie from 1988. Photo: Amblin Entertainment. (Phipps 2019).

Well-known examples of the AR world in the consumer market include, for example, the Pokémon Go -game and Instagram Stories filters in the Instagram -social media platform. In these examples animated digital elements are displayed over the environment viewed through smartphone camera lens in real time as depicted in Figure 6 and 7.

Figure 6. Pokémon Go -game in the player mode experienced through a smartphone camera lens (Informatics 2016).

Figure 7. Examples of Instagram Stories real-time filters through a smartphone camera lens (Instagram Info Center 2017).

The best way to truly understand what augmented reality is, is to experience it by oneself. Casually said, AR could be described as a lens through which one can look at his or her surrounding world or environment, and through which he or she sees digital elements glued over the reality.

Utilizing AR technology in B2C marketing communication offers more potential than VR technology, because AR enables better social interaction. The need for augmented reality content will increase as the technology evolves, whereby understanding AR-based B2C marketing communication content production is a potential growth-oriented skill.

3.2 B2C Marketing Communications

In order to understand where and how augmented reality based content could be used and how it would affect ethical questions it is necessary to define what the word B2C marketing communications means in brief.

It is easy to define that B2C stands for Business to Consumers which means all marketing communications that are directed to consumers, the ordinary people, rather than to other companies and businesses. However, it appears that the term marketing communications is slightly more challenging to define and understand as there are different takes on it and the borders of marketing, marketing communications and communications are overlapping or changeable.

With my best judgement of the gathered information, marketing communication can be defined as the methodologies and tactics adopted by the companies to convey messages about their products, services and the brand they sell, either directly or indirectly to the customers with the intention to persuade them to purchase a product or service (Bhasin 2018).

In other words, marketing communication is a fundamental and complex part of a company's marketing efforts and it is the company's ultimate attempt to inform, convince and remind customers about the products, services or brands they want to sell (Communication Centers 2019).

Marketing communication is activated through all the different media that company adopts to exchange the information about their products and services (Business Jargon 2019). Simply said, marketing communications can be described as all the messages and media a company deploys to communicate with the customers (MaRS 2019). The messages can be delivered, for example, through different media such as television, radio, printed materials and online. In the future and once evolved to such point, augmented reality could be considered as a media of its own.

3.3 Ethics

To give ethics its attribution in its simplest form, I want to present it according to two simple sources. The first definition shall be Wikipedia's definition of ethics, according to which ethics is a field of study that seeks to resolve questions of human morality by defining concepts such as good and evil, right and wrong, virtue and vice, justice and crime (Wikipedia 2019b).

The second source is the definition of a Jyväskylä University of Applied Science's study material website: "Ethics mean a reflective view of right and wrong" (Hopia 2019). Ethics, at its simplest, is a field of study that explores whether the subject, topic or question being studied is good or bad, or right or wrong.

As a field of study, ethics have different ethical tendencies. The normative ethical theories presented in Figure 8 are related to marketing communication ethics and often discussed in the marketing ethics research and articles. Normative ethics include subcategories such as deontological, teleological and virtue ethics (Hunt & Vitell 1986, 6; Chonko 2012). Hunt and Vitell (1986, 7) explain that marketers engage in both deontological and teleological evaluations in determining their ethical judgements and behaviors.

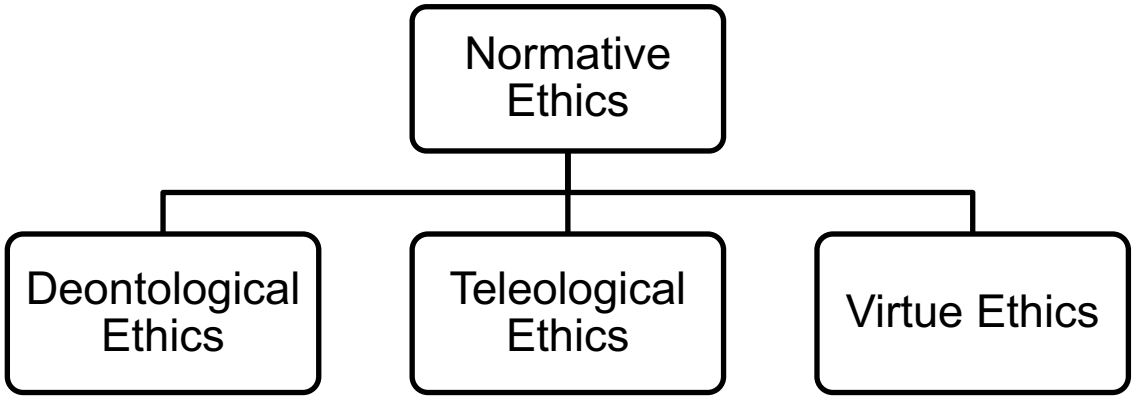

Figure 8. Tendencies of normative ethics (Hunt & Vitell 1986, 6; Chonko 2012).

According to Hunt and Vitell "the deontological theories focus on the specific actions or behaviors of an individual, whereas teleological theories focus on the consequences of the actions or behaviors". They explain that "the key issue in deontological theories is the inherent righteousness of a behavior, whereas the key issue in teleological theories

is the amount of good or bad embodied in the consequences of the behaviors". (Hunt & Vitell 1986, 6). The virtue ethics, on the other hand, judge a person by his or her character rather than by an action that may deviate from his or her normal behavior (Chonko 2012).

Utilitarianism is a subcategory of teleological ethics that is often favored within the field of marketing ethics. Hunt and Vitell (1986, 7) explain that utilitarianism "holds that an act is right only if it produces for all people a greater balance of good consequences over bad consequences that other available alternatives as, for example, 'the greatest good for the greatest number'".

When evaluating ethical actions, it should be taken into account that ethical questions and answers can be influenced by the background of the person who is evaluating or interpreting the issue. This makes it difficult in practice to interpret marketing ethics from the point of view of all, the marketer, the consumer and regulators. According to Wikipedia, "ethics are linked to other cogitations in that sense that the answers to ethical questions often depend on the answers in the concept of reality and other aspects of thinking" (Wikipedia 2019c).

Ethics cover dilemmas such as how to live a good life, rights and responsibilities, the language of right and wrong, and moral decisions (BBC 2014). As Bycel puts it, ethics are a series of beliefs and principles held by a person or group about how to determine which human interactions they believe are right or wrong. He explains that these core beliefs are often interconnected and overlap with other value systems, religious views, legal systems, philosophies, social conventions and moral codes. (Bycel 2013).

Bycel also states that the word "law" does not belong in the definition of ethics as written laws, though they reflect societal values, they are not ethical standards. He explains that abiding by the law may keep a person from going to jail, but it does not necessarily follow that the behavior is ethical. (Bycel 2013). The International Chamber of Commerce (ICC) distinguish the ethics and law similarly in its Code of Advertising and Marketing Communications presented more thoroughly in the next chapter (ICC 2018, 3).

4 Ethics in Marketing Communications

Ethics and marketing communications are often discussed together, especially in areas of fierce competition, where one has to stand out clearly or be left behind (Kiviperä 2014, 1). Marketers may be mistaken into breaking ethical boundaries in their search of increasingly noteworthy ways of reaching the consumer and staying in their mind.

Marketing communications should always be ethical and regulated because the competition can be so fierce that marketers' efforts can be aggressive and dubious or misleading, which can harm the consumer (Kiviperä 2014, 1).

The ICC Framework for marketing, the ICC Advertising and Marketing Communications Code, is meant to set standards of ethical conduct and hence cannot reflect specific legal requirements, nor is it intended as an instrument of law enforcement but rather a mark of professional diligence. ICC states that the fact that “a communication is legal does not necessarily mean it is also ethically acceptable or appropriate”. The intention of the code is to primarily work as an instrument of self-regulation for marketing communications around the globe. (ICC 2018, 3)

The code highlights that marketers are urged to assess legal situations regarding where they target their marketing communications, and to familiarize themselves with the rules and regulations of the various relevant jurisdictions. The ICC codes are supposed to enhance harmonization and coherence, yet they should be flexible enough to accommodate variations in culture and societal rules and norms. (ICC 2018, 5)

4.1 Regulating Bodies and The Code of Ethical Conduct

The ethics and legality of marketing communications in Finland are regulated by the Finland Chamber of Commerce and The Council of Ethics in Advertising. The Council functions in relation to the Finland Chamber of Commerce and issues statements on whether an advertisement or advertising practice is ethically acceptable. It deals with issues like discrimination, decency and social responsibility, but is not empowered to give statements regarding misleading advertisements or comparative advertising, which is dealt by The Board of Business Practice. The Council’s main purpose is to deal with requests from consumers and with issues that are deemed to have public significance. (Finland Chamber of Commerce 2019a; 2019b)

The Council follows the International Chamber of Commerce (ICC) Framework for marketing, the ICC Advertising and Marketing Communications Code, that aims to provide insightful guidance on marketing and advertising. ICC has been the major rule-setter in marketing and advertising since 1937 when it issued its first ICC Code on Advertising Practice. (ICC 2018, i)

The code has served as the inspiration of self-regulatory codes and building block for self-regulatory structures around the world. It has built trust with consumers by assuring them of advertising that is honest, legal, decent and truthful. It is also providing ethical guidelines that create a level playing fields and minimize the need for legislative or regulatory restrictions. (ICC 2018, i)

ICC informs that the marketing code functions within the framework of local, national or regional legislation, supplementing regulation in a complementary manner. Figure 9 depicts where self-regulation frameworks are either based on the ICC marketing code, national codes or remain non-existent ("No SR"). (ICC 2019)

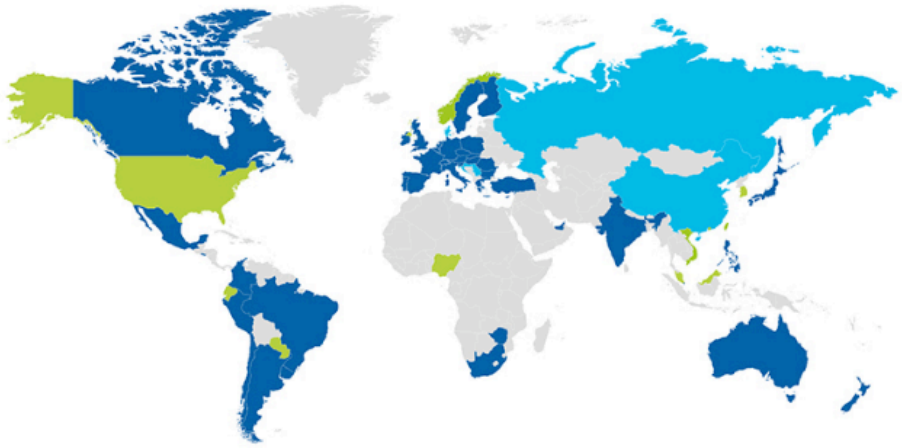

Figure 9. ICC Marketing Code around the world (ICC 2019a).

The dark blue areas of the Figure 9 map present the countries that have national codes based on, or updated to, ICC code. Green areas present the countries with self-regulation based on national codes, and light blue the countries that have self-regulation in development based on the ICC code. Lastly, gray areas are presenting the countries that have no self-regulation framework in place. (ICC 2019a)

4.2 ICC Advertising and Marketing Communications Code

As the purpose of this thesis was to determine if additional ethical rules would be needed for AR-based B2C marketing communications, it is important to understand the existing ethical rules that set the base. The basic principle of the ICC Advertising and Marketing Communications Code is that all marketing communication should be legal, decent, honest and truthful. The basic principle is followed by 25 other articles that define the elements of the ethical conduct in the code's section of General Provisions and Definitions. The articles are presented in Table 1 in short, and the articles can be studied more in detail from the actual code by ICC.

Table 1. Articles of the General Provisions and Definitions of the ICC Advertising and Marketing Communications Code (ICC 2018, 9-17).

Article No.	**Principle**	**In relation to:**
1	Basic Principles	Legality, decency, honesty and truthfulness, sense of social and professional responsibility, principles of fair competition in business, impairment of public confidence in marketing.
2	Social Responsibility	Respect of human dignity, discrimination, exploitation of fear misfortune or suffering, condone or incite of violent, unlawful or anti-social behavior, and superstition.
3	Decency	Offends of standards of decency currently prevailing in the country and culture concerned.
4	Honesty	Abuse of trust of consumers or exploitation of their lack of experience or knowledge.
5	Truthfulness	Misleading of the consumer.
6	Substantiation	Descriptions, claims or illustrations relating to verifiable facts.
7	Identification and transparency	Marketing communications should be clearly distinguishable regardless of the form or medium used and the true commercial purpose of marketing communications should be transparent.
8	Identity of the marketer	Transparency of marketer's identity and reachability.

