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ABSTRACT

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Abstract

With respect to their usage, online stores' conversion rates on smartphones are still lower than on computers or desktops. Even though smartphones have their device limitations, there is still a monetary gap which could be diminished by knowing how to properly design an online shopping experience for a smartphone.

This study adopts the idea behind Stimulus-Organism-Response model. Based on this model, an online store contains stimuli, which affect the customer's organism. The organism can be divided to cognition and affect. The customer's conscious behaviour is due to their cognition and unconscious behaviour due to affect, in other words emotions.

Different emotions cause different behavioural responses and by knowing which emotions are the most significant in customers' online shopping experience, customers' actions can be predicted. This study's purpose is to find out which stimuli, or factors, are most significant in m-shopping context and what emotions these factors evoke.

To find out what these significant factors and emotions are, an experiment including three shopping tests was conducted. The shopping tests were carried out in ethical fashion apparel online stores. The experiment was done by ten participants. From these results was formed a list of 43 factors, which hold significance in customer's online shopping experience. These 43 factors were divided in six main categories, which are named as content, navigation, visual, product, smartphone, and environment and internal state categories. The significant emotions inside each category were determined with the help of an emotion assessment tool called Geneva Emotion Wheel.

Based on this study's results, the navigation category is the most significant category for shopping experience, and the product category for shopping outcome. The shopping experience is not only affected by the online store's design, but also by the online store's products, environment, customer's internal state and customer's smartphone, though smartphone's significance is small. The navigation and content factors evoke similar emotions and are relevant for completing a shopping task. The visual and product categories for their part evoke similar emotions and are important for attracting the customer.

The taxonomy of significant factors and emotions provided in this study can be used by both researchers and managers alike to further study and plan an online shopping experience.

Key words	Shopping experience, emotion, mobile commerce, ethical fashion apparel online store, Stimulus-Organism-Response model, Geneva Emotion Wheel

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Tiivistelmä

Vaikka älypuhelinten merkitys nyky-yhteiskunnassa on suuri, jää verkkokauppojen konversiot älypuhelimilla selatessa suhteessa tietokoneita pienemmiksi. Vaikka älypuhelimilla on omat rajoittavat tekijänsä, hyvän shoppailukokemuksen luomalla verkkokaupan konversiota älypuhelimella voitaisiin parantaa.

Tämä tutkimus käyttää pohjanaan S-O-R mallia. Mallin mukaan verkkokauppa sisältää ärsykkeitä, mitkä vaikuttavat elimistöömme joko kognitiivisella- tai tunnetasolla. Asiakkaan tietoinen toiminta johtuu kognitiosta ja tiedostamaton toiminta puolestaan tunteista.

Eri tunteet aiheuttavat erilaista käyttäytymistä, ja tietämällä mitkä tunteista ovat kaikkein merkittävimpiä asiakkaan shoppailukokemuksessa, yrityksen on mahdollista ennustaa asiakkaan käyttäytymistä. Tämän tutkimuksen tarkoitus on selvittää, mitkä ärsykkeet, toisin sanoen tekijät, ovat kaikkein merkittävimpiä mobiilikaupankäynnin kontekstissa ja mitä tunteita nämä tekijät herättävät.

Tutkimusta varten luotiin koeasetelma, jossa toteutettiin shoppailutesti kolmessa eri eettisessä vaateverkkokaupassa. Koeasetelmaan osallistui kymmenen henkilöä. Tulosten perusteella muodostettiin 43 tekijän lista, jotka jaettiin kuuteen kategoriaan: sisältö-, navigointi-, visuaalisuus-, tuote-, älypuhelin- ja ympäristö ja sisäiset tekijät -kategorioihin. Merkittävät tunteet kategorioiden sisällä määritettiin tunnearviointityökalun, Geneva Emotion Wheel, avulla.

Tulosten perusteella navigointitekijät ovat kaikkein merkittävimpiä shoppailukokemuksen kannalta ja tuotetekijät puolestaan shoppailun lopputuloksen kannalta. Shoppailukokemukseen ei vaikuta ainoastaan verkkokaupan design, vaan shoppailukokemuksen luonnissa on otettava huomioon ympäristö, jossa älypuhelinta selataan, kuluttajan sisäiset tekijät sekä kuluttajan älypuhelin, vaikkakin älypuhelimen merkitys tässä tutkimuksessa olikin pieni. Navigointi- ja sisältötekijät herättävät samanlaisia tunteita ja ovat tärkeitä shoppailun läpiviemisen kannalta. Visuaaliset- ja tuotetekijät puolestaan herättävät keskenään samanlaisia tunteita ja ovat tärkeitä kuluttajan kiinnostuksen herättämisessä.

Tässä tutkimuksessa koottua listausta shoppailukokemukseen vaikuttavista tekijöistä ja tunteista voidaan käyttää tulevaisuudessa tutkijoiden ja yritysten toimesta tutkittaessa ja suunniteltaessa shoppailukokemusta.

Avainsanat	Shoppailukokemus, tunne, mobiilikaupankäynti, eettinen vaateverkkokauppa, Stimulus-Organism-Response malli, Geneva Emotion Wheel

UNIVERSITY OF TURKU
Turku School of Economics

MOBILE SHOPPING EXPERIENCE

The factors and emotions affecting the shopping experience on a smartphone

Master's Thesis
in Marketing

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1 INTRODUCTION

Smartphones have become an inseparable part of our lives. According to the E-marketer's (2018) survey, we spend approximately 3 hours and 35 minutes a day using our smartphones. In 2017 the mobile usage exceeded 50% from all internet usage in every country in the world for the first time, leaving computer usage behind (Google 2017). Even though online is accessed more often using a smartphone than a computer, are conversion rates still lower on smartphone.

Smartphones are used much for information search, but the product is usually paid on a computer. This could be due to the differences in device characteristics and usage intentions. Achieving as good usability on a smartphone as on a computer is harder, because of smartphone's physical limitations such as a smaller screen size and the absence of a physical keyboard. These limitations may subject users to more mistakes. Smartphones are used more for entertainment purposes, while computers are used when we want to get something done. The entertainment factor makes us less tolerable for mistakes when using a smartphone than a computer.

Even though smartphones' device limitations and users' stance make it almost impossible to ever reach the same shopping experience on a smartphone as on computers, there is still a monetary gap between smartphone usage and conversion rates that can be reduced. People tend to hesitate during electronic commerce and on smartphones the hesitation is even stronger. This hesitation is due to conflicting emotions we have from the shopping experience, which make us doubt purchasing from the online store and can result in the abandonment of the shopping cart (Chang, Huang & Korfiatis 2018, 166–168). Shopping doesn't always happen rationally, and emotions have a big impact in our online shopping behavior.

Current research has only vaguely studied what we feel during electronic commerce. Emotions are usually divided into positive and negative dimensions. Important nuances are however lost if all emotions fall only under two valences[1] (Laros & Steenkamp 2005, 1444.) For example, anger and sadness are both negative emotions, but the behaviors they cause are different. A sad person can become inactive, whereas an angry person can become energized and fight against the cause of anger (Shaver et al. 1987, 1077–1078).

There still hasn't been made an exhaustive research what these negative and positive emotions in electronic commerce exactly are what causes them (Lievonen 2017, 397). More precise knowledge about emotions in electronic commerce is needed, because different emotions can lead to different behavioral consequences. Knowing which online store factors evoke which emotions can help a company to better plan their online store's

[1] A term used in psychology for characterizing and categorizing different emotions; pleasant-unpleasant evaluation of an experienced state (American Psychological Association 2019)

shopping experience and direct customers' behavior to the desired direction. Factors evoking positive emotions should be added and factors evoking negative emotions reduced. This research offers a taxonomy of factors and emotions which are related to the shopping experience on a smartphone. The taxonomy can then be used by other researchers and managers alike to further investigate online shopping experience.

The purpose of this research is to explore *what factors and emotions are significant in consumer's online shopping experience on a smartphone*. This research will address the following research questions:

1. How mobile shopping experience is constructed?
2. What factors affect online shopping experience on a smartphone?
3. What emotions evoke from factors affecting online shopping experience on a smartphone?

The second chapter of this research will focus on the first research question and explain what mobile shopping is like and how it differs from the traditional electronic commerce. The chapter will also look at the reasons why smartphones are used for shopping and which design dimensions are significant for creating a good shopping experience. In this research, mobile shopping is considered a process which starts when a consumer enters the online shopping website's homepage with their smartphone and ends when the consumer has paid for their products at the end of a checkout process. Mobile applications are excluded from this research and mobile devices are outlined to smartphones.

The third chapter looks at the emotion research: how emotions are categorized, how emotions are seen to emerge and what kind of behavioural responses emotions might cause. The end of the chapter looks at ways how emotions can affect shopping behaviour.

After the literature review comes the research methodology chapter, in which is explained how the shopping tests, interviews and emotion assessments have been carried out. Based on the research results the results chapter presents in categorizations factors and emotions which are significant for the shopping experience. Also, the factors' significance for the shopping outcome is analysed. Also, the results are analysed which factors are critical for the shopping experience. This paper ends in the conclusion chapter, which collects the main findings and gives implications for managers and future research.

2 MOBILE SHOPPING

2.1 M-commerce vs. e-commerce

"You can tell what a culture values by what it has in its bags and pockets. Keys, combs and money tell us that property, personal appearance or trade matter (Agar 2013, 5)." Nowadays, without a doubt, many of us carry a smartphone on us. It messages our need to be constantly connected. It's a personal device, which we use to strengthen our own identity. Smartphones have permanently changed our ways of doing things, like commerce. (Glotz et al. 2005, 11.)

Mobile commerce[2] is "any monetary transactions related to purchases of goods or services through internet enabled mobile phones or over the wireless telecommunication network" (Wong et al. 2012, 25). M-commerce is a natural extension for *electronic commerce*[3]. In m-commerce business is not tied to a fixed internet connection and you can do business anywhere and anytime with anyone (Turban et al. 2006, 376–377). M-commerce can also be thought of as a part of e-commerce. Even if m-commerce allows the same things as e-commerce, its use is only limited to mobile networks. (Jelassi et al. 2014, 4.) Smartphone's device limitations, context of use and customer's needs make m-commerce different as compared to traditional e-commerce (Rowles 2014, 111). In literature m-commerce has also covered mobile banking or mobile payment services, which is why this research from now on uses the term *mobile shopping*. M-shopping can be seen to limit only to browsing online stores on a smartphone.

Nielsen (2008) uses *lean-back* and *lean-forward* terms to differentiate consumption styles of media devices. Use of television for instance is a lean-back experience. It means that the usage of a tv is passive engagement and a user wants to enjoy it: he does not want to make decisions. In comparison, using a computer and the web is a lean-forward experience: The user is engaged actively and wants to fulfil a goal.

It is hard to determine in which category smartphone usage falls. Smartphone usage is not tied to just one position and research supports both lean-back and lean-forward use of smartphones (Cui et al. 2007, 202-203). However, due to low media richness, smartphone users usually want to undertake only simple tasks. In traditional e-shopping on a computer media richness level is higher, which is why consumers might rather use a computer than a smartphone for more complex tasks. In m-shopping content needs to be simple and the consumer's cognitive load low or otherwise customers may undergo negative experiences. (Maity & Dass 2014, 43-44.)

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[2] M-commerce, m-shopping
[3] E-commerce, e-shopping

M-shopping's lean-back engagement is also supported by other researchers. It has been studied that perceived enjoyment of the m-shopping experience is nearly as important determinant of customer's purchase decision as perceived usefulness (e.g. Cyr et al. 2006, 957; Wu et al. 2013, 17–18; Zhou 2013, 192). We often use smartphones to entertain ourselves during short breaks. Google (2015) calls these short breaks *micro-moments*. Their research shows that customers do a lot of impulsive research during the day to fulfil their need for information or entertainment. During these micro-moments a company has a possibility to convert a random browser to a paying customer.

Micro-moments crystallize the essence of m-shopping. M-shopping needs to be both fast and enjoyable. If one of these requirements is not fulfilled, customers can become frustrated and abandon the m-shopping process.

2.2 M-shopping adoption

Because of the entertainment factor of smartphone usage, a customer can become frustrated more easily and the threshold to abandon a shopping cart is even lower on a smartphone than on a computer. Davis' (1989) *technology acceptance model* (TAM) is a widely used model that has been scientifically proven useful when researching adoption of technology services (King & He 2006, 751). TAM suggests that adoption of technology depends on the user's perceived ease of use and perceived usefulness towards the used technology. Perceived usefulness usually follows perceived ease of use. (Davis 1989, 320.) TAM has been successful because of the model's understandability and simplicity. However, the model is not perfect, and TAM has been modified many times to increase its predictive power. (King & He 2006, 740-741.) TAM and its modifications are presented in the figure 1 below.