9	Use of technical/scientific data and terminology	Misuse of technical data or statistics, and false use of scientific terminology or vocabulary.
10	Use of ”Free” and ”Guarantee”	The restricted use of the words in marketing communications.
11	Comparison	Misleading comparisons and comply of fair competition in business.
12	Denigration	Denigration of any person or group of persons, firm, organization, industrial or commercial activity, profession or product, or the seek of bringing it or them into public contempt or ridicule.
13	Testimonials	Authenticity, veracity, and relevancy of testimonials, endorsements or supportive documentations.
14	Portrayal or imitation of persons and references to personal property	The portrayal or referring to any persons in private and public capacity without prior permission, and the depiction or referring to any person’s property in a way likely to convey the impression of a personal endorsement of the product or organization involved.
15	Exploitation of goodwill	Unjustifiable use of name, initials, logo and/or trademarks of another firm, company or institution, or any undue advantage of another firms’, individual’s or institution’s goodwill in its name, brands or other intellectual property.
16	Imitation	Imitation of another marketer in any way likely to mislead or confuse consumer.
17	Safety and health	Visual portrayal or any description of potentially dangerous practices, or situations which show a disregard for safety and health, as defined by local national standards.
18	Children and teens	Marketing communication directed to or featuring children or teens, including subcategories such as inexperience and credulity of children, avoidance of harm, and social values.
19	Data protection and privacy	Collection of personal data from individuals, respect and protection of their privacy by complying with relevant rules and regulations. Including subcategories of collection of data and notice, use of data, security of

		processing, children's personal data, privacy policy, rights of consumer, and cross-border transactions.
20	Transparency on cost of communication	Cost of sending a message or communicating with the marketer for the consumer.
21	Unsolicited products and undisclosed costs	Practice of sending unsolicited products to consumers who are then asked for payment.
22	Environmental behavior	Condone or encouragement for actions which contravene the law, self-regulatory codes or generally acceptable standards of environmental responsible behavior.
23	Responsibility	Overall all responsibility for the marketing communication of the marketer's products and marketer's and the whole eco-system's responsibility to observe the code, including individuals employed by such companies.
24	Effect of subsequent redress for contravention	Subsequent correction and/or appropriate redress for a contravention of the code.
25	Implementation	National and international adaptation and implementation of the code and its principles.
26	Respect for self-regulatory decisions	The eco-system of marketing communications should not be party to the publication or distribution of an advertisement or other marketing communication which has been found unacceptable by the self-regulatory body.

The General Provisions and Definitions of the code are followed by detailed chapters on Sales promotion (chapter A), Sponsorship (chapter B), Direct Marketing and Digital Marketing Communications (chapter C), and Environmental claims in Marketing Communications (chapter D) (ICC 2018, 20-47). These chapters explain more in detail the ethical conduct related to the specific matters.

In addition to the ICC code, the Finnish Counsel of Ethics states that an advertisement is unethical if a) a woman or a man is used as an eye catcher or sex object, and is used

in a degrading way, b) a woman or a man is used as sex object or as an eye-catcher while having nothing to do with the product or service being advertised; or c) the advertisement contains sexual references or promises that have nothing to do with the product being advertised. Advertising is also considered unethical if it alleges or implies that the position of opposite sex is socially, economically or culturally less valuable than the other. Or, if the advertisement maintains a stereotypical role image of what is typical or characteristic for women or men or their personalities or work. Advertising is not unethical simply for portraying people scantily dressed or naked, if they are not depicted in a degrading or belittling manner. (Finland Chamber of Commerce 2019a)

4.3 Relevancy of the ICC Code for Augmented Reality

In 2018, ICC updated its Advertising and Marketing Communications Code as new practices and technologies had evolved. The code was revised, and its scope was extended to assure its usefulness and relevance to match the changes in behavior resulting from the ongoing digital revolution and sets a gold standard for modern rulemaking. (ICC 2018, i)

The 10th revision of the code required significant changes because of the rapid evolution of technology and technologically enhanced marketing communications and techniques. ICC states that “producing responsible marketing communications that are trusted in a digital world has never been more important for companies in preserving their ‘license to operate’”. The revision addresses both the code’s usability and its applicability to technology enhanced marketing communications and techniques. (ICC 2018, 2)

I reached out to ICC in October 2019 to query if augmented reality was already taken into consideration in the 10th revision of the code or if it was still an issue to be defined in the future. The response stated that the code is not addressing AR specifically but that the area could be covered more generally by some of the following principles in the Code Article 9, 10, 18 and 23, as well as C1, C2, C7, C8, C9, C20, and C22. The responding ICC representative also mentioned that they have not yet discussed whether any more specific guidance will be developed on AR but that it could be a topic for future discussion. (ICC 2019b)

The code itself states that the 10th revision includes the application to all media and platforms including social media, mobile, virtual and marketing communications using artificial intelligence (AI). The code also mentions digital interactive media in its chapter of interpretation, which could include augmented reality. The digital interactive media is defined as "the full range of media, platforms and tacking technologies, including mobile, video, addressable TV, social media, Internet of Things (IoT), wearables, and cross-device tracking, and associated algorithms". (ICC 2018, 2, 5)

It could be assumed that augmented reality touches the base with the sectors of mobile, virtual, AI and digital interactive media, but as ICC itself stated in its response to the query, AR is not specifically considered in this revision and does not cover all aspects of AR-based marketing communications. The code states that marketing communications which are acceptable for one medium may not necessarily be acceptable for another, and therefore communications should be judged by their likely impact on the reasonable consumer, having regards to the characteristics of the targeted group and the medium used. (ICC 2019b; ICC 2018, 2, 5)

According to the code, "marketing communications should be assessed having regard to the knowledge, experience and discriminatory ability of the typical consumer to whom it is directed, as well as social, cultural and linguistic factors". According to ICC, for example, when judging communications addressed to children, their natural credulity and inexperience should always be taken into account. ICC argues that consumers in general are assumed to have a reasonable degree of experience, knowledge and sound judgment, and to be reasonably observant and prudent. (ICC 2018, 5). However, in AR-based marketing communications the argument could be disputed to some extent, purely due to the novelty of the technology and the possible changes in people's perception of reality.

The ICC code is constructed as an integrated system of ethical rules, where General Provisions and Definitions apply without exception to all marketing communications. In addition, there is a set of more detailed codes that concern a specific field of marketing communications. Such cases are, for example, ICC Framework for Responsible Marketing Communication of Alcohol, ICC Framework for Responsible Environmental Marketing Communication, and ICC International Code of Direct Selling. However, augmented reality has not yet got a framework of its own, though it could, and it should have it in the future. (ICC 2019b; ICC 2018, 4)

The code is without a doubt relevant in AR-based B2C marketing communications and at its extensive definitions it gives room for both application and interpretation, possibly in both good and bad. Even though the 10th edition claims to cover all marketing communication in broad sense, regardless of form, format or medium (ICC 2018, 4), its full relevancy in the yet so new and unknown field of AR can be disputed. The code does not go into detail with the ethical concerns related specifically to augmented reality, and therefore a separate additional code should be created for the use of AR-based marketing communications that can be read in conjunction with the other related codes.

Rauschnabel claims that the cognitive and emotional impact of AR is frequently stronger than similar exposure to, for example, traditional TV advertising or web-browsing, which also argues for the importance of including AR in the ethical code of conduct (Rauschnabel et al. 2019).

5 Augmented Reality Experience

The AR technology is growing and gaining ground as few brave marketers have taken the step into the new way of communicating their messages to consumers.

Kipper and Rampolla wrote already in 2013 that more and more brands were leveraging the ubiquity of the mobile phone to begin integrating augmented reality within their campaigns. They mentioned that companies such as Nissan, Toyota, BMW, and Mini were using magazine advertisements and AR to give the viewer a full 3D view of the car being advertised. Lego stores used AR to provide kids an animated version of the completed Lego set inside a box and the movie industry had also taken advantage of augmented reality to promote movies such as Transformers, Iron Man, and Star Trek. (Kipper & Rampolla 2013, 14)

Some of the consumers might be using AR technology without actually knowing it since, for example, Snapchat, Facebook and Instagram provide their users with filters that are considered augmented reality. In Instagram Stories the user can make videos and take pictures with digital elements attached over reality or over their own face.

This chapter will discuss the technology available at the consumer market today and give some examples of the existing marketing communication content and campaigns.

5.1 Technology in the Consumer Market

Augmented reality in the consumer market today is most commonly experienced through a smartphone and its AR applications. This is because most people already have a smartphone and the other available AR gadgets, for example, AR glasses, are expensive and therefore most likely out of the question for many. The prices for AR glasses on market vary between $499 and $2750 (Noble 2019). The technology has the challenge of convincing the world that the value proposition is high enough to add another device to the current slate of offerings in desktops, notebooks, tablets, and smartphones (Goldman Sachs 2016, 10). However, recent developments suggest that in the future augmented reality will be similarly indispensable to consumption as smartphones and other mobile technologies are now (Rauschnabel et al. 2019).

Some examples of the hardware players in the field of AR are Microsoft with its HoloLens, Google with its Glass Enterprise, and Magic Leap with its Magic Leap One (Figure 10) (Goldman Sachs 2016, 10). Microsoft HoloLens is an AR headset with transparent lenses that uses a set of sensors and highly developed optics to add AR content to the environment. With this set the consumers could, for example, watch Netflix on the wall of their room or have a virtual pet walking around their apartment. (Onirix 2019).

Figure 10. The three different AR-hardware; Microsoft HoloLens 2 (Rogers 2019), Magic Leap One (Dingman 2019) and Google Glass Enterprise Edition 2 with safety frames by Smith Optics (Google 2019).

The Magic Leap One AR headset is aimed at bringing the user's online life into the physical world and is powered by a small computer called "Lightpack" that can be attached to the user's belt of pocket (Onirix 2019). Google has been able to develop a lightweight wearable computer with a transparent display for hands-free work where the user is provided with glanceable, voice-activated assistance and the headset is designed to be worn all day (Google 2019).

Virtual screens have also been used in out-of-home advertising and in shopping center installations. In 2011, National Geographic launched a campaign in a shopping mall in Hungary. An augmented reality setup and screen allowed the shoppers to see themselves interacting with different wild animals, dolphins, dinosaurs and astronauts (Gaioshko 2014). In 2014, Pepsi installed AR technology in a London bus shelter where consumers could see a lion, UFOs, flying saucers, and other objects appear through the glass in the real world (Forsey 2019). These mediums are great for the early AR campaigns but are not yet as immersive and interactive as the campaigns experienced through AR glasses or contact lenses will be.

Figure 11. UFOs appearing on an AR screen in the Pepsi AR campaign on a London bus shelter in 2014 (Kastrenakes 2014).

Even though AR glasses and contact lenses are not yet mainstream available on the consumer market, AR-based media pieces can be produced for individual personal viewing with the content viewed through smartphone applications (software). There are plenty of AR applications that run for a certain purpose, as in specifically created by and for a brand communicating their messages to the consumer, or games and entertainment specifically for one content.

Apple claims to have the world's largest augmented-reality-enabled platform, and thousands of ARKit enabled applications in the App Store. They have also developed three AR-based technologies that support the creation of AR content; ARKit 3, RealityKit and Reality Composer. Craig Federighi, Apple's senior vice president of software engineering, introduced the features in the Worldwide Developers Conference in 2019. (Dormehl 2019; Motley Fool Transcribers 2019)

ARKit 3 uses on-device, real-time machine learning to recognize the human form and integrates peoples seamlessly into AR experiences. It recognizes real people are present in the video stream coming in from the device's camera in real time and allows digital objects to appear in front and behind the live people, which increases the immersion factor. (Dormehl 2019)

RealityKit is a new developer framework that makes it possible to implement high-performance 3D simulation and rendering in AR applications. And Reality Composer makes it easier to create AR content for people with limited or no 3D experience. (Dormehl 2019; Motley Fool Transcribers 2019)

Facebook has its own AR Studio Spark AR that lets anyone build and share effects on Instagram (Tech@Facebook 2019). It also allows the users to digitally try on items they can purchase through Instagram and they have launched a pilot where the user is able to check out eyewear from Ray-Ban and Warby Parker or can test cosmetics from MAC and NARS (Bonifacic 2019).

Finland has also taken steps in the augmented reality software development as a Finnish company Robust North Ltd developed and published an AR application Arilyn in 2014. The application functions as a viewing platform (Figure 12) but it also has its own Arilyn Manager -feature that allows users to create their own AR content (Arilyn 2019). In 2019, the application was on the top 4 application on Apple App Store in Finland and got also to the top 10 list in Google Play -store. Overall, the application was downloaded 200 000 times in 2019, of which 80 percent was from Finland. (Lehto 2019). The application provides marketers with the needed platform to create and view augmented reality content. More often than not, the application requires a print code that activates the AR piece through the application by scanning it.

Figure 12. AR content viewed through the Arilyn AR application (Innovestor 2019).

A centralized AR platform for all media and marketing communication content would seem like the future. It would make it simpler and more intuitive for consumers to use since they would not need to download a different application for the viewing of each AR content piece, and it would also be more useful and effective for marketers, as they would not need to advertise the applications to be downloaded in order to view the content.

5.2 Content in the Consumer Market

Augmented reality is an immersive way of marketing, which means that it helps marketers to create an emotional connection with customers. AR advertisements can be interactive and lifelike which means consumers can see and interact with them. The interaction creates an emotional connection and encourages them to make purchases. Emotional connection is also a great tool for increasing brand awareness. (Bryksin 2019)

Such strategy was used in the Arctic Home Campaign by Coca-Cola and the World Wide Fund (WWF). The campaign was executed as an augmented reality event at the Science Museum in London and aimed at the protection of polar bears and their natural habitat. In the event the visitors could see themselves interacting with virtual animals in their natural environment through AR screen. The campaign helped Coca-Cola to create a deep emotional connection between the consumer and the brand. (Bryksin 2019)

Even though AR campaigns have not become common yet, some early adopters have started using the technology. In addition to the Coca-Cola campaign, other great global

examples of brands using AR for their marketing communications are IKEA with its furniture replacement AR application, Pepsi with its AR bus shelter campaign, Toys"R"Us with its in-store AR Easter egg hunt, and Lacoste with its AR application for trying different shoe designs (Bryksin 2019). An effective sales results was shown by Nike in 2018, when they published the "Kyria 4 'red carpet'" -campaign through Facebook Messenger's beta AR run and sold out of their shoes on the platform in less than an hour (Salpini 2018).

In Finland, there are two examples of well-noticed AR campaigns; Aamu the cat -campaign by Arla and the Panda Easter egg -campaign by Panda. Arla is a global dairy company that published an AR campaign in 2017 where an interactive cat called Aamu jumps off to the table from a milk can (Figure 13) to play with the user and eventually learns to "moo" like a cow (Rinne 2017). The campaign was considered successful with an average 3-minute run time and 11 visits by one user, and the company's Head of Digital, Tomi Sirén, stated that it would had required a lot more investment in TV-advertising to hit the same results (Perttula 2018). With good results from the 2017 campaign, Arla went through with another Aamu-cat campaign in 2018, where consumers got to play football with the AR-cat (Arla 2018).

Panda, established in 1921, is the second largest candy manufacturer in Finland (Orkla 2019). In 2019, Panda came out with an Easter campaign where kids could find, along a traditional toy, a small piece of paper with an AR marker that triggered a virtual Panda to appear on the table as depicted in Figure 13. The campaign was well received and viewed over 150 000 times (Lehto 2019).

Figure 13. Arla's Aamu the cat -campaign (on left) (Rinne 2017) and Panda's Easter egg -campaign (on right) (Lehto 2019), both visible through the Arilyn AR application on a smartphone.

6 Future Visions in the Consumer Market

When AR mainstreams, it will considerably shape the world and media we now understand. So far in the market, AR can be experienced and utilized mainly through smartphones or tablets, but in the future, it can hypothetically be imagined to be a physical element to be incorporated into the human eye, possibly as a contact lens.

Once mainstreamed and affordably available in the consumer market, AR technology will offer an enormous amount of opportunities for different medias and for marketers as the whole world can be re-illustrated, colored, brought to movement and filled with messages. The demand for content will grow as the technology evolves and becomes more and more common among the consumers.

6.1 Market Projections

The market projections are more often than not discussed in inclusion of both AR and VR market projections. Therefore, the numbers presented in this chapter should be read in the proposed connection and the outcomes should be read in correlation to the point that the market's growth is predicted to be notable. Only one statistic of AR projections (Figure 14) was found, presenting the current value of the market standing at $5.91bn in 2018, and forecasting a $198bn market by 2025 (Statista 2019).

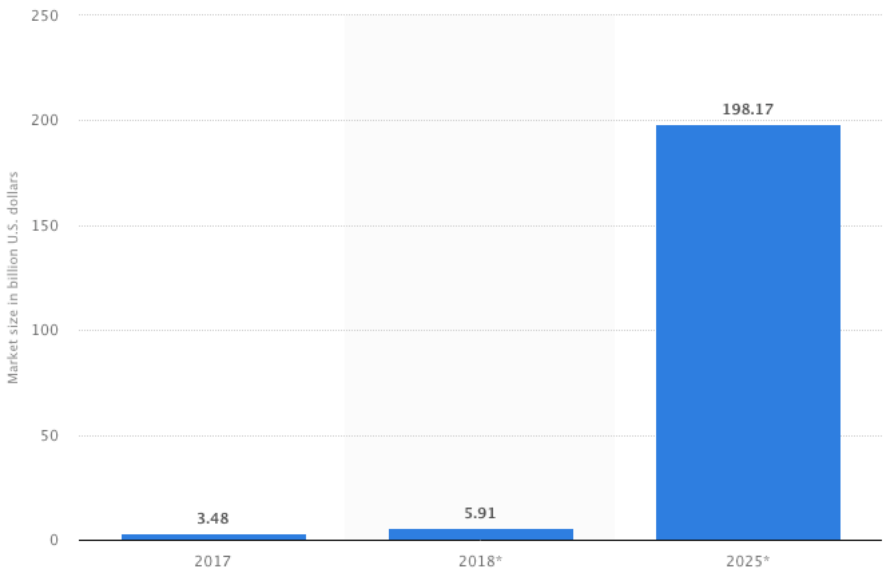

Figure 14. Augmented reality market size worldwide in 2017, 2018 and 2025 (in billion U.S. dollars) (Statista 2019).

More specifically, Goldman Sachs published a report in 2016 that examine what the market of VR and AR could become. According to the report, AR and VR have the potential to become the next large computing platform. The report explains that AR and VR drive a trend towards the adoption of head-mounted-devices (HMDs) as a new computing form factor. Goldman Sachs believe that as the technology advances, price points decline, and an entire new marketplace of applications hit the market, VR and AR have the potential to spawn a multibillion-dollar industry. (Goldman Sachs 2016, 4)

According to a report by We Are Social, there are almost 3.8 billion active internet users globally and the worldwide spending on digital advertisement is expected to reach $335bn by 2020 (Bryksin 2019). A report published by eMarketer mentions that a recent forecast for global AR advertising revenues are anticipated to jump from $428 million in 2018 to $2.5 billion by 2022 (Petrock 2018). Vibrant Media wrote in 2017 that their research team found that nearly seven out of ten (67 percent) media planners and buyers want more AR and VR advertisements incorporated into digital marketing campaigns (Vibrant Media 2017). And in 2017, Tomi Ahonen, a thought leader in the tech space, forecasted that AR would have one billion consumers using it in five years (Appearition 2017).

The Goldman Sachs report presents three scenarios for the market uptake over the next decade. In the base case, they estimate $80bn ($45bn in hardware, $35bn in software) in revenue by 2025 and assume that HMDs gain popularity as technology improves, but adoption is limited by mobility and battery life. The “accelerated uptake” scenario predicts a $182bn ($110bn in hardware, $72bn in software) market, where AR and VR technologies evolve from a niche device to a broader computing platform. In the “delayed uptake” they predict $23bn ($15bn in hardware, $8 bn in software) market and assume VR and AR see challenges in latency, display, safety and privacy, and the technology is used primarily for videogames. (Goldman Sachs 2016, 4)

In Goldman Sachs predictions 60% of the software revenue in 2025 is driven by consumers and 25% ($9bn) is for AR when 75% for VR (Goldman Sachs 2016, 4, 17). These predictions of the market give a great image of the scale of the matter discussed in this thesis. The numbers predicted show that the market is large, and money moves within it, which means there will be competition which again means that ethical rules need to take place to guide the actions taken.

Goldman Sachs view that the user experience, technology constraints, the development of content and applications, and price are the key hurdles to adoption of the technology in the consumer market. They believe that the user experience will be the most important factor and expect technology advancements to reduce cyber sickness and increase mobility, expanding the use cases and pervasiveness of VR and AR. (Goldman Sachs 2016, 4)

The value proposition of the technology and content needs to be high enough for the consumer to adopt it. At the moment there is not enough content for the consumer to consume and the usage of it is not easy enough. Goldman Sachs explains the current situation as a chicken-and-egg issue where content and application developers are cautious to make investments in VR and AR without an installed base, while at the same time, consumers and enterprises are hesitant to buy VR and AR hardware without strong supply of content and applications. (Goldman Sachs 2016, 5)

In order to see a wider adoption, price points need to decline. This is not impossible, as Goldman Sachs express in its report that they believe that VR and AR HMDs could experience similar cost reduction curves as seen on PCs and smartphones, with prices falling 5-10% annually. (Goldman Sachs 2016, 5)

If AR technology becomes as lightweight as a set of glasses, there is potential for the evolution to be similar where multiple devices are combined into one, potentially replacing phones and PC environments. The Goldman Sachs research indicates that AR technology still needs to mature, especially in display technology and the real-time processing and calibration of real-world physical environment. (Goldman Sachs 2016, 5, 17)

6.2 Hypothetical Future of Content Experience

As consumers will operate in a reality that is consistently enriched with virtual content, marketers will need to find ways to integrate the new realities into their marketing strategies (Rauschnabel et al. 2019).

In May 2016 a filmmaker, Keiichi Matsuda, published a six-minute short film Hyper-Reality on YouTube (Matsuda 2016). The film describes a person's daily activity from his or her own perspective in the world of augmented reality. The audience can see an environment saturated with computer graphics and other digital content through the film’s

protagonist's eyes as depicted in Figure 15 and 16. The film is a Director's interpretation of the possible future AR-world, but it is based on real technology and it is a great demonstration of the possible future.

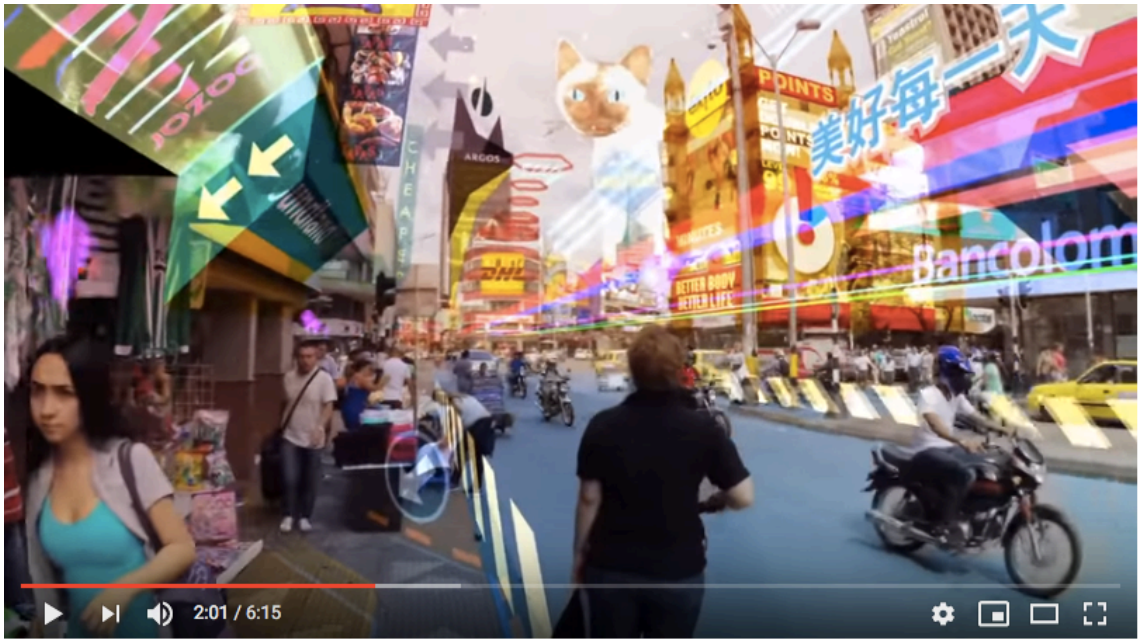

Figure 15. Image capture of the short film Hyper-Reality presenting the world of AR on a busy street (Matsuda 2016).