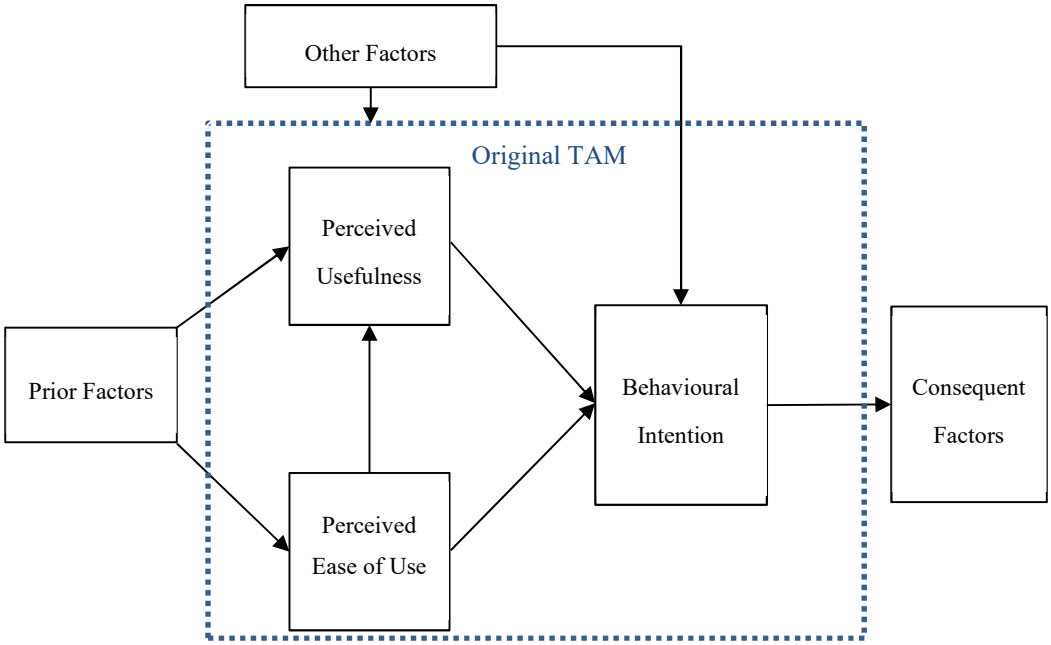

Figure 1 TAM and its modifications (after Davis 1989, 333–334; King & He 2006, 741)

Perceived usefulness and perceived ease of use are the strongest predictors of behavioural intention to use a certain technology. From these two factors, perceived usefulness affects behavioural intention the most and ease of use can be before anything seen to strengthen the perceptions of technology's usefulness. (Davis 1989, 333-334.) In this study the term "technology" means mobile shopping. "Other factors" in the model signify other researched characteristics that are linked to behavioural intention. For instance, Zhou (2013, 192) has added trust to the model and found out that trust is a significant factor affecting perceived usefulness and behavioural intention, which in this study was purchase intention. "A consequent factor" could be an actual purchase. "Other factors" also include contextual factors, that can be the user's motivation to use a service, demographic factors like age or gender and user's skills with the technology (King & He 2006, 741).

"Prior factors" in the model signify characteristics of the used technology that affect perceptions of technology's usefulness and ease of use. In m-shopping, these could be online store's visuals or trust factors. Choi (2018, 117-118) researches mobile commerce's unique benefits and adds ubiquitous access, location-based services and user control as prior factors in TAM to get further knowledge about adoption of smartphone-based m-shopping use. User control means that consumers can determine the details of a transaction, for instance the level of interactivity with firms, transaction speed and time. The research confirms that TAM's core factors, perceived usefulness and perceived ease of use both positively affect the m-shopping adoption. The additions to the model, ubiquitous access, location-based services and user control all increase perceived usefulness,

ubiquity having the most influence. Location-based services do not have an influence in ease of use and user control increases perceived usefulness and ease of use over time, when the user becomes more proficient in using m-shopping.

To get more people to adopt m-shopping, marketers should promote its good attributes, like quickness and efficiency of doing things. Companies can gain advantage if their m-shopping websites are easy to use and effortless. Social aspects can also bring an advantage, meaning that a customer is more likely to buy, if they can discuss a potential purchase with a previous customer, for instance in social media. Companies should focus on promoting facilitating conditions of purchase intention, like trust factors. Alongside trust, effort expectancy and performance should be promoted. (Blaise, Halloran & Muchnick 2018, 106-108.) After a person has first tried out m-shopping and had a positive experience, the likelihood of re-purchase and increase in order size and order rate grows bigger with each subsequent purchase (Wang, Malthouse & Krishnamurthi 2015, 232). But for this to happen the user experience of m-shopping websites needs to be positive.

2.3 Mobile user experience

User experience could be said to be a subjective, momentary, evaluative (positive-negative) feeling that emerges in an interaction with a product or service (Hassenzahl 2008, 12). User experience is separated from the traditional consumer experience by the fact that it happens via user interface (Law et al. 2009, 727). There is a lot of disagreement among researchers, what user experience includes. International Organization for Standardization (ISO 9241-210) defines user experience as “a person's perceptions and responses that result from the use or anticipated use of a product, system or service”. According to a query conducted by Law et al. (2009, 727), this definition is in line with most of the views.

Hassenzahl and Tractinsky (2006, 95) have collected the differing views of user experience together and based on the literature review divided the formation of user experience in three parts: user’s internal state, environment and designed system’s characteristics. These are presented in the figure 2 below.

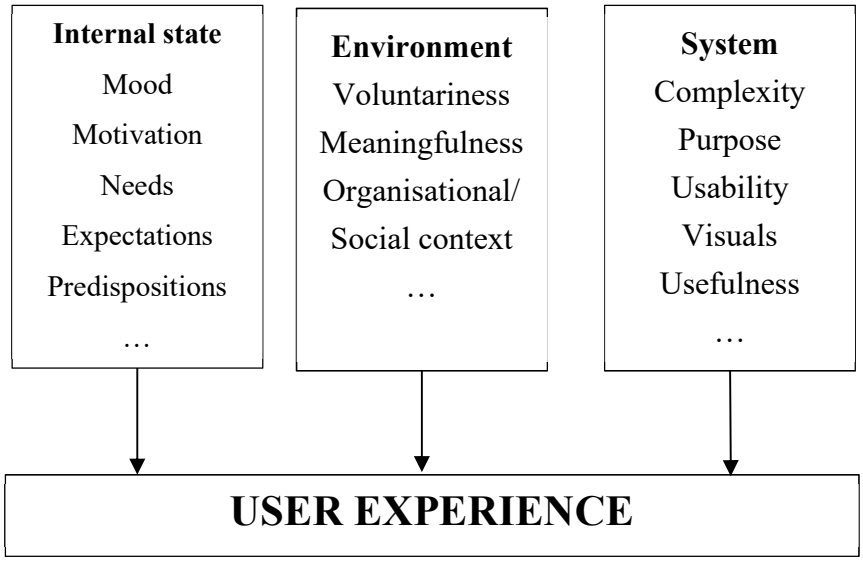

Figure 2 Formation of user experience (after Hassenzahl & Tractinsky 2006, 95)

User experience is a subjective experience and is always different depending on the person, environment and system being used. In this research the focus is on the system, in other words online store on a smartphone and its factors' significance on user experience. Internal state is being controlled in the test as well as possible and participants with similar expectations and motivations are chosen. In this research environment is a test situation, which affects the validity of this research, because in a real-life situation the experience can be different. User experience is not only tied to present but is formed over time. User's previous experiences and the expectations based on these affect the current experience. People tend to try to prove their own thoughts right and avoid challenging them. This way expectations affect user's perceptions and interaction with the system. The user forms an opinion by comparing his/her expectations with the actual experience: the experience is satisfying, if expectations are exceeded, and unsatisfying, if expectations are not fulfilled. (Hiltunen, Laukka & Luomala 2002, 11.)

The better the user experience of a m-shopping site is, the bigger is the chance that consumers can enter in a *flow state* (Chen, Hsu & Lu 2018, 285). Flow state can be said to be a positive user experience, where users enjoyability, challenges and skills are in optimal balance (Hassenzahl 2008, 12). Achieving a flow state during m-shopping positively affects purchase intention (Chen, Hsu & Lu 2018, 285).

Flow term was first introduced by Mihály Csíkszentmihályi (1975, 36). According to him, flow is a holistic experience of total involvement. The activity absorbs the person and irrelevant thoughts and perceptions are filtered out. Enjoyment is a keyword in flow and flow state generates a high level of pleasure. In flow state, a user has a sense of

control, because the user's skill level and challenges are balanced. In flow state users do not have to fear losing control and can perform the task at hand with certainty. The activity is rewarding itself. Flow state could be described as the best, eligible user experience.

In m-shopping context flow is closely related to TAM's perceived usefulness and ease of use. If m-shopping's benefits are greater than the efforts of using it, the consumer is likely to do m-shopping. M-shopping sites that are easier to use are more likely to elicit pleasant emotions, which can help achieve flow state. If a m-shopping site is perceived useful and easy to use, for instance the products are easily located or the purchase process is simple, consumers are more likely enter the flow state and probability of purchase increases. In m-shopping, a well-designed online store is important for consumers. (Chen, Hsu & Lu 2018, 285.) The rest of this research uses term shopping experience instead of user experience, because shopping experience better describes the context of this research.

2.4 M-shopping website design

Online store environment lacks some properties of the traditional retail atmospherics. You cannot taste, smell or touch like you are able to do in a traditional physical store. In an online store, consumers can be appealed only by visuals and sounds, because the entire store is reduced to a digital screen. However, as mentioned earlier, online stores have benefits like ubiquitous access, which combined with the reductions make the online shopping experience quite different to design than a traditional shopping experience. (Eroglu, Machleit & Davis 2001, 179.)

From a designer's perspective designing an online store is not so simple. The online store can be accessed from many different sized devices and the fact that a website works well on a computer does not mean it works on a smartphone. People are used to facing badly optimized websites on smartphones, which means that they get more easily frustrated, when a website does not work as well on a smartphone than on a computer. Device limitations and the context of use make m-shopping different from traditional e-shopping, which means that the website's design cannot be just copied from a computer to a smartphone. (Rowles 2014, 109, 111.)

It's hard to know which device user is likely to use to access a webpage. A website's design can be created in many different ways, from which responsive design and mobile-first approaches are a few examples. In a responsive design approach only one webpage is created. The webpage however does dynamic changes depending on the device's screen size and orientation. Responsive design can make website development faster, because different pages don't have to be created for each device. The challenge of the responsive design is, how to keep the user experience on the same level on each device: because

website elements reshuffle, elements can be located in different locations on different devices. (Schade 2014.)

Mobile-first approach means that the website design is first created on the smallest device and then imported to bigger screen sizes. The idea behind mobile-first is, that simple is better and that a simple and condensed design will also work on the bigger devices. This is, however, not true and can lead to a degraded user experience on a computer, even if the same design works on mobile. In mobile-first strategy, the advantage is that the mobile site feels complete instead of being a cut down experience of the desktop version. (Budiu & Pernice 2016.)

Despite the design approach, the same challenges for m-shopping adoption and mobile user experience exist. There are different opinions about what key characteristics online shopping website design contains. Hasan (2016, 225) groups website design characteristics to visual, navigation and information, because these are most apparent and used by consumers. He found out in his research, that the mentioned design characteristics can cause irritation, if not executed right. Karimov, Brengman and Van Hove (2011, 275) on the other hand divide website design dimensions in visual, social-cue and content design. Visual design can be related to graphics and navigational structure, social-cue design among others to the number of human features on the website, objective social media reviews or customer service chat. Content design includes characteristics like product information, third party seals and brand equity.

Eroglu, Machleit and Davis (2001, 179-181) take a bit different approach to the taxonomy of design characteristics. They suggest that online environment characteristics can be divided into high-task relevant environments and low-task relevant environments. The first is related to verbal and pictorial characteristics that facilitate achieving the shopping goal while the latter includes characteristics that are somewhat irrelevant for completing the shopping task. However, low-task relevant cues, like background colour or third-party seals create the atmosphere that can make the shopping experience more pleasurable or create more confidence towards shopping in an unfamiliar online store. Consumer's level of involvement determines what impact certain types of online cues have on the consumer. Highly involved consumers will likely pursue central cognitive processes and low-task relevant cues can only be on his/her way. Low relevance content might only cause negative emotions in a highly involved consumer.

Cyr et al. (2018, 810) take a similar approach to the website design taxonomy as Eroglu, Machleit and Davis (2001) and implement design characteristics of an online store to the Elaboration Likelihood Model (ELM). Central route is related to argument quality. Image appeal, navigation design, social presence and connectedness are related to peripheral routes. Peripheral route persuasion works when a consumer has low motivation and central route when a customer is motivated and wants to complete some goal,

for instance to purchase a product. When highly motivated, customers might not care about mistakes in visuals or navigation, but are more concentrated on content, like product descriptions. Cyr et al.'s (2018) taxonomy and other presented categorizations of online store characteristics are combined in the table 1 below.

Table 1 Design dimensions of an online store (after Hasan 2016, 225; Karimov, Brengman & Van Hove 2011, 275; Eroglu, Machleit & Davis 2001, 179-181; Cyr et al. 2018, 810; Walter 2011, 5-6)

Design dimension	Contents
Visual design	The visual design refers to the website's aesthetics and their consistency. Keyword is attractiveness. Website's appearance can be manipulated with images, colours, fonts, shapes, animations and layout. - The relevance for shopping task: Low - The ELM route: Peripheral - The user's need level: Pleasure
Navigation design	The navigation design refers to the structure and organization of the site's pages and content. The goal is that a user requires only a minimum effort to navigate and use the website. Quick and easy are the keywords. Unnecessary pages, links or clicks should be removed. The navigation design can be reinforced for instance with visible progress indicators, faster loading times and a structure that follows e-commerce traditions. - The relevance for shopping task: High - The ELM route: Peripheral - The user's need level: Usability
Content design	Good content means relevant, current and personalized information to website's customers. Usefulness and trust are the keywords here. The content design also includes e-assurances that include third-party seals or information about company policies. The content design can be improved for instance with good product or delivery information. - The relevance for shopping task: High - The ELM route: Central - The user's need level: Reliability

The contents of the above dimensions are a combination of Karimov, Brengman and Van Hove's (2011, 275) and Hasan's (2016, 225) researches. These dimensions were researched in a traditional e-shopping context, but there is no reason why the dimensions

would not fit in the m-shopping context as well: as mentioned earlier, m-shopping could be seen as a part of e-shopping, the used device is just different. Karimov, Brengman and Van Hove (2011, 275) also included brand image to content design, but in this research brand image is seen as an environment factor and not related to the system and its design. In some groupings, trust indicators are perceived as their own design dimension. However, in table 1 trust indicators are combined with the content design.