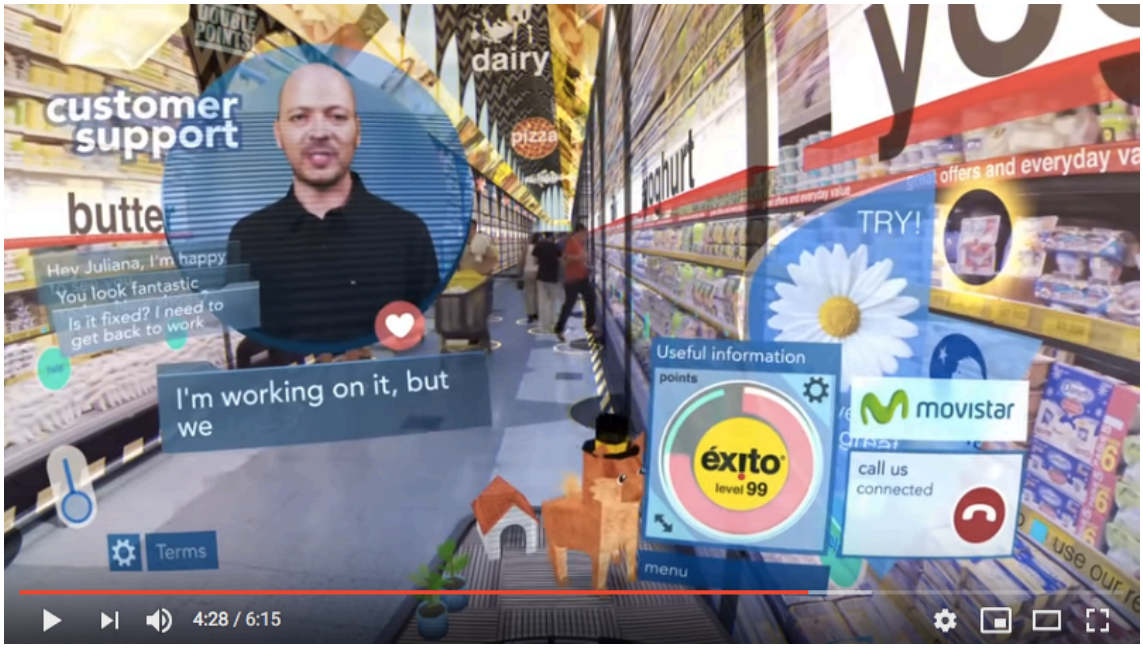

Figure 16. Image capture of the short film Hyper-Reality presenting the world of AR in a supermarket environment (Matsuda 2016).

Another interesting interpretation of the future AR-world is an insightful short film called Strange Beasts (2017) written, directed and produced by Magali Barbé. The film explores augmented reality through an AR game that allows people to create and grow their own virtual pets. The sci-fi short film questions how far a game like this can go and presents the idea so well it has been acknowledged widely as depicted in Figure 17 (Barbé 2017). The short film is so well and smartly made that in the beginning of the film it could be mistaken for a real-life games advert or a marketing communication video.

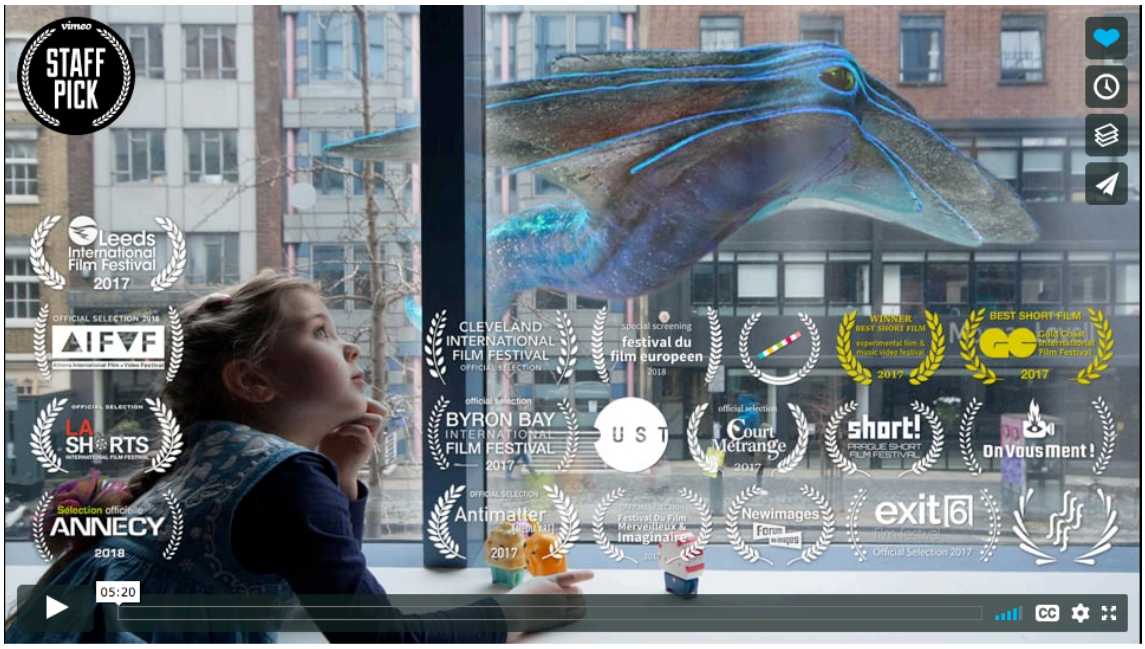

Figure 17. Image capture from the Strange Beasts short film presenting the nominations of the film (Barbé 2017).

The film begins with a young man, Victor Weber, introducing himself and his game “Strange Beasts”, an augmented reality game that sits somewhere between Pokémon Go and the classic Tamagotchi. As the story moves forward, Weber presents how the game works; users can create, customize, and grow their own pets, and can interact with them on a daily basis as they would with a real pet. He also tells the viewers that his augmented reality is achieved through “nano retina technology” and shows the technology in his eye as depicted in Figure 18 (Barbé 2017; Townsend 2017).

Figure 18. Image captures from the short film “Strange Beasts” presenting the “nano retina technology” in the protagonist eyes (Barbé 2017).

After the introduction scenes, the viewer can see Weber playing with his pet beast Walter, and his “little girl” Anna is introduced with her own pet beast, Blooby (Townsend 2017). Scenes are presented from both Weber’s point of view through the AR lens in his eye, but also from the third-person perspective, where it looks like Weber is talking to thin air while interacting with his pet.

In the final scene of the short film we see from Weber’s perspective that Anna is hungry. We see Weber call Anna over for a snack from third-person perspective and unexpectedly realize that Anna, just like the pet, is an AR creation and part of the game (Figure 19). (Townsend 2017). As we see Weber alone, talking to his imaginative family in the very last shot (Figure 20), a concern is raised about our future with AR, even if at the same time it creates such excitement for the future possibilities.

Figure 19. Image capture from the short film Strange Beasts presenting protagonist’s view through the AR lens with his pet beasts and his “little girl” Anna (Barbé 2017).

Figure 20. Image capture from the short film Strange Beasts presenting a moment from a third-person perspective without AR experience with the film protagonist talking to his "little girl" Anna (Barbé 2017).

As the examples depict, there will be a future where phones are no longer used, and the use of two-dimensional screens of any type will be rare. In the examples AR is experienced directly through the eye or a contact lens, and AR can be considered the new media or even the new Internet infrastructure. When AR becomes such an intertwined feature of our lives it is important to protect everyone from unethical behavior and activities.

Wassom suggests that when AR becomes reliable enough, most social interaction and consumer experiences will have an augmented digital component to them and marketing messages will become digital-only, including the now physical billboards and signs. Wassom argues that once AR has reached its maturity (in the far future), the ability to interact in the manner that AR will allow, will have shaped our societal norms and ethics to a degree that is difficult to foresee. Our society might be something that people today would not recognize or be comfortable in. (Wassom 2015, 38-39)

The basic elements of Internet will become the basic elements of AR and the values and practices of Internet will spread across the board. The new media form integrated into an individual's field of vision can have a significant impact on an individual's identity and sociality. It could result in individuals thought process development to be disrupted with one-sided and unethical directions in the world of AR. (Heinonen & Ruotsalainen 2015, 17)

Heinonen and Ruotsalainen (2015, 16) claim that individuals build their identities on media content, which should be taken into account when creating marketing content on the yet so immersive AR platform that can truly have significant impact on people. Wassom (2015, 6) suggests that if AR reached even half of its potential, it will be poised to revolutionize society at least as much as the Internet has done. And as AR grows and becomes the media, it is important that the media players and marketers take social responsibility over an individual by following ethical code of conduct in their processes of creating content in AR.

With these outlined future visions, it becomes clear that the question of this thesis is truly relevant and even inevitable; are additional ethical rules needed in augmented reality based B2C marketing communications? The next chapter will present the excising concerns related to the subject matter.

7 Ethical Concerns in AR-based B2C Marketing Communications

The hypothetical vision of our augmented future makes it clear that the research question of this thesis is truly relevant and pressing. If ethical rules didn't exist in the time where consumers can easily be immersed and manipulated, serious damage could be caused on individuals or even societies. In this chapter I will discuss the matters and concerns that a marketer should take into consideration when planning AR-based B2C marketing communications.

The matters and concerns discussed in this chapter are the ones that I find the most relevant to explore based on my experience in producing marketing communication content, and my readings and discussions on the topic in the field of Augmented Reality and Marketing Communications. As AR is a new medium, I'm certain that the ethical questions related to augmented reality based marketing communications stretch far beyond the finding of this thesis and most likely even beyond the papers and researches written by the industry professionals this far.

7.1 Acknowledged Concerns

The topic is wide and complex with considerable number of aspects that the ethical questions and challenges concern. For example, an industry professional Adriana Blum writes

in an web article *Ethical Challenges of Virtual and Augmented Reality,* published at Insight Success, that the main ethical challenges in AR include facial recognition and anonymity, mental and social side effects, unrealistic expectations, reality distortion, and manipulation (Blum 2019).

According to a paper called *Ethical Considerations in Augmented Reality Applications* by Department of Psychology, Fielding Graduate University, written by S. Pase, this technology raises significant ethical concerns that include the question of how consumers will be affected, manipulated, persuaded, or informed by the technology. Pase also brings up the ethical concern about the use of people's user information, privacy and privacy protection, and does not forget to mention the actual physical safety of the consumers and those around them. (Pase 2012)

Fiona J McEvoy, a tech ethics researcher and founder of YouTheData.com, expresses her concern on the topic in her web article *Six Ethical Problems For Augmented Reality* published at Becoming Human: Artificial Intelligence Magazine. The six concerns she raises up are just a fraction of concerns there are, but on the top of her list are the hijacking of public spaces, parking up on private land, anonymity, who should be able to augment, physical safety and reality distortion (real or faux). (McEvoy 2017)

The aspects that are most pressing for a marketer creating marketing communication content for AR campaigns, would be unrealistic expectations, reality distortion, manipulation, persuasion, informing and public and private spaces as well as physical safety. The more technology driven matters handle issues in, for example, data collection, privacy protection (incl. anonymity and user information) and facial recognition. The features the technology itself can provide for enhancing marketing communication strategies, for example, in personalization, should be examined by both the marketers and developers.

7.1.1 Unrealistic Expectations and Reality Distortion

If we think about the world enhanced with augmented reality, a world covered by digital elements that modify the viewed world in some cases even in very realistic ways, the reality might twist especially for those unable to identify the differences.

In worst case scenarios spending too much time in a cyber reality could lead people to have unrealistic expectations of real life, and in addition to the B2C marketing communications point of view, unrealistic expectations of products and services (Blum 2019). Blum states that if over-exaggerated fantasies become too immersive, it could lead to real life difficulties, and there is only little research on the effects that AR will have on individuals, especially children (Blum 2019). Psychological issues could increase with people who have difficulties interacting in the real life if they spend too much time using AR technology (Blum 2019). This is relevant to B2C marketing communications too, since a marketing communication piece could potentially be very immersive and long-lasting experience.

The issue becomes more relevant when the technology evolves and become part of our everyday life through AR glasses and lenses. In that hypothetical time, it can get difficult to distinguish between what is real and what is virtual while interacting through AR (Blum 2019). Blum thinks that there should possibly be an obligation put on developers to make this distinction apparent (Blum 2019).

McEvoy also wonders if there should be some way to indicate to users witch parts of an AR experience are fake if it isn't entirely clear. She states that convincing and compelling augmentation may lead to serious confusion amongst vulnerable members of society. She explains that if AR becomes the norm, we may see accusations of deception in cases where the real and the virtual aspects of the experience become indistinguishable. (McEvoy 2017)

Blum acknowledges the potential for advertisers to create misleading advertising, where, for example, a company selling property could augment it with nice features to look better than the property actually is (Blum 2019). Using AR to distort actual reality in misleading ways should most certainly be considered unethical, and the matter can be very concerning when, for example, children, who cannot distinguish real from virtual, are involved.

As a Producer of B2C marketing communication content, I could imagine countless fascinating and exciting ways to market toys for children through augmented reality, creating immersive fairytale worlds where different toys become alive right in front of the child's eyes. In this type of campaigns ethical rules should be considered very carefully.

7.1.2 Manipulation, Persuasion and Informing

Pase is talking about augmented reality as an effective tool for persuasion. I would understand that marketing communication is persuasive as its main goal is to get, and therefore persuade, a consumer to buy an idea or a product or service. According to Pase, AR is a powerful tool for persuasion because “it can create a convincing experience that changes the consumers thoughts and perceptions, and thus behaviors, by changing how we see, expect, interact with and experience the world around us”. (Pase 2012, 1)

Marketing communications will be taken into a whole new level of persuasion through augmented reality, as the AR applications are functionally better at persuasion than humans. Pase suggests that “when human persuaders give up on their persuasive attempts, technology can continue without such concerns as losing their voice, offending someone, taking too much time, experiencing cognitive dissonance or giving in to resistance towards their persuasive attempts”. (Pase 2012, 1)

According to Blum AR is currently unregulated with no legal infrastructure and consumers have little or no protection right now. She mentions that companies could get creative with false or misleading advertising or inventive tricks to trick people to buying more products and services. (Blum 2019)

Blum mentions that many researchers have argued that our environment has a significant effect on behaviors, and people could easily be manipulated in the environment. She explains that the potential for this manipulation is huge and therefore it is important that the appropriate safeguards are deployed. (Blum 2019)

Pase states that the novelty of the technology creates an ethical concern as the intentions of the companies can be masked or completely hidden. The consumer can be unaware that persuasive attempts are being directed at them in the application, which means that he or she is no longer an informed or willing participant of the B2C marketing communication experience. (Pase 2012)

This kind of persuasive efforts are then considered covert, questionably unethical and potentially coercive (Pase 2012). The companies should clearly express that they own

the content the consumer is viewing or experiencing and that it is part of their B2C marketing communications. This is an ethical standard in more traditional platforms of marketing communications, usually presented by logos and other informative notations, but might turn out to be more challenging to present in the AR environment.

7.1.3 Public and Private Spaces, and Physical Safety

As one of the best uses of augmented reality based B2C marketing communications is in an immersive location-based content, the question lays on *where* this type of content can be presented or experienced, and *what* kind of content is ethically appropriate to present in certain spaces.

McEvoy states that public spaces belong to all, and companies could easily upset the consumers if they use brash augmentation to adorn, for example, cherished local monuments or much-loved vistas (McEvoy 2017). It should be discussed when and in what situations the marketers need to ask for permission from the owner for the use their physical spaces for marketing communication purposes.

It is unclear who does the virtual space belong to and who is, or will be, managing it. In the future, a system that controls where commercial content can be published and experienced should exist. This could mean a map that divides public spaces and private spaces, and simply restricts any commercial publications on unwished areas. Also, as McEvoy suggests, private owners could have the rights over the virtual space that surrounds their property (McEvoy 2017).

At the moment a control system is not in place and any augmented reality content could be published anywhere, which creates serious ethical concerns. McEvoy presents a simple example of a company being forbidden to place a yard sign on a family's private lawn without asking, and questions why AR should be any different. Another example is of a burger chain augmenting a house where the residents are from a culture or religion that does not appreciate, for example, the consumption of certain type of meat. McEvoy also wonders about the ethicality of, for example, companies transposing publicly available census information onto private houses. (McEvoy 2017). These examples would most likely be considered unethical and this type of marketing communication actions could harm or upset the owners of the space.

The concerns related to spaces and surroundings are not only limited to mental and societal questions of *where* and *what* can be published. Experiencing immersive AR content in public and private spaces may also cause the user (or consumer), and those around them, real physical safety hazards. This risk would significantly increase when AR can be experienced through eyeglasses or lenses, as the augmented world would be visible in the user's eyes nonstop without the extra efforts of holding a smartphone.

The safety hazards would occur due to the user's attention and focus on the viewed content and the viewing device, be it a smartphone or AR glasses or lenses. Pase reminds that human beings have limited capacity to focus on multiple activities, which is due to the brain's limited capacity to process multiple actions, and handle the processing and memorizing of the activities and stimulus. Focus on the augmentation leaves a limited ability to focus on the rest of the world. (Pase 2012)

A sad yet good example of real physical safety hazard was witnessed through the famous Pokémon GO game, where users search for Pokémons through an AR application. The game led to a number of high-profile incidents, including the death of players (McEvoy 2017). McEvoy wonders what extent should the companies using AR be compelled to understand the environments they are augmenting and if they should know if they are leading consumers into dangerous neighborhoods, onto busy roads, or to places where the terrain is somehow unsafe (McEvoy 2017). A system that maps out the risks could again be of use to make AR experiences safer for a consumer.

Immersive applications, such as AR applications, that command the consumer's continued attention creates potential for the user to become so engaged in the experience that they become completely engrossed in the activity and lose awareness of time and what is happening around them. This may lead to a risk of the consumer walking down a busy street without paying attention to other pedestrians, broken concrete or other obstacles in the surroundings which may lead to tripping and falling, and injury. The consumer might also step off the curd into oncoming traffic because they are so focused on something they see on the other side of the road, which in worst scenario may end up in deaths. (Pase 2012)

While the company would want to keep the consumer engaged and engrossed in their AR-based B2C marketing communication experience, they should consider if the experience may cause physical safety hazards to the consumer. Though the safety hazards

should be taken into consideration already in the development phase of the AR technology and some level of safety control should take place by an official regulating body. Pase suggest that a simple “time out” feature could be placed in the AR application that pauses the experience and thus gives the consumer an opportunity to be aware of their surroundings (Pase 2012). Or, a warning disclosure could be placed at the launch of the application that informs the consumer of the potential for immersion and injury (Pase 2012).

7.1.4 Anonymity, Privacy and Facial Recognition

Pase notes that there are limited number of published articles on AR and the ethics, and the topic discussed in relation to it, is most frequently of privacy. Pase states that personal and private data collection of the end user is a significant point of ethical concern in AR applications, and it is a topic that the consumers have a strong reaction and concern on. (Pase 2012, 4)

When marketers try to determine the most effective way to gain consumer attention, the end user data becomes very valuable. The data could be used on how to effectively engage, maintain, and persuade the end user with a product. This data allows the marketer better tailor products and campaigns to such end goals that ultimately lead to increase of revenues. Pase suggests that these desires must be tempered by ethical considerations such as privacy protection, informed release of information, informed consent, and user safety. (Pase 2012, 4)

Ethical concerns are raised especially about how the collected information is used, how it is protected, and who has access to it. Pase is concerned of a case where AR is being used as a web browser; does the application track user’s every move and what types of locations a user visits based on GPS data? He is also worried about the technology tracking how long the users stay in a location, or how many times they frequent the location. (Pase 2012, 4)

Pase raises a concern about the control the user has over what information is retrievable and disseminated. The use of information could become unethical, for example, when it is used to target a person based on, for example, their religious affiliation because their data shows them visiting a specific house of worship. Pase states that when raw information is accessible to others, they are able to make assumptions about the user that

might be good, bad, or simply incorrect without the end user's knowledge or ability to correct or defend against those assumptions. (Pase 2012, 4)

While AR can offer an enormous amount of possibilities to personalize marketing communication content for consumers, these opportunities create serious unethical concerns that in some scenarios are even a threat to civil rights.

Blum writes that the concern is real with AR products that can be used for facial recognition so that people never have any real privacy (Blum 2019). According to Pase the use of AR data including GPS and other data mined information, when combined with the facial recognition, will lead to seamless blending of online and offline, as well as public and private lives (Pase 2012, 4).

Imagine this in a time where everyone was wearing AR glasses or lenses, and the system was able to collect information to its database through everyone's device, through what they see. A passer-by's device could collect your data passing by in a certain location and give information about you to the passer-by, without you ever knowing.

Pase describes a person interested in someone they randomly encounter, being able to find information about that person, potentially without their knowledge and without their permission if they are unaware the application was being used on them. In this case their friends, marital status, general affiliations, and other private data might all be available at the push of a button or swipe of a hand, and on display for anyone who uses the application to see. (Pase 2012, 4)

Blum says there are already a number of free applications that are stating that they use image analysis software for facial recognition. She suggests that this technology could potentially be used to identify people on the streets, time-stamping faces against locations for real-time tracking. (Blum 2019). This could be very useful and beneficial for B2C marketing communication purposes as the right type of messages could be targeted to individual consumers.

However, this feature may lead to serious concerns on privacy, stalking, being targeted by misleading advertisements and scams, social stereotyping and profiling. Pase is concerned if the person has the ability to opt in or opt out of the recognition in the AR application. And if they do opt in, do they have control over what information is allowed to be

shared? He wonders if people would have any ability to know where, when and who has used the applications to identify them. (Pase 2012, 5)

Blum brings up an example of Amazon that recently came under heavy fire for their facial recognition technology, which has been deemed a threat to civil liberties. According to Blum, anti-facial recognition technology is being developed in response to the matter, with make-up and scarves designed specifically to fool facial recognition devices. (Blum 2019)

McEvoy mentions an application by Blippar that boasts how it can harness “powerful augmented reality, facial recognition, artificial intelligence and visual search technologies”. She describes that the application allows the user to use phone cameras to unlock information about the world around us. At present, Blippar is using its technology to allow the consumers look-up gossip about famous faces spotted on TV or images, but McEvoy suggests that there is a very real prospect of AR technology identifying individuals in the street and therefore there is a concern that AR could affect personal anonymity in public places. (McEvoy 2017)

A considerable risk also lies on companies using or presenting only negative or false information of users, that could damage a person’s reputation. Pase states that while there is market excitement surrounding facial recognition, the risks of ethical violations concerning privacy are significant. (Pase 2012, 5)

7.2 Acknowledged Ethical Concerns in Relation to the ICC Code

Reading and interpreting the ICC Advertising and Marketing Communications Code can be challenging in relation to the ethical concerns of AR-based B2C marketing communications. The code is written to cover all marketing communications in broad and all its mediums, forms and content by the whole eco-system and its activities (ICC 2018, 30). Thus, it could be understood that the code covers it all very widely and vaguely, and a lot of room is left for interpretation. The top-level code does not go into detail when it comes to interactive digital media, and even less when it comes specifically to augmented reality based marketing communications.

All articles of the General Provisions and Definitions of the ICC code are relevant in AR-based B2C marketing communications as they would be in any marketing communications. However, only few can be interpreted to cover the acknowledged ethical concerns of AR-based marketing communications, and only in some extent. Based on the ICC's response to my e-mail query the articles 9, 10, 18 and 23 were relevant to AR. In addition, the articles depicted in Table 2 could be considered in relation to the acknowledged ethical concerns. The depicted articles could cover the concerns in some extent, but not completely and should not be considered in any level sufficient.

Table 2. Articles of the General Provisions and Definitions of the ICC Advertising and Marketing Communications Code in relation to the acknowledged ethical concerns (ICC 2018, 9-17).