Table 1 combines task relevance and ELM route with the design dimensions. These are only generalizations, because one could for instance argue that a product picture is highly relevant for purchase, which is true. However, most of the characteristics that can be put under visual design have a low relevance for shopping tasks. Navigation design is marked as highly relevant for shopping tasks, because if the usability of an online store is bad, it hinders the purchase task. In persuasion navigation design does not have much significance, which is why its ELM route is peripheral. The relevance for purchase in table 1 means that a customer already intends to buy a product. The relevance for impulse purchase might be different.

Table 1 also includes user's need levels. This is related to emotional design. In emotional design the product or system is designed so that it evokes desired emotions and creates a positive emotional bond with the user. User's need levels are drawn from Walter (2011, 5-6), who approaches emotional design via Maslow's hierarchy of needs. On the bottom level is the functionality of the system similar to physiological needs in Maslow's hierarchy. Functionality level includes all the characteristics that are required for the system to work at all. Next comes the reliability of the system and after that usability. After these three levels of user's needs are fulfilled, comes the final level, which is pleasure. Fulfilling this level results in a positive user experience.

Walter (2011, 6) notes that the pleasure level is often neglected in emotional design. When compared to the original version of TAM, this observation is true. Perceived usability is related to navigation design. High quality content and trust are related to content design. However, perceived enjoyment, which is related to the pleasure level, was added later to the TAM. It could be seen that content design and navigation design are necessary for the user to accept the technology, which in this research is a m-shopping website. But to stand out from all the other m-shopping websites, the website needs to be pleasurable to use, in other words its user experience needs to be positive. This can be achieved with visual design. As seen in table 1, visual design has mostly a low relevance for the purchase and is related to the peripheral route, indicating that a good visual design is "something extra". However, it is the visual design dimension that allows differentiation.

You could demonstrate the significance of the emotional design with an example of two coffee cups. These coffee cups are similar in size and price, but the other is in your favourite colour. You will most likely choose the coffee cup that is your favourite colour,

because it activates your emotions and makes it possible for you to emotionally connect with that coffee cup. The positive emotional response that you felt because the coffee cup was your favourite colour made you choose that coffee cup (Desmet 2003, 4). How emotions and their responses emerge are further investigated in the next chapter.

3 EMOTIONS

3.1 Stimulus-Organism-Response model

Mehrabian and Russell's (1974, 31) *S-O-R (Stimulus-Organism-Response) model* has been much used in studying consumer behaviour in store environments, also in a mobile shopping context. The model suggests that a shopping environment contains stimuli that affects consumer's internal evaluations and results in avoidance or approach response. In the framework of this study this could mean that in the m-shopping site there is certain stimuli, for instance website aesthetic (S), that evokes pleasure in the consumer (O), which increases purchase intention (R).

S-O-R model as well as other simple consumer behaviour models have received criticism. Jacoby (2002, 52, 53) criticizes that modelling consumer behaviour only as a linear depiction where one factor follows the other can lead to overlooking important parts and relations of a phenomenon. Usually phenomena do not happen in a linear fashion but simultaneously and in different sequences. Furthermore, some phenomena, for instance beliefs, can go to two categories, stimuli and responses. There is no generally accepted framework against which other consumer behaviour models could be evaluated. This hurts their scientific reliability.

Despite the critic, S-O-R model's strength is that it pictures plainly that between stimulation and human behaviour there is always an organismic component intervening. Because of its easily comprehensible structure, the framework is meaningful to use as a basis of a research model. It makes the study more easily approachable to a person that is not acquainted with the subject.

S-O-R framework starts with stimuli that ends in an emotional response. Holbrook and Hirschman (1982, 133) have studied consumer behaviour in a similar approach to S-O-R framework and divide stimuli in environmental- and consumer inputs. Consumer inputs include individual differences and personal motivation while environmental inputs include characteristics independent of the consumer. This is similar to Hassenzahl and Tractinsky's (2006, 95) findings regarding the formation of user experience presented in the chapter 2.3.

Holbrook and Hirschman (1982, 136) divide organism into cognition and affect. These are further divided into information processing and experiential perspectives. The former is related to rational choice and the latter to hedonic motivation and irrational buying needs. Mehrabian and Russell (1974, 31) on the other hand use a threefold dimension (pleasure, arousal, power) to explain in which extent the environmental stimuli evokes feelings of pleasure or displeasure, how much it activates an individual and does the individual feel they are in control or not.

Mehrabian and Russell (1974, 31) have divided response to avoidance and approach behavior. Holbrook and Hirschman (1982, 137) state that the behavior caused by the organism can be conscious or unconscious and be related to fulfilling hedonic or utilitarian goals. Behavior can for instance be an increased purchase intention or be related to the consumption.

This chapter and research focus on the affective side of the organism and more specifically in *emotion.* The word has caused confusion among researchers. There is no generally accepted definition for emotion. To avoid confusion in a research, it's suggested that an author first provides a statement what he assumes the term means. (Izard 2010, 368-369.)

Robinson (2008, 155) describes *basic emotions*[4] as emotions that are experienced similarly by different individuals. A basic emotion has a quick onset, brief duration, distinctive physiology, automatic appraisal and unbidden occurrence among other features (Ekman 1992, 175). Basic emotions are for instance anger, hope, joy or fear. In addition to basic emotions there are emotions, that are felt to different extent by different people. Examples of these emotions are pride, embarrassment, sympathy or generosity. (Robinson 2008, 155.) Even though some may think of these emotions also as personality traits, Robinson (2008, 155) thinks they are too important to be left out of the basic emotions set.

A basic emotion is triggered by a real or imagined event and leads to a certain kind of behavior to affirm or cope with the emotion (Robinson 2008, 156; Bagozzi, Gopinath & Nyer 1999, 184). Emotion should not be mixed with *mood*. While emotions activate us and are more differentiated, mood is a low arousal, nonspecific, long lasting feeling state, that does not directly cause a behavior. External stimuli, like music or weather can affect our mood and our current mood can unconsciously guide our actions. (Cohen et al. 2008, 301.)

Even though mood does not directly cause a behavior, mood can have an influence on our actions by affecting the emergence of emotions. It is hard to find an exact reason for our mood and sometimes we are not even aware that we're in a certain mood. Mood can be a result of many feelings. A person can be irritated, because "it's raining outside" or "there is no coffee left". (Bagozzi et al. 185, 199.)

Both emotion and mood can be thought as instances of *affect*. Affect can be considered "a general category for mental feeling processes, rather than a particular psychological process, per se". (Bagozzi et al. 1999, 184.) Affect can be described as an internal feeling state that is "distinct from either liking or purely descriptive cognition". Liking for some object or people can be seen more as an evaluative judgement than a genuine feeling.

[4] Also known as *discrete emotions*

(Cohen et al. 2008, 299.) Cognitive evaluation of an event is usually linked to *attitude* rather than affect (Cacioppo & Berntson 1994, 401).

The terms handled in this chapter and S-O-R-model are collected in the figure 3 below.

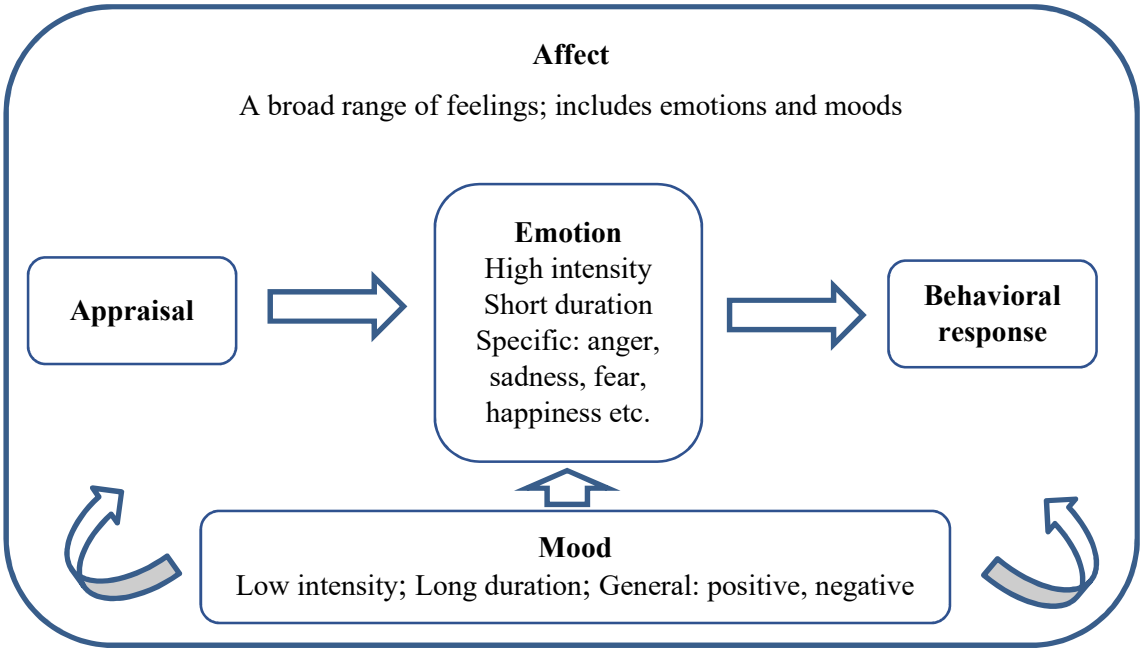

Figure 3 Emotion, mood and affect

In this study, S-O-R model is used as a basis for analyzing and presenting the results. The next chapters will further focus on emotions, how they can be categorized, how emotions evoke and what behaviors they cause.

3.2 Categorizations of emotions

As mentioned in the previous chapter, the lack of a clear definition for emotion makes it hard to form a definitive list of basic emotions (Robinson 2008, 158). Some have even argued that there is no need to use such a term as basic emotion: holding on to unconfirmed assumptions about what the definitive basic emotion set is can only hinder research (Ortony and Turner 1990, 329).

In consumer behavior research Richins' (1997) consumption emotion set (CES) is a widely used categorization of basic emotions. Emotions experienced during consumption differ from emotions experienced in other contexts, for instance when exposed to advertising (Richins 1997, 129). CES is a tool that helps researchers to study consumption related emotions and make distinctions in emotions felt within different product classes. CES categorizes emotions on basic and subordinate levels. A basic level emotion could

be for instance anger, whose subordinate emotions are frustration and irritation. (Richins 1997, 144.)

Emotions experienced vary by consumption situation, which is defined by the product being consumed (Richins 1997, 140). Products can be categorized by the emotions their consumption evokes. Sentimental products like jewellery can evoke positive feelings of love and negative feelings of loneliness, but less likely feelings of anger or fear. Excitement is strongly associated with automobiles and recreational products and consumption situations with expensive automobiles also strongly evoke guilt. (Richins 1997, 142.) Mundane products are unlikely to evoke consumption emotions. Clothing, which is the product category used in this research, is a conditional product and evokes emotions based on the situation it's being consumed and on the nature of a person consuming it. We can for instance wear a garment to wear something, which is unlikely to evoke consumption emotions. Or we could wear the 'perfect' garment at a job interview, which boosts our self-confidence and elicits highly positive emotions. The elicited positive emotions are consumption emotions. (Richins 2008, 401, 406.)

Laros and Steenkamp (2005) use CES as a basis to further develop the categorization of emotions and suggest a hierarchical emotion approach, which divides emotions to three layers. The categorization is presented in the Figure 4 below.

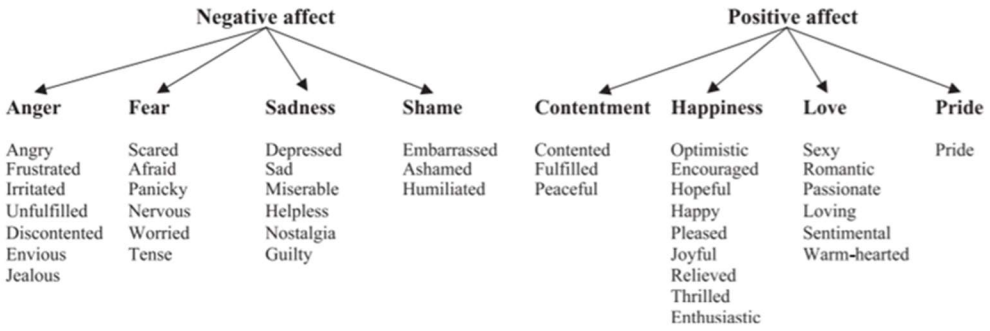

Figure 4 Hierarchy of consumer emotions (Laros and Steenkamp 2005, 1441)

On a superordinate level, emotions are divided into negative and positive emotions. The intermediate level Laros and Steenkamp have formed by doing a literature review about basic emotions. Subordinate level is drawn from Richins' consumption emotion set with a few modifications. (Laros and Steenkamp 2005, 1440.) Hierarchical approach of emotions allows a better understanding of consumers' emotions in different situations and shows differences between *valences*. Subordinate emotions have similarities with the basic emotion under which they go to but can vary in intensity, level of arousal, facial expressions etc. Dependent on the research question, only part of the categorization may be used. Categorizations of emotions help to identify research gaps in the emotions

research and the research to cumulatively build on each other. (Laros & Steenkamp 2005, 1444.)

Emotions can also be categorized by how we appraise situations. All emotions are relevant to oneself, but *self-conscious* emotions are even more immediately self-relevant. These emotions are for instance shame, embarrassment, guilt and pride. The stress is on the word 'own'. We feel pride for our own positive actions and shame or guilt for our own negative actions. If we feel these emotions for someone else's actions, this person is usually part of our self-definition. (Tangney & Tracy 2012, 446.)

The self-conscious emotions can be included in *moral emotions*. Haidt (2003, 853) describes moral emotions as "those emotions that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent". In addition to self-conscious emotions, moral emotions can vary depending if they are other-condemning, other-praising or other-suffering. Emotion resulting from condemning others could be anger, other-praising emotion could be gratitude and other-suffering emotion could be compassion. (Haidt 2003, 855.)