Sub-chapter	**Acknowledged ethical concerns as discussed in subchapters of chapter 8.**	**Related ICC code Articles** (Assuming article 18 about children and teens apply to all)
8.1.1.	Unrealistic expectations and reality distortion	Article 2 – Social Responsibility Article 4 – Honesty Article 5 – Truthfulness Article 17 – Safety and health
8.1.2.	Manipulation, persuasion and informing	Article 4 – Honesty Article 5 – Truthfulness Article 7 – Identification and transparency Article 8 – Identity of the marketer
8.1.3.	Public and private spaces, and physical safety	Article 14 – Portrayal or imitation of persons and references to personal property Article 15 – Exploitation of goodwill
8.1.4.	Anonymity, privacy and facial recognition	Article 2 – Social Responsibility Article 12 – Denigration Article 14 – Portrayal or imitation of persons and references to personal property Article 19 – Data protection and privacy

It could be stated that there is a good common ground for AR-based B2C marketing communications, but the code just does not seem to cover all aspect of the ethical concerns related. Also, in the stage of early adoption, the ethical concerns and the rules are not unambiguous as the ethical conduct might be difficult to identify or implement. Further guidelines and means are needed for how to achieve ethical actions and behavior in the world of augmented reality.

For example, regarding article 17 on safety and health, the ICC code states that “marketing communication should not, without justification on educational or social grounds, contain any visual portrayal or any description of potentially dangerous practices, or situations which show a disregard for safety of health, as defined by local national standards”. However, the article does not take into account the actual physical or mental safety of the consumer experiencing the AR content in the physical world, though it does recommend that instructions for use should include appropriate safety warnings and disclaimers (ICC 2018, 12).

In its novelty AR sets challenges in the article 4 and 5, honesty and truthfulness, especially in the first stages of adoption of the technology. Without wider understanding of the features of the technology and its effects in an individual and society, there is a risk of unethical actions and behavior that is not yet acknowledged in the ICC code. For example, within the concern of reality distortion, marketers might unintentionally mislead the consumer due to the immersion and features the technology provides. Also, a conflict in the level of experience and understanding of the technology and its features will most likely vary between consumers and marketers for a long time from the early adoption. The challenge of distinguishing between what is real and what is virtual while interacting through AR can become a serious issue.

The code states in article 15 that the name, initials, logo and/or trademark of another firm, company or institution should not be used in marketer’s marketing communications, and that, for example, any undue advantage of another firms’, individual’s or institution’s goodwill in its name, brands or other intellectual property shouldn’t be taken (ICC 2018). This article might become challenging when we think about the world where augmented reality takes place. The physical world is already covered by content created by companies with, for example, out-of-home advertisement, and logos are presented in the building walls. It should be taken into consideration what limits or challenges this existing rule creates for AR marketers.

The relevant additional guides that should be interpreted in conjunction to the General Provisions and Definitions are ICC Resource Guide for Self-Regulation of Online Behavioural Advertising (OBA), ICC Guide for Responsible Mobile Marketing Communications, ICC Guide for Responsible Mobile Marketing Communications, Supplement to the ICC Resource Guide for Self-Regulation of Interest Based Advertising, ICC Resource Guide for Self-Regulation of Online Behavioural Advertising. All these additional guides should

be taken into account when the marketing communication content presented in AR is associated with the subjects of the guides.

8 Survey

In September 2019 I conducted a web survey to research the common opinion on if pre-existing rules of traditional marketing communication ethics apply for augmented reality based B2C marketing communications or not, and if additional ethical rules should be created.

8.1 Survey Structure and Questions

The survey was executed in Google Forms -format and distributed as a link in social media platforms such as Facebook and LinkedIn, and in different professional, expert and interest groups within those channels. The survey's questions were targeted for relevant professionals as well as for ordinary consumers in order to get a wider understanding of the prevalent opinion on the thesis question.

The aim was to receive a minimum of 100 responses, but the participation rate fell low with only 51 responses and therefore the survey cannot be considered very trustworthy or successful. However, the data collected is interesting enough to present in this thesis and it supports the research hypothesis.

The survey was presented in three sections. First, the aim was to determine the respondent's professional background and level of expertise in the subject matter. On the basis of their expertise in the subject matter, it was identified if they were consumers or professionals in the field. Second, the aim was to ascertain if they were familiar with the terms discussed in the survey. And finally, the questions related to ethics in B2C marketing communications and augmented reality based B2C marketing communications were presented.

Full list of survey questions can be found in Appendix 2.

8.2 Respondent Overview

Most of the survey respondents practiced their profession in Finland (83.3 percent), but few responses were received from, for example, Europe, Japan and United States. Considering the reach of the survey, it was only natural to receive most responses from Finland, and it is also the most relevant respondent group for this thesis approach as ethical rules may vary in different countries and cultures.

Variation in the respondents' field of profession was visible in the survey results. Largest response group was, as expected, in the field of Marketing Communication, Marketing, Advertising and Communication with 60.8 percent of response rate. Other responses came from, for example, the fields of Augmented Reality or Virtual Reality Technology or Content Production, Film & Television, Video Production, Mobile & Digital Games (other than AR or VR), Education and Teaching, and Legal & Law. Also, a variation of professional titles was present in the survey as seen in Figure 21.

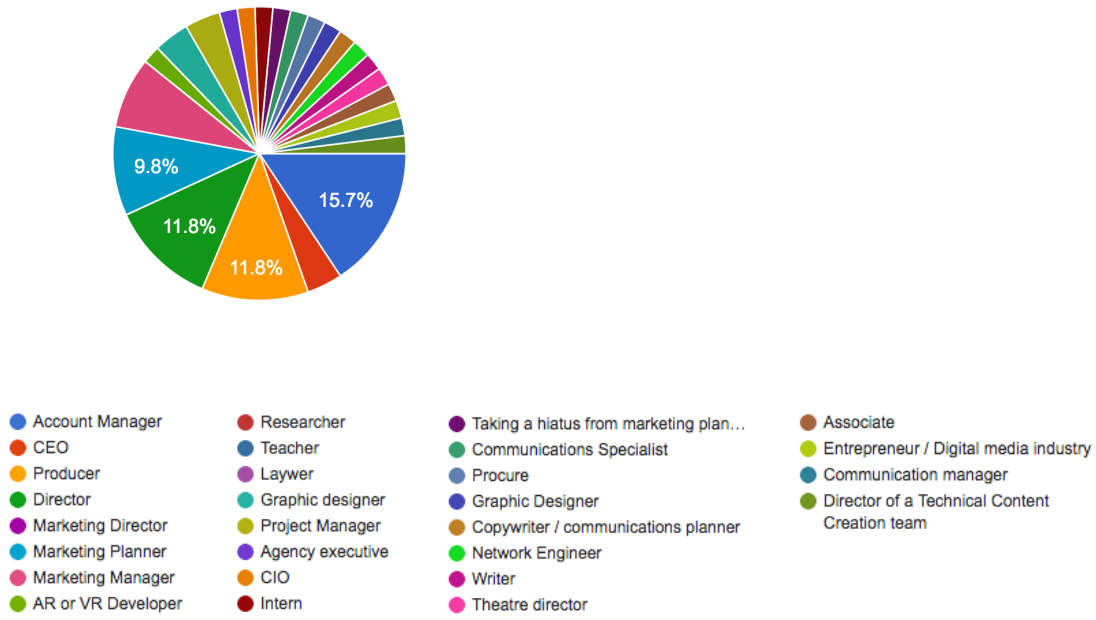

Figure 21. Respondent's current professions.

The respondents had to identify the level of their expertise in augmented reality based B2C marketing communications (Figure 22). Five levels were proposed with level one

(1) standing for no professional experience in the subject matter and level five (5) standing for high professional experience and proficiency in the subject matter. These levels of expertise will be referred to as levels 1-5 hereafter.

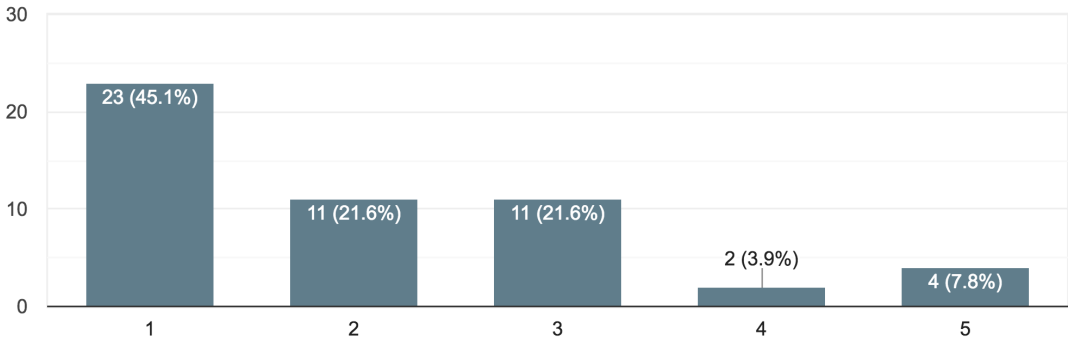

Figure 22. Respondent's level of expertise in augmented reality based B2C marketing communications from low to high.

As depicted in Figure 22, greater part of the respondents had no expertise in augmented reality based B2C marketing communications. Only 7.8 percent identified themselves with high professional experience and proficiency in the subject matter. The level 5 respondents were from the fields of Marketing Communication, Marketing, Advertising and Communication, or the field of AR and VR or Procurement.

Level 1 respondents present 45.1 percent of the respondents. 81.5 percent of these respondents identified themselves as consumers of marketing communications rather than some level of experts in the field. 7.4 percent identified themselves as students and 11.1 percent of the responses in this specific question were irrelevant due to misunderstanding of the question. The 11.1 percent re-entered their current profession or expertise level in the question field.

The respondent's term awareness was high with 96.1 percent considering themselves familiar with the term B2C Marketing Communication. The same number of respondents had heard the word "Augmented Reality" sometime in their life. However, the concept of augmented reality was less familiar (familiar to 90.2 percent) and only 66.7 percent had ever experienced or viewed augmented reality based marketing communication content. These numbers are actually rather high considering AR to be a fairly new technology and unfamiliar to many as an expectation.

8.3 Survey Results

The survey's questions and results support the thesis hypothesis strongly. Hundred percent of the respondents said that ethical rules are necessary in augmented reality based B2C marketing communications (Figure 23) and majority (56.9 percent) of the respondents thought that pre-existing ethical rules of traditional marketing communications were relevant in AR-based B2C marketing communications (Figure 24). This supports the hypothesis that of course ethical rules apply in AR-based B2C marketing communications as well as in any marketing communications.

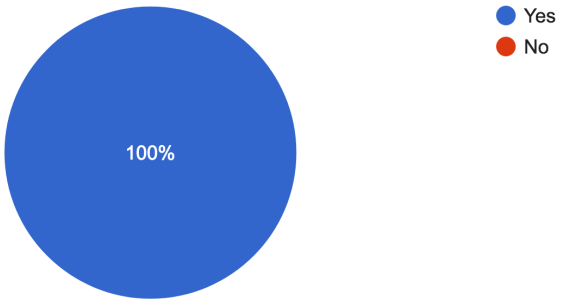

Figure 23. Hundred percent of the respondents considered ethical rules necessary in augmented reality based B2C marketing communications.

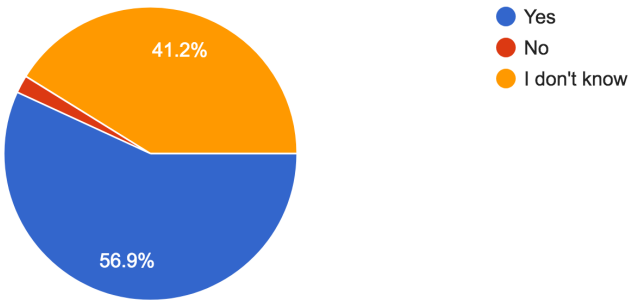

Figure 24. Respondent's view on if pre-existing ethical rules of traditional marketing communications were relevant in AR-based B2C marketing communications.

However, the survey result does not provide a clear answer for the actual research question; are additional ethical rules needed for AR-based B2C marketing communications. For this question the respondents were given three response options: "yes", "no" and "I

don’t know”. Majority (58.8 percent) of the respondents answered that they don’t know when 39.2 percent answered yes and one respondent said no as depicted in Figure 25.

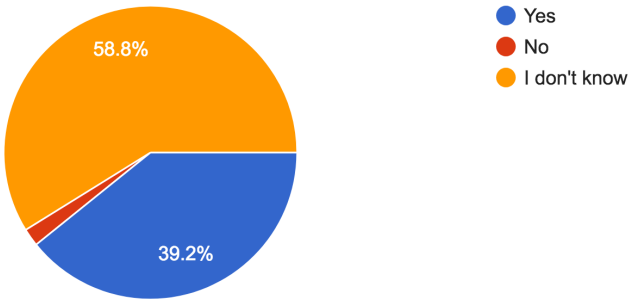

Figure 25. Respondent’s view on if additional ethical rules were needed for AR-based B2C marketing communications.

Taking a closer look at the results, 25.5 percent of the respondents were actually unfamiliar with the ethical rules of traditional marketing communications. They all still reported that ethical rules are necessary in AR-based B2C marketing communications. Yet half of that group said that the pre-existing ethical rules apply to AR-based B2C marketing communications without understanding the rules in place, and the other half of the same group responded with “I don’t know”.

It could be interpreted that these respondents think that ethical rules are necessary when it comes to any activities taken to persuade consumers, even if they were not familiar with the concept of application or the existing ethical rules related to it. Therefore, the 25.5 percent of the responses could be considered questionable for the research as that group does not really know if the pre-existing ethical rules apply and therefore cannot know if additional ethical rules are needed.

The level 5 professionals all responded that the pre-existing ethical rules of traditional marketing communications were relevant in augmented reality based B2C marketing communications, though one admitted being unfamiliar with the ethical rules of the traditional marketing communications. Half of this group’s respondents thought that additional ethical rules are needed for AR-based B2C marketing communications and the other half did not know if the additional rules were needed. For one of this group’s respondents the idea of ethical rules in the subject matter was new, but the rest had thought about the matter before.

In other words, overall all respondents acknowledged that ethical rules are needed in AR-based B2C marketing communications, but it was unclear if pre-existing ethical rules apply and if additional rules are needed. This may be simply due to not understanding what the pre-existing ethical rules are and how augmented reality works or could work. Only 17.6 percent of the respondents had thought about ethical rules in the subject matter before and for the rest it was a completely new idea as depicted in Figure 26.

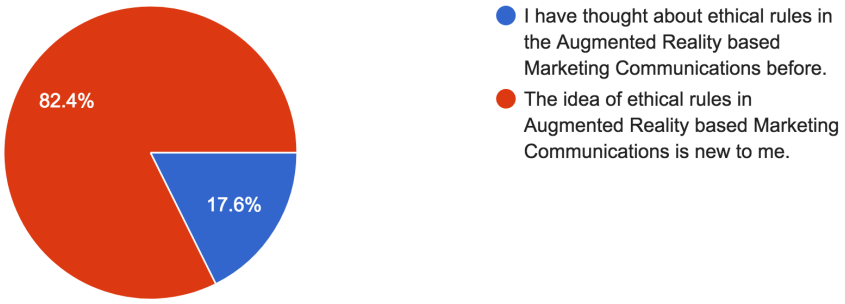

Figure 26. The distribution between the respondents that had thought about ethical rules in AR-based marketing communications before and those who the idea was new to.

The survey assumed that the respondents understanding the pre-existing ethical rules understand the ICC Code of Advertising and Marketing Communications, but it cannot be confirmed as the ICC code was not directly referred to in the survey questions. The survey should have referred to the ICC code in order to be sure all respondents were talking about the same rules even though the code is the common code in the field.

9 Conclusion

I believe that the future of B2C marketing communications belongs to AR, and as discussed in the thesis interview with Tom Wright, Head of Technology and Production at Miltton, the future of B2C marketing communications will change dramatically when people commit to seeing the world through a lens that includes augmented digital elements and information (Wright 2019).

Blum states that there are many ethical considerations to take into account in terms of AR. In addition to the relevancy analysis of the ICC code, Blum states that there's currently no regulatory infrastructure in place to moderate the development and deployment of AR technology. Like this thesis, she shows real concern; "the speed at which the technology is advancing is too fast for the traditional legislative system to account for". (Blum 2019)

In the hands of the wrong people with bad intentions serious damage can be caused to consumers in AR-based B2C marketing communications. And to think of it, it is not only the wrong people with bad intentions that can cause harm, but it is also the people with good intentions that can cause harm only due to ignorance of the subject and the lack of understanding how the new features of AR can affect the consumer. The damage may concern, for example, the consumers privacy, personal information, and physical and mental safety. The aim of the society should be in protecting people, and therefore there should be a body on international and national level that regulates the matters related to ethics in AR-based B2C marketing communications.

Wright agrees that a body should exist to monitor the AR experiences and be responsible for taking complaints and investigating the cases. He suggests that the body should also have the power to set consequences and take down unethical campaigns or send a notice to change whatever is unethical in the content or campaign, which is what the Council of Ethics in Advertising is actually entitled to do in Finland. Wright notes that it is very hard to police absolutely everything, but standards should exist and a standardized "black mark" could exist to go on a brand or some actor that is behaving badly. (Wright 2019)

The regulating bodies could and probably would be the same as they are for the traditional marketing communications that we are familiar with today. In Finland, the bodies

are the Finland Chamber of Commerce and The Council of Ethics in Advertising, and internationally the ICC and the self-regulatory bodies. However, due to the complexity and multi-dimensional features of AR, the regulating bodies should adopt true expertise and special know-how on augmented reality.

The ICC code is without a doubt relevant in AR-based B2C marketing communications as it is in any marketing communications, but it can be claimed that it is not precise or relevant enough to serve solely as the code of conduct for the subject, and therefore additional ethical rules are needed urgently.

Like this thesis, Wright supports the claim on additional ethical rules being necessary. He states that additional rules are needed because the use cases are just different to what the existing use cases are, and most likely most of the use cases do not even exist yet. Wright suggest that the rules and regulations have to be applied in a way that is relevant for all of the things that are new and different in the field. The amount of content and messages in our media and channels is so great that even today there is not enough bodies that oversee things rigorously and punish those breaking rules. (Wright 2019)

Wright explains that pre-existing ethical rules in traditional B2C marketing communications originally exist because of people's experiences with marketers over time (Wright 2019). A rather recent action taken towards additional rules in marketing communications was when influencer campaigns became more common in the market in Finland. Parents started to file complaints to The Council of Ethics in Advertising who then started to investigate the field and established a set of additional rules for marketers to follow in the campaigns. I would expect something similar to happen with the additional ethical rules in AR-based B2C marketing communications, but I hope that actions are taken at least on some level before the content is available to the consumers and before the complaints start to arise.

Taking this matter seriously before unethical actions become real is also important, because the consumer might not see or be aware of all the possible unethical actions taken inside the software or hardware. It simply might not all be visible to the consumer or it might be something difficult to comprehend, especially in the early stages of the adoption. Furthermore, marketers using AR for their marketing communications may be uneducated on the matters related to the technology and its effects.

We have already witnessed situations where personalization became a considerable concern and discussion on global level as marketing communication actions were taken without the consumer understanding what they had committed to. Wright remembers this from the mid 2000s where consumers could create, for example, digital custom Happy Birthday messages or Holiday cards online. In these cases, he remembers, for example, that Facebook was able to scrape user's profiles and their friend's profiles and images, and create content based on the collected information. Back then there were no regulations around the collected information, so marketers could have done whatever they wanted with it. (Wright 2019)

It is good that the awareness on protection of personal information is shifting and people are paying more attention to what they agree on. Wright thinks that people's approach to AR and to what kind of information it uses, and how it applies to individuals or public, will have to be addressed in AR-based B2C marketing communications. Wright states that it is going to be a tangle of its own, but hopes that regulations will take place and people will be responsible about the use of AR. He thinks that it is important everyone using AR will learn to understand how AR works before people suddenly see someone's credit scores floating over their heads as they walk down the street. (Wright 2019)

Blum suggests that the control over AR software should be in the hands of the consumers so they can make the decisions with regard to what they want to see and what data is made accessible (Blum 2019). Wright also addresses the option of consumers maintaining the social regulations, for example, in application stores through review and oversight submissions in some extent. He mentions that there are models for experiences going through a review cycle, and applications and software that offer resource for bad experiences and bad acting, which might be something for the developers and regulators to consider as AR evolves. (Wright 2019).

Wright admits that it is hard to think what the additional ethical rules would be. He explains that the ethical concerns would be ones around altering someone's perception of reality in a way that's unethical. The additional ethical rules could also be about the advocacy of information that becomes more relevant to a consumer because it is a paid placement. They would also be about consumer's decisions, or their perception of what's around them, as this can be altered by the primacy of company's advertisement placement or their brand placement. The companies could be increasing their representations somehow in the consumer's experience in a way that affects the consumers' experience

as a person, whether it is in understanding their surroundings, their perception of actual reality or they could see some content more often or less often, because of a marketer's decisions. (Wright 2019)

To summarize, the need for additional ethical rules is pressing as the market is expected to grow rapidly, and more and more marketers are taking actions to pursue AR-based B2C marketing communication campaigns. The revised ICC code is relevant as in any marketing communications, but it is not sufficient as it does not specifically address AR and its novelty features. I recommend that actions are taken by the existing regulating marketing communication bodies in collaboration with the augmented reality developers, researchers and representatives, to deliver a new ethical code of conduct to cover AR-based B2C marketing communications.

References

Appearition, 2017. The Magic that is AR – QnA with Tomi T Ahonen. [online] Available at: https://www.appearition.com/the-magic-that-is-ar/ [Accessed 27 October 2019].

Arilyn, 2019. Arilyn Manager. [online] Available at: https://arilyn.com/product [Accessed 26 October 2019].

Arla, 2018. Pelaa jalkapalloa Aamu-kissan kanssa! Arla. [online] Available at: https://www.arla.fi/aamukissa/ [Accessed 15 September 2019].

Barbé, Magali, 2017. Strange Beasts. Vimeo. [online] Available at: https://vimeo.com/2090706290 [Accessed to 05 October 2019].

BBC, 2014. What is ethics? Ethics: a general introduction. [online] Available at: http://www.bbc.co.uk/ethics/introduction/intro_1.shtml [Accessed to 01 October 2019].

Bhasin, Hitesh, 2018. Importance of Marketing Communication. Marketing91. [online] Available at: https://www.marketing91.com/importance-of-marketing-communication/ [Accessed to 23 July 2019].

Blum, Adriana, 2019. Ethical Challenges of Virtual and Augmented Reality. Insights Success. [online] Available at: https://www.insightssuccess.com/ethical-challenges-of-virtual-and-augmented-reality/ [Accessed to 01 October 2019].

Bonifacic, Igor, 2019. Instagram takes its first steps into becoming an AR changing room. Engadget. [online] Available at: https://www.engadget.com/2019/10/04/instagram-spark-ar-commerce/ [Accessed to 26 October 2019].

Bryksin, Gleb, 2019. How Augmented Reality Makes Advertising Interactive. RubyGarage. [online] Available at: https://rubygarage.org/blog/augmented-reality-in-advertising [Accessed 15 October 2019].

Business Jargon, 2019. Marketing Communication. [online] Available at: https://businessjargons.com/marketing-communication.html [Accessed 23 July 2019].

Bycel, Ben, 2013. How Do You Define Ethics? Santa Barbara Independent. [online] Available at: https://www.independent.com/2013/05/23/how-do-you-define-ethics/ [Accessed 12 October 2019].

Chonko, Larry, 2012. Ethical Theories. The University of Texas at Arlington. DSEF. [online] Available at: https://www.dsef.org/wp-content/uploads/2012/07/EthicalTheories.pdf [Accessed 3 November 2019].

Communication Centers, 2019. What is marketing communication and how it is used. [online] Available at: https://communicationcenters.org/what-is-marketing-communication-and-how-is-it-used/ [Accessed 07 July 2019].

Dingman, Hayden, 2019. Magic Leap hands-on: Magic, sure, but augmented reality is still a long way away from mass consumption. PCWorld. IDG Communcation. [online] Available at: https://www.pcworld.com/article/3384701/magic-leap-hands-on-augmented-reality.html [Accessed 20 October 2019].

Dormehl, Luke, 2019. This is the start of a whole new era for Apple augmented reality. Cult of Mac. [online] Available at: https://www.cultofmac.com/644042/apple-arkit-augmented-reality/ [Accessed 16 October 2019].

Finland Chamber of Commerce, 2019a. Markkinointiin sovellettavat säännöt. [online] Available at: https://kauppakamari.fi/lautakunnat/men/sovellettavat-saannot/ [Accessed 5 October 2019].

Finland Chamber of Commerce, 2019b. The Council of Ethics in Advertising. [online] Available at: https://kauppakamari.fi/en/boards/council-of-ethics-in-advertising/ [Accessed 16 October 2019].

Forsay, Caroline, 2019. 7 Innovative & Inspiriting Examples of Augmented Reality in Marketing. Hubspot. [online] Available at: https://blog.hubspot.com/marketing/augmented-reality-examples [Accessed 26 October 2019].