In addition to self-conscious and moral emotions, emotions can be categorized in knowledge- and decision-related emotions. Knowledge emotions are related to people's goals associated to learning and include emotions like confusion, interest, surprise and awe (Silvia 2010, 75). Decision-related emotions include disappointment and regret. Disappointment evokes when the outcome of an event is worse than expected. You think you were morally right and someone else is to blame. Regret evokes when you think you could have done something differently to prevent an event. When experiencing regret, you have a stronger desire to change your choice. When disappointed, you are more likely to complain than when regretful. (Van Dijk & Zeelenberg 2002, 328; Chua, Gonzalez, Taylor, Welsh & Liberzon 2009, 2031, 2039.)

Emotions rarely occur alone, which makes researching them harder. Izard (1972, 103) states that a pure, discrete emotion is impossible to obtain in any research setting. Pure emotion is short lived and is quickly followed and mixed by other emotions. Mixed-emotion set can consist of both positive and negative emotions. Research shows that when a positive emotion is experienced, the level of other positive emotions is extremely high and the level of other negative emotions is extremely low. When experiencing a negative emotion, other negative and positive emotions are experienced at a moderate level. (Ruth et al. 2002, 54.)

Mixed emotions make appraisal patterns more unclear and less corresponding with any one emotion. Negative emotions are usually more differentiated from each other than positive emotions. One explanation could be that negative events are more important to cope with than positive ones. From the research perspective, asking reasons for negative emotions, the answers can be more precise than responses to positive emotions. It is not

always even necessary to separate one emotion from others to identify its attributes: taking into account all emotions in a mixed-emotion set can help a researcher to see more clearly the causalities and effects of the target emotion. (Ruth et al. 2002, 54.)

Consumer's experience and knowledge of emotions determines how precise information researchers can get about the appraisal-consumption emotion relationship (Ruth et al. 2002, 46). For instance, Ruth (2001, 99) found out that consumers tend to understand basic level emotions better than subordinate level emotions, when she researched consumers' understanding of brands' emotional benefits.

3.3 Emotion as a process

Why do we experience emotions then? What responses do emotions cause? Some researchers think that an emotion is always a result of some degree of cognitive appraisal (Lazarus 1982, 1019). Rather than asking subjects what event caused a certain emotion, we should ask about the appraisals that led to the emotion (Roseman et al. 1990, 913). Appraisal theorists define emotions as processes rather than affective states and emotions are seen as a result of an evaluation of the environment or the person-environment interaction. (Moors et al. 2013, 119.)

Plutchik (1984, 208) sees emotions as complex chains of reactions that help us adapt to the environment and deal with the survival problems. Similarly to the S-O-R model, a stimulus in the environment starts a cognitive appraisal which evokes an emotion and results in a behavior that has a certain functional goal. Plutchik has collected typical survival issues and emotion development processes related to them, which are shown in the table 2 below.

Table 2 Survival problems and emotion development (after Plutchik 1984, 208)

Stimulus event	**Cognitive appraisal**	**Subjective feeling**	**Behavioral response**	**Function**
Threat	"Danger"	Fear, terror	Escape	Safety
Obstacle	"Enemy"	Anger, rage	Attack	Destroy obstacle
Gain of a valuable object	"Possess"	Joy, ecstasy	Retain or repeat	Gain resources
Loss of a valued individual	"Abandonment"	Sadness, grief	Cry	Reattach to lost object
Group member	"Friend"	Acceptance, trust	Groom, share	Mutual support, affiliation

Gruesome object	"Poison"	Disgust, contempt	Push away	Rejection
New territory	"What's out there?"	Anticipation	Examining, mapping, organizing	Exploration
Unexpected object	"What is it?"	Surprise	Stopping, alerting	Gain time to orient

Emotion development does not always follow the above pattern and there are many things that could block or modify the process. For instance, one can misunderstand a threat or one's ego defense can deny an emotion from evoking. Behavior can similarly be affected by internal values and beliefs, one can put a lot of value for bravery and might therefore not leave from a dangerous situation. (Plutchik 1984, 208-209.)

To further understand the cognitive appraisals that lead to emotions, Roseman et al. (1990, 899-900) have developed the emotion system model. It presents five appraisals that form an emotion. First appraisal is *motivational state*: Positive emotions are elicited by events that are consistent with one's motives while negative emotions elicit from events that are motive-inconsistent. One's motive in a given situation can be aversive (a punishment he/she tries to avoid) or appetitive (a reward he/she tries to attain).

Second appraisal is *situational state* which means whether the punishment or reward is present or absent in the situation an individual is reacting to. Third appraisal is *probability*, has the outcome been certain or uncertain. Fourth appraisal is *legitimacy*: was the negative or positive outcome deserved in the situation. Last appraisal is *agency*, which determines whether the outcome was caused by a circumstance, some other person or the self. (Roseman et al. 1990, 899.)

Roseman et al. (1996, 270-271) further developed the model to be more accurate and changed legitimacy to the appraisal of *control potential*. Control potential is a more primitive appraisal: For instance, infants under four months can express feelings of anger before they have the cognitive capacity to make judgements of legitimacy. Legitimacy is not a necessary determinant of anger while control potential is.

Other addition that Roseman et al. (1996, 247, 264) do to the model is the addition of *non-characterological* and *characterological distinctions*. Non-characterological emotion, for instance anger, is experienced, when someone's action causes a negative event. Characterological emotions appear when someone's character causes a negative event. Such a feeling is for instance disgust. Roseman et al. (1996, 269) improved emotion system model is shown in the figure 5 below.

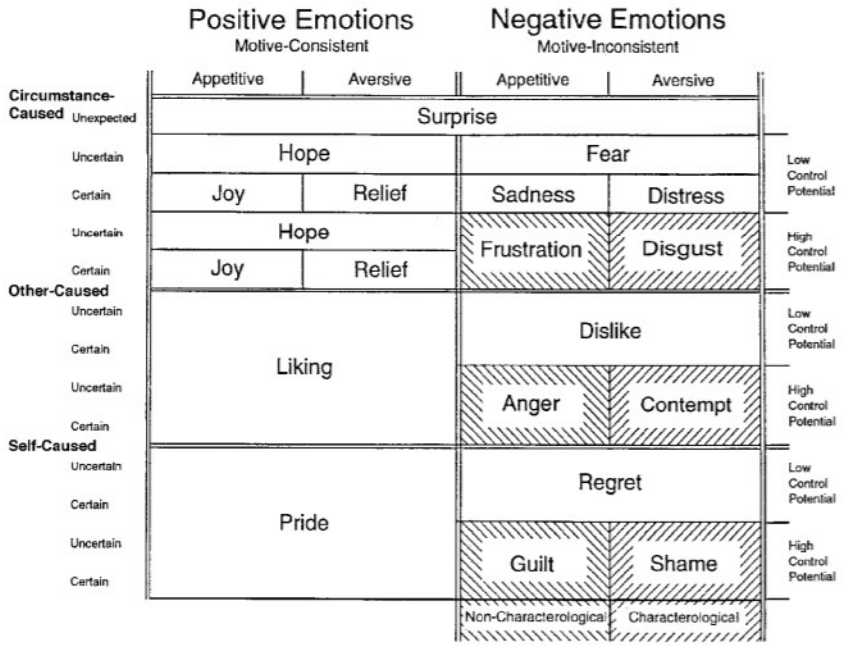

Figure 5 Improved emotion system model (Roseman et al. 1996, 269)

An event can have multiple appraisals, which can make it harder to find out an appraisal-emotion link (Roseman et al. 1990, 913). Yih et al. (2018, 4) suggest that appraisal of an event is a continuous loop and appraisals happen parallelly. Emotion generation involves perception (attention), valuation (with appraisals) and action (emotional response) in relation to the state of the world (situation/event). At any point of the loop can happen reappraisals of the situation. Emotion generation can also create anticipatory emotions, when we model a situation in our head. For instance, giving a presentation can provoke anxiety (world), which the person detects (perception) and appraises to be unhelpful for a good presentation (valuation), leading to an attempt to reappraise the situation as less harmful (action). The loop might go around multiple times to find and successfully deploy a regulation strategy, leading to slower and more effortful emotion regulation. (Yih et al. 2018, 4.)

If the appraisals leading to emotions are made up of many factors so are the behavioral responses. Russell's (1980, 1174–1175) circumplex model of affect is a model that tries to understand what different reactions emotions cause in us. The circumplex model divides emotions in two bipolar dimensions, valence (x-axis: unpleasant-pleasant or negative-positive) and arousal (y-axis: deactivate-activate). Russell claims that a majority of the emotions can be placed in this xy-axis.

The idea of the model is that emotions exist in bipolar categories (for instance happy-sad). The closer the emotions are to each other, the more similar they are and vice versa. For example, when you are excited, you are more active than when happy, but when you

are happy you feel more pleasant. The model has been proved to receive similar results regardless of the culture it is applied to (Russell et al. 1989, 853–854).

Even though the model keeps the research of emotions simple and is widely used, it has also been criticized. Circumplex model doesn't take into account distinctions among different valences. For instance, fear and anger are both high arousal, negative emotions. Exaggerated, circumplex model's valence-based approach predicts that fear and anger lead to same behavior, even if these can cause different risk perception (Lerner & Keltner 2000, 484) and lead to different behaviors as shown in table 2.

Despite the criticism, circumplex model works in showing the bipolarity of opposing affective states (Remington et al. 2000, 297). Pleasure or displeasure and arousal are universal affective states that every emotion can cause (Barrett et. al. 2007, 377-379). On a general level, circumplex model is good in explaining the behaviors an emotion can cause, even if the model alone isn't sufficient to fully explain behavioral responses of certain emotions in certain situations.

3.4 Emotions and shopping

Emotions in any shopping context are important in creating more lasting relationships with the consumers. Knowing what characteristics of the online store contribute to the pleasant or unpleasant shopping experience is important for an online store's success. Emotions are known to have a mediating effect in purchase decision. The more pleasant a consumer is feeling, the more likely they are going to like the store and spend more money in it. (Sherman, Mathur & Smith 1997, 361-362.) This chapter examines ways how emotions can affect one's shopping experience.

Negative emotions usually end up in unwanted results, but sometimes negative emotions can actually increase purchase intention in the store. Mano (1999, 167) found out that if the consumer is distressed, he/she wants to cope with the negative emotion by trying to get out of the "bad" situation as soon as possible. Because of this, it might be possible that consumer's purchase intention might increase when feeling distress, if the consumer has a motivation to purchase something. If the shopping experience on an online store is bad and the consumer is bored, the consumer might just carry out the purchase to leave the online store quickly. This still does not mean that negative emotions should be pursued. If a consumer already has a pre-existing negative affect towards the store, it negatively affects purchase intention (Mano 1999, 149).

Experienced negative emotions in a store can be stronger than positive emotions. People try to cope with their negative emotions and complaining is one such coping mechanism. A coping mechanism facilitates an emotion associated with a certain coping mechanism, if an individual believes coping is possible with the coping mechanism. An angry

customer is more likely to spread negative WoM and if a customer is given an opportunity to write a complaint, the customer will experience even more anger. (Nyer 1997, 303.)

Writer's emotions might show in an online review and other consumers perceive reviews differently depending on the emotion shown from the review. Reviews where you can see that the writer has been angry, are perceived less helpful than reviews where the writer has expressed anxiousness: an anxious person is believed to think more carefully what he is going to write about and therefore the review is perceived as more informative. (Yin, Bond & Zhang 2014, 540, 555.)

Emotions and mood can affect the product choices we make. Di Muro and Murray (2012, 574, 581–582) use the circumplex model to study this. Previous studies had only studied the effect of consumers' valence feeling to product choices. Di Muro and Murray's study added arousal to the mix and found that people who feel relaxed (pleasant and low-arousal mood) tend to choose relaxing products whereas consumers feeling excited (pleasant and high-arousal mood) choose exciting products. However, when consumers are in a negative mood, they are more likely to choose products that are opposite to their affective state. Consumers who are in a low-arousal, unpleasant mood choose products that are high-arousal and pleasant, while a consumer with a high-arousal, unpleasant feeling typically chooses pleasant and low-arousal products. Consumers' mood can be affected with music and scents, but only when the consumer is not aware of his mood.

A single basic emotion can affect the product choice differently depending if the emotion is driven by a focus in the future or in the present. In case of happiness, if the focus is in the present, individuals experience happiness as calm and peaceful. Individuals with a future focus of happiness experience it as exciting and arousing. These individuals prefer products that offer excitement. (Mogilner et al. 2012, 429.)

Zeelenberg et al. (1996, 157) have also studied anticipated emotions and their importance in consumer's purchase decision. Consumers tend to take into account their present decision's future emotional consequences. They are likely to focus on consequences that are most relevant to their future affective states. For instance, consumers try to avoid decisions that could cause them regret. When the decision is made, a consumer tries to avoid information that would make the consumer regret that decision. A favorable outcome message during shopping reinforces anticipated emotion's motivating purchase and weakens anticipated emotion's motivating non-purchase. In general, it's more difficult to encourage a purchase of a product than discourage it. This might be due to the fact, that consumers want to protect themselves from over-exposure of purchase endorsing messages. (Bagozzi et al. 2016, 35–36.)

Verhagen and Bloemers (2018, 541–543) have also studied product types and consumer choices, concentrating on consumer's hierarchy of effects in electronic commerce. Verhagen and Bloemer's literature review shows that in traditional commerce when

buying high involvement products or informational products, our hierarchy of effects is usually think-feel-do. This means we first search for information (think), form a positive affection (feel) and then buy the product (do). With low involvement or transformational products, the hierarchy is usually feel-think-do. Purchase starts with an affective reaction followed by beliefs formation and results in purchase.