Gaioshko, Daria, 2014. National Geographic Brings Educational Augmented Reality. Augmented Pixels. [online] Available at: https://augmentedpixels.com/national-geographic-brings-educational-augmented-reality/ [Accessed 20 October 2019].

Goldman Sachs, 2016. Virtual & Augmented Reality. Profiles in Innovation. The Goldman Sachs Group Inc. [online] Available at: https://www.goldmansachs.com/insights/pages/technology-driving-innovation-folder/virtual-and-augmented-reality/report.pdf [Accessed 06 October 2019].

Google, 2019. Discover Glass Enterprise Edition. [online] Available at: https://google.com/glass/start [Accessed 06 October 2019].

Harris, Miriam, 2017. Everything you need to know about designing with augmented reality. DigitalArts. [online] Available at: https://www.digitalartsonline.co.uk/features/hacking-maker/everything-you-need-know-about-designing-with-augmented-reality/ [Accessed 06 October 2019].

Hopia, H., 2019. Eettinen osaaminen. [online] Available at: https://oppimateriaalit.jamk.fi/eettinenosaaminen/ [Accessed 22 September 2019].

Hunt, Shelby D., Vitell, Scott, 1986. A General Theory of Marketing Ethics. SAGE Social Science Collections. [online] Available at: http://sdh.ba.ttu.edu/JMacro86%20-%20A%20general%20theory%20of%20marketing%20ethics.pdf [Accessed 3 November 2019].

ICC, 2018. ICC Advertising and Marketing Communications Code. International Chamber of Commerce [online] Available at: https://cms.iccwbo.org/content/uploads/sites/3/2018/09/icc-advertising-and-marketing-communications-code-int.pdf [Accessed 06 October 2019].

ICC, 2019a. ICC Advertising and Marketing Communications Code. International Chamber of Commerce. [online] Available at: https://iccwbo.org/publication/icc-advertising-and-marketing-communications-code/ [Accessed 06 October 2019].

ICC 2019b. Re: New submission from Contact us: Ethics in AR based B2C MarComm. Representative of International Chamber of Commerce (ICC). Email: 24th October 2019.

Informatics, 2016. Pokémon GO and the Future of Augmented Reality. [online] Available at: https://www.informaticsinc.com/blog/2016/pokemon-go-and-future-augmented-reality [Accessed 06 October 2019].

Innovestor, 2019. Arilyn / Co-onvestment opportunity. [online] Available at: https://innovestorgroup.com/arilyn-co-investment-opportunity/ [Accessed 06 October 2019].

Instagram, 2019. New Face Filters and More. Info Center [online] Available at: https://instagram-press.com/blog/2017/06/15/new-face-filters-and-more/ [Accessed 26 October 2019].

Kastrenakes, Jacob, 2014. Pepsi's bus stop ad in London might be the best use of augmented reality yet. The Verge. [online] Available at: https://www.theverge.com/2014/3/25/5545842/pepsi-bus-stop-ad-augmented-reality [Accessed 06 October 2019].

Kipper, Gregory and Rampolla, Joseph, 2013. Augmented Reality, An Emerging Technologies Guide to AR. USA: Syngress. Elsevier Inc.

Kiviperä, Otto, 2014. Markkinoinnin etiikka. Lahti University of Applied Sciences. [online] Available at: https://www.theseus.fi/bitstream/handle/10024/71275/Kivipera_Otto.pdf?sequence=1&isAllowed=y [Accessed 20 July 2019].

Krevelen, Van, Rick, 2007. Augmented Reality: Technologies, Applications, and Limitations. Vrije Universiteit Amsterdam, Department of Computer Science. ResearchGate. [online] Available at: https://www.researchgate.net/publication/292150312_Augmented_Reality_Technologies_Applications_and_Limitations [Accessed 20 July 2019].

Lehto, Tero, 2019. Lisätyn todellisuuden sovellus nousi kärkisijoille Suomessa. Kauppalehti. [online] Available at: https://www.kauppalehti.fi/uutiset/lisatyn-todellisuuden-sovellus-nousi-karkisijoille-suomessa/fc88d363-34dc-4874-acaf-af5dc57b675b [Accessed 15 September 2019].

MaRS Discovery District, 2019. What is marketing communication (MarCom)? [online] Available at: https://learn.marsdd.com/article/what-is-marketing-communication-marcom/ [Accessed 23 July 2019].

Matsuda, Keiichi, 2016. HYPER-REALITY. YouTube. [online] Available at: https://www.youtube.com/watch?v=YJg02ivYzSs [Accessed 26 October 2019].

McEvoy, Fiona J., 2017. Six Ethical Problems For Augmented Reality. Becoming Human: Artificial Intelligence Magazine. [online] Available at: https://becoming-human.ai/six-ethical-problems-for-augmented-reality-6a8dad27122 [Accessed 01 October 2019].

Motley Fool Transcribers, 2019. Apple Inc. (AAPL) Q3 2019 Earnings Call Transcript. [online] Available at: https://www.fool.com/earnings/call-transcripts/2019/07/30/apple-inc-aapl-q3-2019-earnings-call-transcript.aspx [Accessed 16 October 2019].

Noble, 2019. What are the best AR smartglasses? Aniwaa. [online] Available at: https://www.aniwaa.com/best-of/vr-ar/best-augmented-reality-smartglasses/ [Accessed 05 October 2019].

Onirix, 2019. The Best Augmented Reality Hardware in 2019. [online] Available at: https://www.onirix.com/learn-about-ar/the-best-augmented-reality-hardware-in-2019/ [Accessed 20 October 2019].

Orkla, 2019. Panda. [online] Available at: https://www.orkla.fi/brands/panda/ [Accessed 15 September 2019].

Perttula, Ville, 2018. Lisätty todellisuus rakentaa Arlan brädiä – ”Ensisijainen tarkoitus ei ole ollut myydä maitoa”. Markkinointi&Mainonta. Alma Media. [online] Available at: https://www.marmai.fi/uutiset/lisatty-todellisuus-rakentaa-arlan-brandia-ensisijainen-tarkoitus-ei-ole-ollut-myyda-maitoa/c1ac8bff-c465-3199-b131-d39f89c9c8f1 [Accessed 3 November 2019].

Petrock, Victoria, 2018. Augmented Reality Marketing and Advertising 2018. eMarketer. [online] Available at: https://www.emarketer.com/content/augmented-reality-marketing-and-advertising-2018 [Accessed 3 October 2019].

Phipps, Keith, 2019. Detective Pikachu is the perfect reminder to revisit Who Framed Roget Rabbit. The Verge. [online] Available at: https://www.theverge.com/2019/5/10/18564449/detective-pikachu-who-framed-roger-rabbit-streaming-recommendation-what-to-watch [Accessed 26 October 2019].

Rauschnabel Philipp A., Felix Reto, Hinsch Chris, 2019. Augmented reality marketing: How mobile AR-apps can improve brands through inspiration. Journal of Retailing and Consumer Services.

Rinne, Sirpa, 2017. Arlan AR-toteutus Suomessa puhuttaa kansainvälisesti. Arla. [online] Available at: https://www.arla.fi/yritys/medialle/2017/news/arlan-ar-toteutus-suomessa-puhuttaa-kansainvaelisesti-280343/ [Accessed 15 September 2019].

Rogers, Sol, 2019. What We Know About HoloLens 2. Forbes Media LLC. [online] Available at: https://www.forbes.com/sites/solrogers/2019/09/11/what-we-know-about-hololens-2/#5d51e7f74662 [Accessed 15 October 2019].

Salpini, Cara, 2018. Nike seels out of Facebook Messenger sneaker drop in less than an hour. Retail Dive. Industry Dive. [online] Available at: https://www.retaildive.com/news/nike-sells-out-of-facebook-sneaker-drop-in-less-than-an-hour/524065/ [Accessed 3 November 2019].

Statista, 2019. Augmented reality (AR) market size worldwide in 2017, 2018 and 2025 (in billion U.S. dollars). Statista. [online] Available at: https://www.statista.com/statistics/897587/world-augmented-reality-market-value/ [Accessed 27 October 2019].

The Finland Chamber of Commerce, 2019a. Markkinointiin sovellettavat säännöt. [online] Available at: https://kauppakamari.fi/lautakunnat/men/sovellettavat-saannot/ [Accessed 15 October 2019].

The Finland Chamber of Commerce, 2019b. The Council of Ethics in Advertising. [online] Available at: https://kauppakamari.fi/en/boards/council-of-ethics-in-advertising/ [Accessed 15 October 2019].

Tech@Facebook, 2019. Creativity for all: Facebook's Spark AR now lets anyone build and share effects on Instagram. [online] Available at: https://tech.fb.com/creativity-for-all-facebooks-spark-ar-now-lets-anyone-build-and-share-effects-on-instagram/?utm_source=web&utm_medium=spark-ar&utm_campaign=ar-ig-launch&utm_offering=spark-ar&utm_product=spark-ar [Accessed 26 October 2019].

Townsend, Chris, 2017. Augmented Reality And Loneliness: Magali Barbé's 'Strange Beasts'. HuffPost Tech. [online] Available at: https://www.huffingtonpost.co.uk/chris-townsend/strange-beasts_b_15686092.html?guccounter=1 [Accessed 5 October 2019].

Vibrant Media, 2017. New Virtual Reality Ads Give 360 Degree View From Within Editorial. [online] Available at: https://www.vibrantmedia.com/blog/2017/02/28/new-virtual-reality-ads-give-360-degree-view-within-editorial/ [Accessed 27 October 2019].

Wassom, Brian D., 2015. Augmented Reality Law, Privacy, and Ethics. Syngress.

Wikipedia, 2019a. Virtual Reality. [online] Available at: https://en.wikipedia.org/wiki/Virtual_reality [Accessed 20 September 2019].

Wikipedia, 2019b. Ethics. [online] Available at: https://en.wikipedia.org/wiki/Ethics [Accessed 20 September 2019].

Wikipedia, 2019c. Etiikka. [online] Available at: https://fi.wikipedia.org/wiki/Etiikka [Accessed 20 September 2019].

Interview

Wright, Tom, 2019. Head of Production and Technology. Miltton Oy. Interview: 8 October 2019.

Appendix 1. Interview questions: Tom Wright, Head of Production and Technology at Miltton Oy. Interview took place in Helsinki, Finland in September 2019, in a face-to-face meeting.

1. What is the current status of AR-based B2C marketing communications?

2. What does the future look like for AR-based B2C marketing communications?

Presented Survey Result: Most respondents thought ethical rules are necessary in AR-based B2C marketing communications.

3. Why are ethical rules necessary in AR-based B2C marketing communications?

4. What could happen if there were no ethical rules in AR-based B2C marketing communications?

Presented Survey Result: Most respondents thought pre-existing ethical rules of traditional marketing communications apply.

5. Why are the pre-existing ethical rules relevant?

Presented Survey Result: Majority of the respondents don't know if additional ethical rules are needed for AR.

6. Why do we need additional ethical rules for AR-based B2C marketing communications?

7. What could the additional ethical rules be?

8. In what kind of situations would they be needed?

9. What is the current discussion and future views about the ethical rules right now?

10. How urgent is the need for additional ethical rules and why?

11. Who should be responsible to create the additional ethical rules and who should be monitoring them?

Appendix 2. Online Survey. Survey took place online in September 2019.

Section 1: [headline] Thesis Research: Ethics in Augmented Reality based B2C Marketing Communications.

Section 2: Your Background

1. What is your current profession?
2. What is the key field of your profession?
3. Where do you practice your profession?
4. Level of expertise in the subject matter: Augmented Reality based B2C Marketing Communications?
5. If you had no professional experience in the subject matter, please let me know if you identify yourself with one of the following groups: Student, Consumer of Marketing Communication, Other.

Section 3: Term Awareness

1. Are you familiar with the term B2C Marketing Communication?
2. Have you ever heard the word 'Augmented Reality'?
3. Are you familiar with the concept of Augmented Reality?
4. Have you ever viewed/experienced Augmented Reality based Marketing Communication content?

Section 4: Questions related to ethics in the subject matter.

1. Are you familiar with the ethical rules of traditional Marketing Communication?
2. Are ethical rules necessary in Augmented Reality based B2C Marketing Communications?
3. Are pre-existing ethical rules of traditional Marketing Communications relevant in AR-based B2C Marketing Communications?
4. Is there a need to create additional ethical rules for AR-based B2C Marketing Commutations?
5. Have you thought about ethical rules in AR-based B2C Marketing Communications before or is the matter new to you?