In e-commerce the order is think-feel-do regardless of the product type (Verhagen & Bloemers 2018, 551–553). This finding is in line with Walter's (2011, 5-6) hierarchy of user's needs. The online consumer wants to first satisfy the need for reliability through content design, before they are able to fulfil the need for pleasure through visual design. Verhagen and Bloemers (2018, 551–553) argue that the reason for think-feel-do-order might be that customers are unable to feel the product, security reasons or uncertainties regarding the product delivery. Their study indicates that online stores should first concentrate on improving positive online store beliefs, like adding trust seals to enhance the feel of security or improving the usability of the website. After this, efforts should be put in making the site entertaining and visually pleasant to trigger positive affection in the customer. The study also showed that in some occasions the order can be feel-do indicating impulse buying.

Shortcomings in visual design and content design can lead to emotional ambivalence. The term is used to describe the mixed feelings mobile shopping started by cognitive conflicts. Research shows that emotionally ambivalent consumers are more likely to hesitate at the checkout process. Hesitation means that a consumer requires more thinking time before buying the product. Hesitation at the checkout affects positively in the decision to abandon a shopping cart. (Chang et al. 2018, 166–168.)

Choice-process, meaning how hard or easy it is for a consumer to do a choice in an online store, affects emotional ambivalence. Satisfaction with the choice-process weakens the positive link between hesitation and shopping cart abandonment. Product information, choice set size and product presentation among others affect choice-process. Emotional ambivalence is also positively affected by attributes[5] of m-shopping, interpersonal conflicts (what others think if I buy this product etc.) and self-efficacy. (Chang et al. 2018, 168, 171.)

The same emotional design does not work with every store. Determining which emotions are important for a shopping experience is tied to the type of store visited. Stores with more functional and task-oriented environments, for instance grocery stores, are more likely associated with lower pleasure and arousal related emotions. Positive emotions, like joy, are more likely associated with recreational shopping environments, like malls. There is a relationship between expected store atmosphere and emotions. If the

[5] Negative: unsafe, screen too small, unstable connection, complex operation, slow speed, and privacy concerns: Positive: convenient, timely, fast, entertaining, interesting, and fashionable (Chang et al. 2018, 168)

store’s atmosphere isn’t what customers expect, it’s likely to evoke negative emotions. (Machleit & Eroglu 2000, 105, 110.)

The store type in this research is a mobile online store and more specifically ethical fashion store, which falls under recreational shopping environment. This chapter showed that it is not irrelevant to think about online store’s design and emotions it might evoke. Consumer’s behaviors and choices might be very different depending on the experienced emotions during online shopping. Despite the importance of emotions in online shopping there hasn’t been any exhaustive list of emotions and online store factors that evoke them, especially in m-shopping context. This research aims to fill that gap.

4 METHODOLOGY

4.1 Research paradigm

Paradigm was first comprehended as a "set of practices that define a scientific discipline during a particular period of time". However, researchers are not always in agreement of theories, concepts and methodologies. (Eriksson & Kovalainen 2008, 16.) Therefore, it's better to see the term as a belief system, which guides a researcher in his work (Guba & Lincoln 1994, 107).

Researcher's paradigm determines, how he sees the world, what is the relationship between the world and the researcher, and how the researcher thinks the world can be researched, in other words, what methodology to use (Guba & Lincoln 1994, 108). Methodology focuses on specific ways, methods, which we can use to study the world. Methodologies can be divided broadly (qualitative vs. quantitative) or more specifically (thematic analysis, narrative analysis etc.) (Eriksson & Kovalainen 2008, 16).

There are many contending theoretical approaches to emotions. They have different premises on the nature of emotions and vary in how they for instance address the effect of cultural context or the relevance of emotion regulation (Holodynski & Friedlmeier 2005, 11). Holodynski and Friedlmeier (2005, 11, 13) have tried to outline these differences and ended up dividing the theoretical approaches in four emotion paradigms: structuralist, functionalist, dynamic-systems and sociocultural. Despite the differences, all paradigms agree that emotions possess two aspects: a form and a function. The form aspect shows how emotions can be identified. The function aspect focuses on how emotions affect our actions.

Structuralist approach is the most basic of the paradigms, regarding emotional behavior mainly as facial or bodily expressions of internal feelings. Emotional development is a by-product of growing up and maturation of a person's cognitive processes. *Functionalist approach* sees emotions more complexly and sees emotional behavior as a functional relationship between an organism and nature. A person can regulate their emotions in relation to the environment and own motives. (Witherington & Crichton 2007, 628–629.)

Dynamic-systems approach also sees emotions as complex systems, but no component of the emotion formation is primary to others unlike in functionalist approach. All the components (appraisals, goals etc.) are important for the emotion process and their order and significance is person, context and time dependent. *Sociocultural approach* further broadens the emotion process by pressing the importance of communication and social context of emotion development. For instance, interaction with caregivers strongly affect the child's emotional development. (Holodynski & Friedlmeier 2005, 28, 38; Witherington & Crichton 2007, 629–630.)

From the before presented paradigms, the functionalist approach fits best this research by its scope and views. The functionalist emotion paradigm assumes that people adjust their emotions to the environment in relation to their own motivations and goals. Emotions help to achieve these goals, because they focus action. People gain knowledge about their emotions over time and basic emotions can get new nuances resulting in the emergence of new families of emotions. For instance, the fear of someone trying to assault you has different nuances than the fear of cancer. Emotions and nuances determine how we regulate our behavior and social interactions. (Holodynski & Friedlmeier 2005, 18–19.)

Elpidorou and Freeman (2014, 507) have also tried to structure emotion research and have outlined two paradigms. The first paradigm sees that emotion and its context, in which emotion is experienced, are inseparable. According to the other paradigm emotions can be detached from the context, and emotions can be observed as separate cognitive architectures and neurobiological mechanisms.

This research sees that emotion and context are inseparable. It also follows the functionalist approach, which sees that emotions affect cognitive processing and emotions emerge in relation to one's goals. In this research participants are given a shopping goal in m-shopping context. Test setting is created in order to simulate authentic m-shopping events as accurately as possible.

4.2 Research strategy

Phenomenology is usually seen as a research paradigm, but it can also be regarded as a research strategy. Phenomenological analysis does not require any nailed down theories. Researcher's or participant's experiences are central in understanding the essence of the phenomenon. The starting point for the analysis is the researcher's openness: the researcher should not have any set assumptions about the researched case. The researcher should be ready to take the phenomenon as it opens up. (Anttila 1998, 285–286.) In this research the phenomenon is the emotions evoked by mobile shopping.

From phenomenology is drawn phenomenographic analysis. It also bases the analysis in the subjective experiences of individuals. However, the focus is in the experience: *how* a person perceives a phenomenon. Phenomenon and perception are simultaneous and inseparable. Experience is the connection that links these two together. *Phenomenography* investigates the different ways people experience something or think about something. Phenomenographic analysis does not abandon theory and theory is an inseparable part of an analysis. Theory works as a framework for ideas, but the researcher should not use it to test hypotheses or pre-categorize concepts. (Anttila 1998, 289–291.) The researcher interviews participants that express their different viewpoints about a subject. From these viewpoints the researcher tries to form different meaningful categories to better understand them. (Metsämuuronen 2000, 23.)

Phenomenographic analysis has been criticized about generalizability. Can data collected from a test setting be utilized in a real-life situation? Also, the collected data is linked to context, and experiences from one online store might not be utilized when researching experiences in another online store. People's opinions change over time and people have vastly different experiences, so how can the researcher determine what experiences are more "right" than others? (Metsämuuronen 2000, 23–24.)

One could also argue that a fitting research strategy for this research could also be an extensive case study. In the extensive case study the focus is not on any individual but on an issue that can be studied by using several cases. The interest lies in explaining a phenomenon and not in the cases themselves. The epistemological question of a case study is that what can we learn about one case? The case can be nearly anything: an individual, group or a company. The aim of an extensive case study is usually to extend prior research. It could be said that all qualitative study is case study, because nearly every strategy uses case study as an approach. The differences in data acquisition strategies lie in how the data is collected and what is the object of the research. (Eriksson & Kovalainen 2008, 122–123; Metsämuuronen 2000, 16–18.)

There are many research strategies and even more opinions about them. It's hard to find a research strategy that fits perfectly with a certain research. Based on the literature made about research strategies, this research is a mix of both case study and phenomenographic analysis. This research studies different individuals', in other words cases', subjective experiences of mobile shopping. Theory is used as a framework, but it does not guide the research too much: participants can and are encouraged to tell about their experiences outside of the formulated questions and used research tools.

4.3 Research method

The material for this research was collected by conducting an experiment study, which structure is presented in the Figure 6 below.

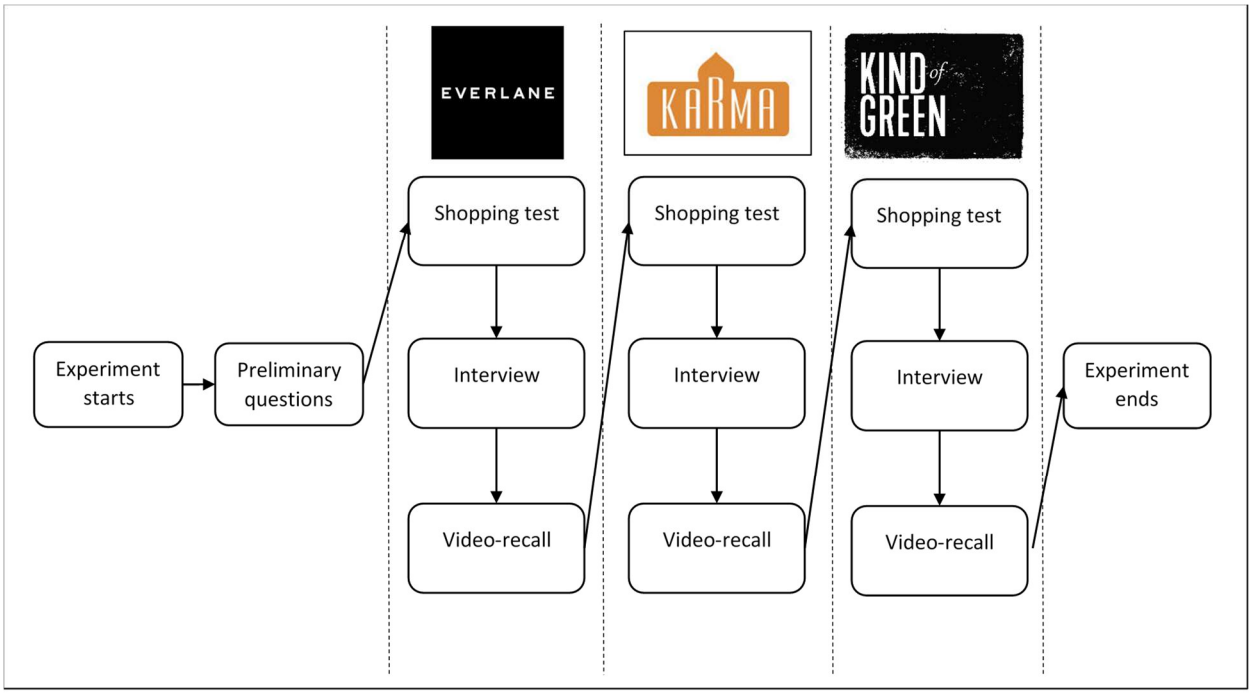

Figure 6 The structure of the experiment study

The arrows in the figure show the order of the phases in the experiment. When the experiment started, participants were told about the structure of the experiment and the instructions for the shopping test. After the introduction participants were asked some preliminary questions to find out the participant's starting level. The participants were asked about factors, which might possibly affect the experiments' results, like participants' skill level with m-shopping or their current mood. The preliminary questions are presented in the chapter 4.3.4.

The dashed lines in the figure 6 divide phases, which were related to the online store currently being handled. For instance, after the preliminary questions started the first shopping test, which was done in an online store called Everlane. After the shopping test in Everlane was an interview where the participant was asked questions related to the previous shopping test. After the interview was the video-recall phase, where the participant was shown a video recording from the shopping test, to better recall the emotions experienced during the shopping test on Everlane. After the video-recall from Everlane footage, the next online store, Karma, was taken into handling and the shopping test in Karma could start. Similar to Everlane, after the shopping test in Karma participant was interviewed about it after which footage from Karma shopping test was shown to the participant in the video-recall phase. The experiment included a total of three online stores, the last online store being Kind of Green. After this the experiment ended. All the online stores in this experiment were ethical fashion stores and the arguments why online stores from only this line of business were chosen can be read from chapter 4.3.3.

In the shopping tests the participants simulated a real life shopping situation in the designated online store from entering the website all the way to the end of the checkout process, having filled their delivery information, chosen the right payment option and when they were about to purchase the products. Participants had an imaginary budget of 200 €/$, which they had to spend in the online store. In the shopping tests participants used their own smartphones. Each shopping test was filmed on two video cameras, one which shot the participant's face and the other which shot the participant's smartphone screen. The footage was then used in the video-recall phase.

After each shopping test was an interview, in which the participants were asked questions related to the previous shopping test. During the interview the participants were asked to write down their topmost emotions from the shopping test in an emotion assessment tool called the Geneva Emotion Wheel (GEW), which is explained in more detail in chapter 4.3.5. Participants were also given a blank paper where they could write down their experienced emotions not found from the GEW. The interview questions can be read from the chapter 4.3.4.

After the interview came the video-recall phase, which aim was to help the participants to better recall the events and emotions felt during the shopping test. During the video-recall the participants watched the footage which was shot during the shopping test. While watching the footage, the participants wrote down their recalled emotions into new GEW sheets. The footage was watched from the researcher's laptop to which the footage was transferred from the camera during the interview. The video-recall technique is presented in depth in the chapter 4.3.6.

4.3.1 The pilot experiment

The final structure of the experiment presented in the figure 6 was modified based on the results of a pilot experiment. The pilot experiment was carried out with one participant. Instead of Everlane, Karma and Kind of Green, which were the online stores in the final experiment, the experimented online stores in the pilot experiment were Weecos and Wish. This chapter goes through what changes were made to the final experiment based on the pilot experiment.

The pilot experiment started with preliminary questions similarly to the final experiment structure, and no changes were made to the questions. In the pilot experiment, the participant was asked to think of a product she needs or would like to have and was then instructed to look for this product from the online store. In the pilot experiment there was no imaginary budget like in the final experiment, but the imaginary shopping budget was added afterwards. Pilot experiment's participant told that she would like to have a fanny pack and searched for those in the shopping tests. However, Weecos and Wish didn't have many fanny packs and the available fanny packs were not necessarily to the

participant's liking, so the shopping experience ended up being short and the participant had to involuntarily choose items she would not have had chosen in an actual shopping situation. This led to the inclusion of an imaginary budget to encourage the participants to explore the online stores more and to choose products they truly liked. The participants were still asked in the preliminary questions if they had any apparel in mind to make it easier for the participants to start exploring the online stores. If you could not find the apparel you were initially thinking of, you could still spend the 200 €/$ for something else.

As Nyer (1997, 302) states, emotions result from congruence and relevance to once goals. If, for instance, a situation is highly relevant and incongruent with someone's goals, this person will experience strong negative emotions. The imaginary budget worked as a goal for the participants making them more engaged with the shopping tests: what would you purchase from this online store if you had 200 €/$ to spend?

The sum of 200 €/$ was chosen, because the ethical fashion in the online stores was expensive and with the designated sum participants were able to choose approximately 2-3 items in their shopping cart. It was an amount that was not too exhausting or too small and let the participants get acquainted with the online stores enough to be able to comprehensively judge them. Participants needed to include the delivery costs in the 200 €/$ budget, so that the participants would familiarize themselves with the online stores' delivery conditions and thus making the shopping test to further match an actual shopping situation.

In the pilot experiment the participant was instructed to look for a product she wanted, in this case a fanny pack, then learn about the product, its delivery costs and delivery times, add the product to the shopping cart, register to the online store, go to the checkout page and fill in the delivery and payment information after which the shopping test ended. In the final experiment the participants were instructed to choose products they would like to have with an imaginary budget of 200 €/$ including the delivery costs, add the products to the shopping cart, go to the checkout and fill the delivery information and choose the preferred payment option.

As can be noticed from the previous paragraph, two changes were made to the shopping test in addition to the imaginary budget. In the final experiment the participants did not have to fill their payment information. This decision was made after the pilot experiment, when the participant thought it felt weird that fulfilling her payment information was filmed. The participant also feared that after she had filled her payment information, it would be easier for her to accidentally buy the product. For these safety and ethical issues, the requirement for the participants to fill their payment information was left out.

The second change to the shopping test was to remove the requirement to register to the online store. The participant in the pilot experiment told that she would not normally

register to an online store as a first timer, unless it was compulsory. For this reason, the need to register was left out from the instructions, to make the shopping test to better match an actual shopping situation.

Both in the pilot and final experiment the participants used their own smartphones in the shopping tests. A smartphone given by the researcher could have taken away the participants' attention from the online stores, when participants' focus was in learning to use an unfamiliar smartphone. Also, smartphones are personal items and might save previously typed information into the website. The disadvantage of the participants using their own phones is that the screen size varies. As mentioned in chapter 2.4 mobile optimized websites change the structure of the website according to the screen size of the mobile device, which can make some characteristics of the website appear in different locations and in different sizes. However, this was thought to affect the experiment's results less than using an unfamiliar phone.

The results from the pilot experiment led to the replacement of the experimented online stores for the final experiment. Wish is an U.S. online store where almost all the products sold are Chinese. The online store includes all imaginable products from apparels to electronics for a cheap price. The pilot experiment's participant had negative emotions towards Wish, because she thought that the online store represented harmful consumption culture, which should not be supported. She said that she would not normally spend time on such online stores. Weecos on the other hand evoked positive emotions in the participant. Weecos is a Finnish online store offering ethical clothes and the participant said she could consider buying something from the online store in the future.

Being forced to shop in an online store one does not like does not represent a realistic shopping situation: if you do not want to be in an online store, you would probably leave from there and shop your clothes from some better online store. In a shopping test this is not possible. It could be presumed that young adults in general have a positive attitude towards ethicality in fashion, like the pilot experiment's participant. For this reason, Wish was removed from the experimented online stores and ethical fashion online stores were chosen for this experiment. In chapter 4.3.3. is examined more closely which ethical fashion online stores and why were chosen for the experiment. After this evaluation, Weecos was also removed from the experimented online stores and replaced by Everlane, Karma and Kind of Green.

Outside of the shopping test, the pilot experiment's structure transferred quite unchanged to the final experiment's structure. The interview and video-recall phases remained almost unchanged. The only change was that participants now received three GEW sheets for the video-recall section, because using only one sheet for the interview and the video-recall made the sheet too cluttered and hard to interpret. The three GEW sheets were marked as home page, product page and checkout page. If for instance a

participant recalled an emotion when the footage was showing they at the checkout page, they would write down the emotion in the checkout page -sheet. The pilot experiment also did not have any blank paper where to write down the emotions. The pilot experiment's participant could not sometimes find a fitting emotion from the GEW, which is why she had to settle for a substitution from the GEW. The researcher did not want to limit the participants' expression of emotions too much, which is why a blank paper resembling the GEW was made by the researcher and it can be seen from Appendix 2.

4.3.2 The participant selection

In a qualitative study, the research's scientific criterion does not depend on the number of participants, but their quality. In a qualitative research, the researcher tries to analyze his participants as thoroughly as possible. Discretionary selection is acceptable in order to get the most relevant participants that match theoretical foundations. (Eskola & Suoranta 1998, 18.) In Table 3 below are the criteria, *website unfamiliarity*, *attunement to m-shopping* and *age*, which were used to select the participants for this research. The criteria are compiled from previous m-shopping research.

Table 3 The criteria for participant selection

Criteria	**Explanation**
First-time visitor / website unfamiliarity	First timers don't have pre-existing experiences and affection to the website making the experience more genuine. Emotions have a bigger impact on the purchase intention for the first timers: they are for instance more suspicious towards the online-vendor and are more likely to hesitate and experience emotional ambivalence. (Li, Sarathy & Zhang 2008, 36.)
Attuned to m-shopping	If people aren't accustomed to m-commerce, they are more prone to mistakes and can become more easily frustrated. They are more likely to fear entering personal information online and using wireless transactions. Unfamiliarity with m-commerce would generate biased research results because the experienced emotions could be more related to m-commerce adoption than the visited website. (Mahatanankoon & Vila-Ruiz 2007, 123-124.)
Young adult (the age of 18-34 years)	Related to the previous criteria. Young adults have higher computer literacy and attitude towards technology, which is why they can easily adapt to m-commerce. Adults in age group 40-55 years are more concerned about security problems of monetary transactions. This age group is unlikely to adapt m-commerce as quickly

	as young adults. (Subaramaniam & Kolandaisamy 2019, 311-312.)

The chosen participants were familiar to the researcher and were personally contacted. Before the individuals were chosen to partake the experiment, it was made sure that they matched the criteria in table 3. The number of participants for this research was determined beforehand and the chosen number ended up being 10: this research's goal is not to generalize, but to explore the subject and choosing 10 participants for the research seemed an adequate amount for that purpose. Also, each participant carried out three shopping tests making the number of researched tests 30. In addition to these was conducted the pilot experiment, which was presented in the last chapter. Table 4 collects all the participants together and shows how the participants match the criteria presented in the table 3.

Table 4 The participants of the experiment

	Experiment date	Gender	First time visitor	Familiarity with m-shopping	Age	Experiment duration
Pilot experiment	17.3.2019	Female	No	Has purchased clothes with smartphone.	24	95 min
Participant 1	5.4.2019	Female	Yes	Has purchased clothes with smartphone.	27	100 min
Participant 2	6.4.2019	Female	Yes	Has purchased clothes with smartphone.	27	71 min
Participant 3	7.4.2019	Female	Yes	Has purchased and browsed online stores with smartphone but not clothes.	29	69 min
Participant 4	10.4.2019	Female	Yes	Has purchased and browsed online stores with smartphone but not clothes.	24	61 min
Participant 5	11.4.2019	Female	Yes	Has purchased clothes with smartphone.	24	75 min
Participant 6	11.4.2019	Female	Yes	Has purchased clothes with smartphone.	34	64 min

Partici-pant 7	18.4.2019	Male	Yes	Has purchased and browsed online stores with smartphone but not clothes.	28	89 min
Partici-pant 8	19.4.2019	Male	Yes	Has purchased clothes with smartphone.	29	100 min
Partici-pant 9	7.5.2019	Male	Yes	Has purchased and browsed online stores with smartphone but not clothes.	23	74 min
Partici-pant 10	9.5.2019	Male	Yes	Has purchased and browsed online stores with smartphone but not clothes.	29	101 min

There were differences in participants' familiarity with m-shopping. All the participants had purchased something with their smartphone, but not everyone had shopped clothes. These participants had however browsed clothes on smartphones but decided to do the actual purchase on a computer or in a physical store. They had still used their smartphone to purchase tickets or electronics online. Not having purchased clothes with a smartphone could affect these participants' purchase or browsing intention during the tests, because "m-shoppers tend to use mobile devices to shop for habitual products that they already have a history of purchasing" (Wang, Malthouse & Krishnamurthi 2015, 217). However, everyone having adopted m-shopping should put the participants closer to the same starting point and make the results more comparable.

All the actual participants fitted the dictated age-range. Table 4 shows that the pilot experiment's participant was not a first-time visitor. The participant had previously visited one of the tested websites, Wish, from which she had negative experiences. This affected the pilot experiment's results, because the participant had already formed negative opinions about the online store's factors and the new factors she encountered in the online store, she took with suspicion. To make sure that the participants do not have any pre-existing opinions about the visited online stores and every participant starts the shopping tests from the same line, being a first-time visitor was added as a precondition. So all of the participants who participated in the final experiment, had never visited Everlane, Karma or Kind of Green before.

4.3.3 The experimented online stores

As was mentioned in chapter 4.3.1, ethical fashion online stores were chosen for the experiment, because it could be presumed that young adults, which are the target group in this research, have a positive attitude towards ethical fashion in general. Therefore, ethical fashion is a product category, which the participants could possibly consider shopping in an actual shopping situation outside of the experiment. Also, from the products purchased online, fashion is the most popular product category (Marketing Charts 2018).

It was at first considered to choose also other product categories outside of fashion for the experiment, like electronics. However, this idea was abandoned, because product type affects the experienced emotions and how online store's factors are perceived. Percy and Donovan (1991) divide products in transformational and informational products. Emotions have a bigger impact on consumers when purchasing transformational or hedonic products (Percy & Donovan 1991, 18-19). If the experiment had online stores offering both transformational and informational, it might make the experiment's results less comparable. Additionally, fashion products are transformational products (Percy & Donovan 1991, 13), which matches the hedonic context of m-shopping.

There is still the decision to be made, which online stores to choose for the experiment from all the ethical online stores in the internet and by which criteria. Supposedly no online store is exactly identical, even though there are some online store characteristics, which are found from most of the online stores. Magrath and McCormick (2013, 120) and Ha, Kwon and Lennon (2007, 488) have studied characteristics that online fashion apparel stores have or should have. Their researches were used to help to determine the criteria for choosing the experimented online stores. Magrath and McCormick (2013, 116) comprised a framework about marketing design elements that can be transferred from a traditional e-commerce setting to a m-commerce app environment. Ha, Kwon and Lennon (2007, 488) on the other hand studied which fashion store elements can be implemented from brick-and-mortar stores to online stores and what characteristics are found from most of the online stores.

Online store characteristics handled in these two researches were compared with five randomly selected ethical fashion online stores. The table 5 below does not include all the characteristics that Magrath and McCormick (2013, 120) and Ha, Kwon and Lennon (2007, 488) presented. Their categorizations included for instance picture graphics and search tools. These were left out, because they were found from all the considered online stores. The considered online stores were found from the Google, after using keywords 'ethical fashion online store' and 'eettinen vaateverkkokauppa'. From these search results, the researcher picked the online stores, which differed from each other. Only characteristics that were not common between the considered online stores were included in the table.

Table 5 Characteristics of online fashion apparel stores (after Magrath & McCormick 2013, 120; Ha, Kwon & Lennon 2007, 488)

Characteristics	Everlane.com	Nudge.fi	Kindofgreen.fi	Weecos.com	Karma.fi
Visual design					
Product videos	Every apparel	Some of the brands	No	No	No
Navigation design					
Interactive image technology (IIT)	Zoom	No	No	No	No
Product categorization & product search filters	Clothing category, color, size	Clothing category, alphabetical, newest, cheapest	Clothing category, top/down-clothing, review, price	Clothing category, ethical stamps, brands, country, color, size	Clothing category
Compulsory registration	Yes	No	No	No	No
Content design					
Product recommendations	"People who bought also bought these", "This model is also wearing"	"People who bought also bought these", "Check these out"	"Check these out"	"We recommend"	No
Style advice	No	"Combine with these"	No	No	No
User reviews	Yes	No	Yes	No	No
Information presentation style	Sheets, bullet points, Table	One-page, bullet points	Sheets, bullet points, Table	Sheets, bullet points, ethical stamps	One-page, bullet points

Social media implementation	Link to social media channels	Instagram feed implemented	Instagram feed implemented	No	No
Trend information	Yes	Yes	Yes	Yes	No

The characteristics in table 5 are divided in the design dimensions from chapter 2.4. The table was composed to help to show differences between the online stores and which online stores to choose for the experiment to make the results of this research as applicable as possible. Table 5 shows that Everlane includes most of the online fashion store characteristics that consumers find enhancing for the shopping experience. Karma on the other hand doesn't include these characteristics and has a simple design. These two extremities were chosen to get results from the whole scale of online store designs. However, to balance these two polar opposites in the results, one more online store was decided to be chosen for the test. Nudge, Kind of Green and Weecos have around half of the online store characteristics and go between Karma and Everlane. From these three Kind of Green was chosen as the third website, because it has a clear distinct style from Karma and Everlane. Kind of Green offers street fashion while Everlane's products are a bit businesslike and Karma sells hippie fashion. In addition to improving the reliability of the research by choosing online stores from the both ends and middle of the scale of online store characteristics, the decision to choose three different websites for the experiment was to confound the effects in fashion tastes.

4.3.4 The interview

An interview was used to help find out participants' experiences and emotions, which they had felt during the shopping test. The interview was conducted as a semi-structured interview, in which the questions were the same for every participant, but answers were open ended (Eskola & Suoranta 1998, 87). A semi-structured interview works, when the subject is intimate or little known (Metsämuuronen 2000, 42). Emotions are an intimate subject and they are only little researched in the e-shopping context, even less in m-shopping. For this reason, having had a structured and standardized interview, which has predestined answer options, wouldn't have had been as suitable for this research as a semi-structured interview, which gave the participants a possibility to answer the questions openly.

A semi-structured interview is used to study both how and what questions. In a semi-structured interview a researcher has prepared the topics and issues but can vary the order of the questions and wording as he seems fit. This way the interview stays informal and conversation like, while still keeping the interview somewhat systematic and comprehensive. (Eriksson & Kovalainen 2008, 82.) The semi-structured interview's informal

structure might have helped to create an atmosphere, where it was easier for the participants to talk about their own emotions. For this reason, the answers regarding the participant's emotions might had been more authentic. (Oplatka 2018, 1347.)

While the preliminary interview and the actual interview are semi-structured, the video-recall section resembled an unstructured interview. In an unstructured interview the researcher may first ask some guiding questions after which the conversation can be taken to any direction of interest that may come up. An unstructured interview is useful when the topic is explored broadly and from the participant's point of view. Unstructured interviews can provide insight which the researcher had not expected. (Eriksson & Kovalainen 2008, 82–83.) Before the video-recall phase started, the participants were given the guiding question to tell about the previous shopping experience in their own words while marking down emotions in the GEW. Otherwise there were no preplanned questions for this phase, but interesting topics were freely discussed as they appeared. There does not exist listings of online shopping emotions, from which questions for the video-recall phase could had been formed. Preplanned questions in the video-recall phase could had restricted the answers too much and important topics could had been left uncovered.

Oplatka (2018, 1356, 1358) advises that when researching complex topics and interviewing emotions, the interview structure should go from straightforward and easy questions to more complex and personal ones, to first build rapport between the participant and the researcher after which it may feel safer for the participant to answer the more sensitive questions. Oplatka (2018) in his study interviews teachers about the emotions they experience during educational work, which presumably is a more sensitive subject than interviewing participants about online shopping emotions. However, talking about emotions could be hard for someone regardless of the context, which is why following Oplatka's (2018, 1361) suggestion to move from straightforward to more complex questions could had ended up in more fruitful results.

Table 6 below shows the questions asked in each phase of the experiment and also ties the interview questions with the research questions.

Table 6 Operationalization framework

Purpose of the research	**Research questions**	**Theory**	**Interview questions**
What factors and emotions are significant in consumer's online shopping	**Preliminary interview** These questions are asked once at the start of the experiment to figure out participant's starting level.		
	1. How mobile shopping experience is constructed?	2.3 Mobile user experience	1. What is your current mood?

experience on a smartphone.		Formation of the user experience: Internal state (mood, familiarity, personal skills, expectations, motivation)	2. How well do you know the online stores Everlane, Karma and Kind of Green? 3. How experienced are you in shopping in online stores through your smartphone? 4. What expectations do you have regarding the shopping experience in these online stores on your smartphone? 5. Is there any apparel you would like to have or have thought to purchase?
	SHOPPING TEST **(1. Everlane 2. Karma 3. Kind of Green)**		
	Interview These questions are repeated after each shopping test to get a general view of participant's opinions regarding the online store and its shopping experience.		
	2. What factors affect online shopping experience on smartphone?	2.4 M-shopping website design 3.4 Emotions and shopping	6. How was the shopping experience in the online store like? 7. Did you think that the shopping experience was more positive or negative? 8. Which factors and emotions evoked by them affected your shopping experience? Mark down your experienced in the GEW. 9. How would you improve the online store for a better shopping experience? 10. What is your mood now? Do you think that your mood affected the shopping experience? 11. Could you imagine yourself purchasing something from the online store? Why / Why not? 12. Would you have left the online store earlier, if you hadn't been in this experiment? Why / Why not? 13. Do you feel like your smartphone affected the shopping experience? Would the shopping experience be different on a different device?
	Video-recall		

	This phase comes after each interview and helps the participant to recall and better associate the experienced emotions with different factors.		
	3. What emotions evoke from factors affecting online shopping experience on smartphone?	2.4 M-shopping website design 3.3 Emotion as process 3.4 Emotions and shopping	14. Recall with the help of the video footage, which emotions emerged during your shopping experience and which factors caused these emotions. You can mark down the emotions in the GEW.
PROCEED TO THE NEXT SHOPPING TEST			

The above operationalization framework has been made to resemble the structure of the experiment first presented in the figure 6 in chapter 4.3. The experiment starts with preliminary questions, which were asked only once at the start of the experiment. The preliminary questions were asked to sort out the participants' starting level or internal state (questions 1–4) and prepare the participants for the shopping tests (question 5). As was gone through in the chapter 2.3 the user's internal state along with the previous experiences affect the current user or shopping experience.

After the preliminary questions, the participants repeated the following cycle three times with each of the online stores: shopping test, interview and video-recall. The first shopping test was done on Everlane, the second on Karma and the third on Kind of Green. After each test the participants were asked general questions about the online stores. The first interview questions (questions 6–9) aimed to collect the fresh opinions and topmost emotions from the participants regarding the previous shopping tests. In the chapter 3.1 the effects of the existing mood on emergence of emotions was discussed, so mood was taken into account also in this research (question 10). In the interview it was determined how a real life shopping situation would differ from the shopping test, could the participants actually had done a purchase from the online store (question 11) or would the participants really had stayed in the online store, if they hadn't been in the experiment (question 12). The device used to browse the online store was limited to smartphones in this research. To find out how the participants thought the device itself affected the shopping experience, the participants were asked if the shopping experience would had been different on a different device (question 13). As told in the chapter 2.3, the device itself affects the shopping experience and because participants used their own smartphones, there might had been different opinions about the device's role in the formation of the shopping experience.

After the interview, the participants moved on to watch footage from the shopping test. This phase's intention was to more specifically recall emotions and factors which might

had been left unmentioned during the interview. During the video-recall the participants were encouraged to freely tell about the experienced emotions and mark them down in the GEW (question 14), which is explained in more detail in the next chapter.

4.3.5 The self-assessment of the emotions

The instrument which was used for participants' emotion assessment in this research is called the Geneva Emotion Wheel (GEW). It's a tool developed at the University of Geneva and has been scientifically proven useful in emotion assessment. It has a circular space similar to Russell's (1980, 1174) circumplex model of affect, but instead of arousal GEW has control power dimension, which measures how much control the participant thinks they have in a situation. Control power is related to the coping potential of the situation similarly to the Roseman's model (1996, 269) presented in chapter 3.3. The other dimension in the model is valence, which measures how positive or negative an event was. This dimension basically measures the event's congruence to participant's goals (Scherer et al. 2013, 285.) The third and newest version of the GEW is presented in the figure 7 below.

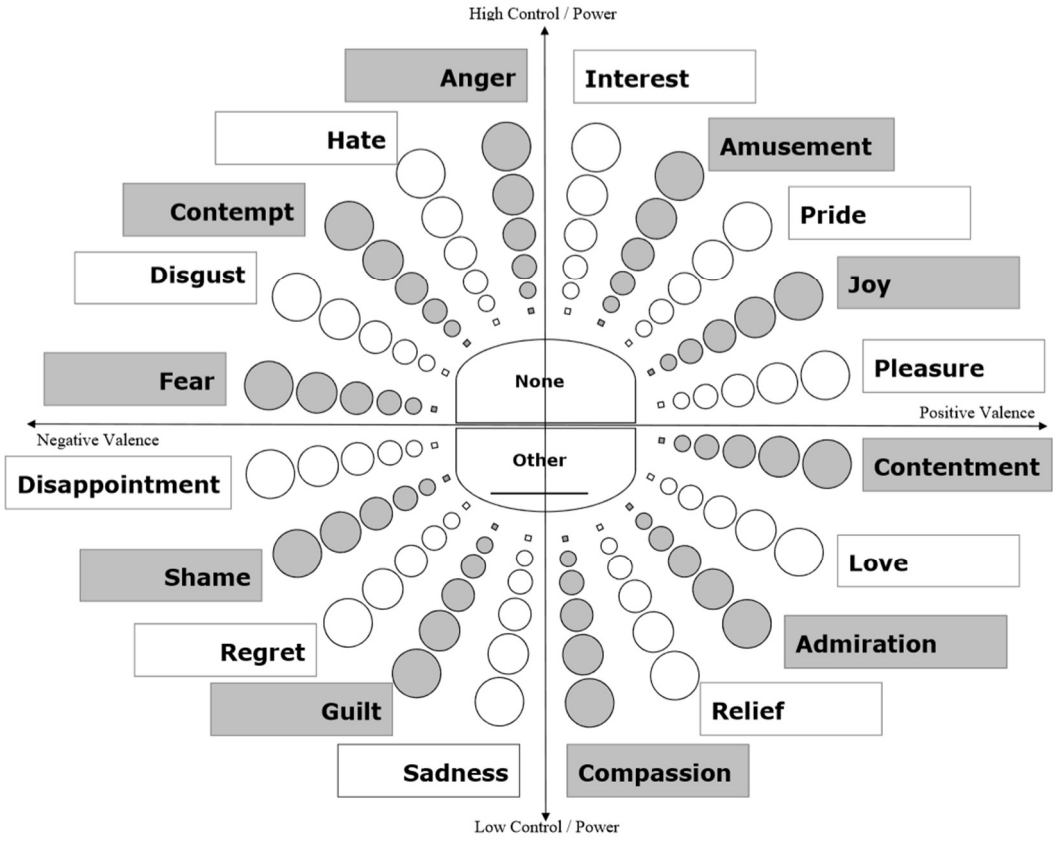

Figure 7 GEW 3.0 with an added xy-axis (after Swiss Center for Affective Sciences 2019)

In reality GEW 3.0 does not have a visible xy-axis, but it was added to the figure 8 to make it easier to explain the model. The five circles leading to each emotion label measure the intensity of the emotion. Intensity grows when moving from the center to the outer circle of the model. Emotions in the model present emotion families, not just single emotions. Therefore, the intensity can mean different subordinate emotions. In case of anger, at the lowest intensity level the emotion experienced could be irritation and the highest intensity rage. Intensity in this model does not mean arousal, even though it correlates with the members of the emotion families. (Scherer et al. 2013, 285.)

The emotion families or basic emotions chosen for this model differ from the groupings presented in the literature review in chapter 3.2. As mentioned there, there are many differing opinions about which emotions could be classified as basic emotions. Scherer et al. (2013, 286, 293) had three arguments how the basic emotions for the GEW were chosen. Firstly, these emotions have been frequently used in the past research and secondly, they cover most of the segments in the circular space. Thirdly, these emotions afford an arrangement of the terms around the wheel. The emotions' locations on the wheel were validated by an international study, in which Finland was also part of. Finnish version of the GEW that was used in the study can be found from the appendices (Appendix 1).

The purpose to use the GEW in this research was to help the participants in their emotion assessment. Emotion assessment without the help of any tool can be disadvantageous, because there are big differences in how well people can tell about their emotions in their own words (Gohm & Clore 2000, 694–695). If the participants could not find any emotion label from the GEW that matched their feelings, the participants could write down the emotion label in their own words and also mark down the related intensity level. A separate blank was given for this, which is found from the appendices (Appendix 2). The GEW in figure 7 also has a blank spot under the text 'other', to which one can write down an emotion in their own words, if none of the emotions in the GEW seems fitting. However, the researcher thought that only a one spot to express feelings in own words wouldn't be sufficient, which is why the blank paper was created.

From all the emotion assessments tools available the GEW was chosen, because it offered the broadest range of emotions. The topmost purpose to use an emotion assessment tool in this research was to help the participants to better describe their feelings. As mentioned at the end of the chapter 3.2, people's knowledge and experience of emotions may vary, which could had affected the quality of information received from the participants. By offering a ready list of emotions, the participants were able to tell about their feelings more diversely and in detail. As mentioned earlier there was also a scientifically validated Finnish version of the GEW, so the researcher didn't have to translate the words to Finnish himself and be susceptible for mistranslations.

The second reason for choosing the GEW as the emotion assessment tool was the ability to mark down the emotions' intensities. In the chapter 3.2 it was mentioned that we rarely feel only one emotion, but multiple emotions at the same time which form a mixed emotion set. These emotions can vary in intensity. If the emotions' intensities weren't measured, it would have placed the emotions in a mixed emotion set on the same level. For instance, some online store factor could evoke fear on level 1 on the GEW's intensity scale and also anger on level 4. This means that the online store factor made the participant a bit scared, but most of all angry. If the intensities weren't measured, on a paper the participant would have been equally both scared and angry. The intensities are used in chapter 5.2 to calculate significance coefficients, which are then used to determine the most significant emotions an online store visitor might experience during a shopping experience.

4.3.6 The video-recall

The shopping tests were filmed with two cameras, from which one was directed at the smartphone's screen and the other at the participant's face. The video material was then used to help participants recall their experienced emotions during the video-recall phase. There is evidence that video-recall technique can be sufficient in recreating the affect that was experienced during the original situation. Gottman and Levenson (1985, 152-153, 159) researched married couples and made them talk about conflicts in their marriage. During this conversation each spouses' emotional reactions were measured with physiological sensors. In a subsequent interview, videos of the non-verbal reactions from the conversations were shown to each spouse individually and they had to measure with a bipolar valence line segment how they were feeling at each moment. The results showed that the spouses were able to recall with a good precision what they were feeling during the conversation just from watching the video.

Of course, talking about marriage conflicts likely evokes bigger emotions than online shopping experience, but the video material was still helpful in recalling emotions during the video-recall phase. The participants were also allowed to speak aloud during the shopping tests to further help the participants to recall their emotions. In the first two interviews during the video-recall the participants were shown the videos of the participant's face and the smartphone's screen simultaneously. However, the first two participants said that it was difficult to concentrate on both videos at the same time and that they mainly concentrated on the video showing the smartphone's screen. According to these two participants, the video showing the smartphone's screen was alone sufficient for recalling the emotions. Their own commentary during the tests helped with the recalling. Also, the participants found it uncomfortable to watch their own face. For these reasons, video

material from participant's face was not shown anymore from experiment 3 onwards and only videos from participant's smartphone screen, like in figure 8, were shown.

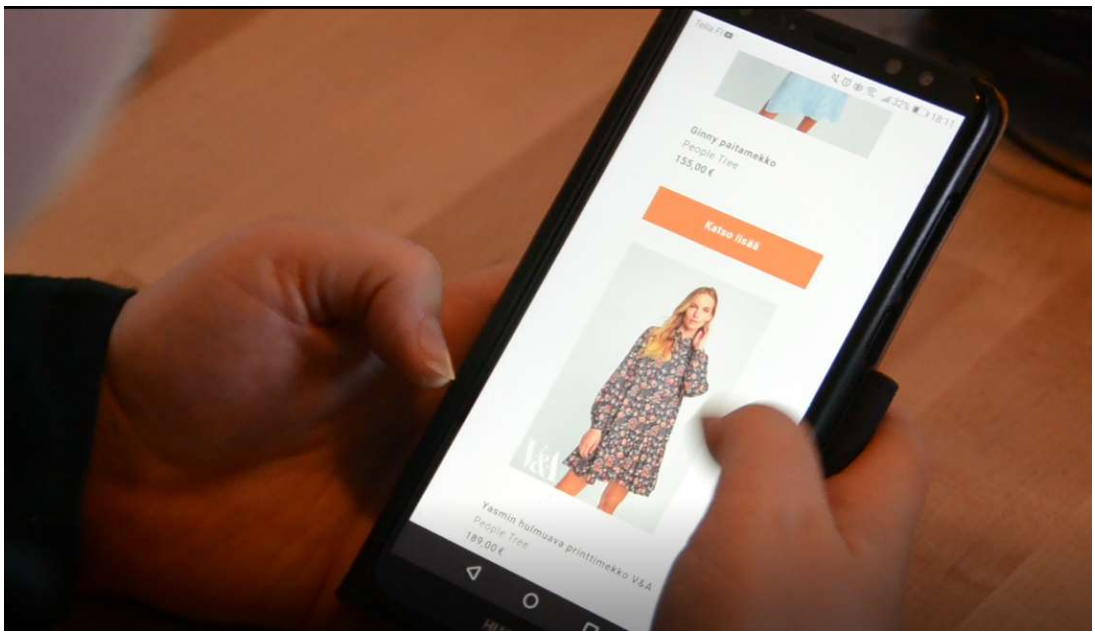

Figure 8 Video-recall example

Though the decision to give up on showing video footage of the participant's faces during the video-recall was already done after the second experiment, the shopping tests were still filmed on two cameras in the rest of the experiments. The reason for this was that the material was used in Noldus FaceReader (version 7) application, which recognizes emotions from the person's expressions. However, the application is better suited for videos taken while being on a computer rather than on a smartphone (Noldus 2018, 2). Probably because of this, most of the participants showed bias towards some facial expressions and these couldn't be corrected with the calibration methods the application offers. Because of this, the Noldus material isn't used in this research.

Inclusion of Noldus analyses would have had enabled comparison between structuralist and functionalist approaches, which were talked about at the beginning of the methodology chapter, in chapter 4.1. Structuralist approach sees emotional behaviour mainly as facial or bodily expressions of internal feelings. This paradigm fits Noldus, which makes its emotion analyses based on person's facial gestures. Functionalist approach on the other hand sees emotional behaviour more broadly, and emotional behaviour can be seen for instance in person's cognitive processing, social interaction or physical experience. This paradigm fits with the video-recall, because participants can tell about their felt emotions themselves and mark them down in the GEW. One could say that structuralist approach is an objective take on emotional analysis and functionalist approach a subjective. If Noldus analyses would have worked, it would have allowed comparison between the results

of Noldus analyses and GEW markings and how well subjective and objective evaluations of experienced emotions match each other. Now this stays only as a suggestion for future research.

4.4 Data analysis

The data analysis started with transcribing the recordings. The whole experiment was recorded, starting from the preliminary interview and ending with the last video-recall phase. After that the GEWs were analysed, and the emotion markings and their related intensity levels were listed in Excel. From the transcriptions was then searched which factors had evoked these emotions and the factors were marked next to the emotions and intensities in Excel. Also participant's explanation, why the factor had evoked the emotion in question, was marked in Excel. The listing in Excel made it easier to see the link between an emotion and a factor and why these two are linked to each other.

The factors in the listing were divided in 43 sub-categories, which were then divided to 6 main categories. Shopping experience is a broad concept and made up from multiple factors, which is why it was suitable to categorize the factors to make it easier to understand the formation of shopping experience. Leiman and Toivonen (1991, 182) contemplate that it's hard to determine what would be an appropriate number of categories for the data. If there are too many categories, the results of an analysis illustrate the data well, but are not reliable. If there are too few categories, the results are more reliable, but something essential can disappear from the researched matter.

It isn't enough to just count the number of times a subject has been mentioned. The subject needs to somehow affect the researched end-result, if the subject should be counted in. The researcher has to interpret the data and decide how to deal with borderline cases. Creating criteria for the categorization helps. (Eskola & Suoranta 1998, 167.) The created categories in this research and the criteria for them are presented in the next chapter, in chapter 5.

There were a few borderline cases with the categorizations in this research. Participants sometimes mentioned emotions they had experienced during a shopping test, but they couldn't specify from which factors these emotions evoked. These emotions were assessed to factors, which are labelled as *general*. For instance, a participant could have mentioned that the online store was easy to use and had marked *joy* in the GEW, in which case *joy* was assessed to *general navigation* -factor. Sometimes participants could specify the location where the emotion was felt. Related to the last example, if participant had mentioned that the online store's checkout page was easy to use, *joy* would have been assessed by the *checkout process* -factor, which covers all the emotions experienced at the checkout page.

Participants also mentioned factors to which they didn't assess any emotions. These factors were counted in, if it could be interpreted that it was somehow meaningful for participant's shopping experience. For this reason, in chapter 5 the number of factors' mentions in the tables might not always match the number of emotion assessments.

After listing the emotions and factors in Excel and dividing them into categories, the intensities of the emotions were taken into handling. Intensities were used to calculate *significance coefficients* for each emotion in each main category to find out which emotions are the most common in each main category. Significance coefficients were then used to compare the different categories in chapter 5.2. The formula which was used to calculate the significance coefficients can be found from Appendix 3.

4.5 Validity and reliability of the research

When evaluating a research, terms reliability and validity are pretty sure to come up. A good reliability means that repeated experiments yield the same results. A good validity on the other hand means that the results gained with the experiment are true and certain. Researchers have debated how well these evaluation criteria fit qualitative research and if reliability and validity are better suited for quantitative research. (Eriksson & Kovalainen 2008, 292; Eskola & Suoranta 1998, 212.) For instance, Lincoln and Guba (1985, 300) have suggested better fitting terms for the evaluation of qualitative research's trustworthiness. These terms are credibility, transferability, dependability and confirmability, which are equivalents to the traditional terms of internal validity, external validity, reliability and objectivity.

Credibility means it's credible that researcher has achieved the research results with the research methods written in the report (Anttila 1996, 408). Qualitative research report includes researcher's own interpretations and a good credibility means these interpretations coincide well with participants' interpretations (Eskola & Suoranta 1998, 209, 211-212). To improve the credibility of this research, the results include citations from the participants, from which readers can see themselves that the findings are based on participants' sayings.

In a qualitative research the researcher needs to constantly ponder the reliability of his own decisions. The most central criterion for credibility is the researcher himself and therefore the whole research process. (Eskola & Suoranta 1998, 209, 211-212.) To further improve this research's credibility, the research methods and the arguments for choosing them, have been explained in the previous chapters as thoroughly as possible.

There were a few reliability concerns when the planning for research methods started: Can participants remember reliably their felt emotions from previous shopping

experiences? Do participants know enough about emotions, so that they can express themselves as accurately as possible?

To answer the first question, shopping tests were chosen as a part of the experiment. This way, the participants had fresh memories from the shopping experience, which to record. If the participants were told to reminisce about their old experiences, the measured emotions would unlikely be as accurate. Larsen and Fredrickson (1999, 42) also suggest this: The more concurrently an emotion is measured with the emotion experience, the better the accuracy and validity of the results. The point of the video-recall was to further improve the concurrence of the emotion and the experience, by making the participants relive their shopping experience.

As Fehr and Russell (1984, 464) in their research mention, "everybody knows what an emotion is, until asked to give a definition". GEW is the answer to the second question, if participants can express themselves well enough. With the help of the GEW all the participants had enough emotion words in use to help them sufficiently express themselves. Also having an emotion assessment tool in front of the participants made them ponder their feelings more thoroughly when there was something to start from.

External validity used by conventionalists is practically impossible to achieve in a qualitative research. *Transferability* is a better suitable term for qualitative studies. To improve transferability of the research, the researcher should offer readers evidence that the research's results could be transferable to other contexts. Readers can then make the judgements of transferability by themselves. (Guba & Lincoln 1985, 316.)

To improve the transferability of this research, several external factors which could affect the experiment's results, had been taken in account as well as possible. For choosing the participants was compiled criteria, which helped to choose the most fitting participants for the research. In the interview questions were asked, if the experiment setting affected the shopping experience. Participants do three shopping tests in three different online stores, to diminish the impact of different fashion tastes and the impact of different online store structures to the research results. These have been explained thoroughly in the previous chapters.

There can be no validity without reliability and therefore no credibility without *dependability* (Cuba & Lincoln 1985, 316). To make the research as dependable as possible, the research needs to be consistent. Subjects that are not related to the research should be left out. Recommendations and interpretations should be based on the data. (Korstjens & Moser 2018, 121–122.) To improve dependability, researcher should mention all the factors that could affect the research's results (Eskola & Suoranta 1998, 213). Some of these factors were already mentioned in the previous paragraph.

Other factor, which could affect the research's results, are the participants themselves. In a qualitative research, researcher needs to take into account what intentions participants

might have. A researcher must be on his toes to notice the motivations behind the participants. Sometimes it can be that a participant twists or covers their answers or doesn't recall a certain event correctly. A researcher starts from the assumption that the information given is correct, but to improve the reliability, in other words dependability, of the research, the researcher could use more than one method to collect material. (Anttila 1996, 185.) In this experiment participants emotions and experiences are recorded in two ways: first the interview is aimed to collect participants' foremost thoughts and then video-recall is used to help the participants to recall their experienced emotions with more accuracy.

Research's *confirmability* means that research's findings receive support from other similar studies (Eskola & Suoranta 1998, 213). Confirmability concerns the aspect of neutrality. Both confirmability and dependability can be ensured by using a strategy called audit trail. The researcher should provide readers the notes of the whole research process, for example what material has been adopted, what decisions have been made during the research process or how research's data was managed. This way the reader can evaluate the transparency of the research. Audit trail strategy includes hiring an auditor, who can objectively evaluate the research. (Korstjens & Moser 2018, 122.) No auditor was hired for this research however, but this research rapport has still been made as consistent and transparent as possible, for the readers to evaluate the confirmability and dependability of this research themselves: the literature review aims at covering the previous studies related to this research while laying the foundation for the research methods used in this research. The development process of the used research method has been made transparent, for instance by including chapter 4.3.1 about the pilot experiment. The results chapter tries to cover all the findings thoroughly. In the conclusion chapter, the research's findings are compared to other related researches.

5 RESULTS

This section goes through the results of the data analysis. In total participants mentioned 374 factors which affected their shopping experience. To these factors the participants assessed 266 times positive feelings and 236 times negative feelings. These feelings participants marked down in the GEW or wrote down in the blank paper in their own words. These feelings were then divided to 12 different positive emotions and 14 different negative emotions. Most of the times participants found a fitting emotion from the GEW to describe their feelings, and every emotion from the GEW was used at least three times. Participants also wrote down their feelings in the blank paper, if they couldn't find a proper emotion from the GEW. A few times participants expressed their feelings in a way, which wasn't meaningful for this research. These expressions were converted to their closest equivalents[6]. The converted expressions included expressions that weren't proper emotion terms or expressions that were mentioned only a few times and could be subsumed to another emotion without losing any significant information. The emotion terms, which are added from the blank papers are *confusion* (37[7]), *frustration* (20), *boredom* (9), *trust* (8), *surprise* (8) and *suspicion* (4).

As was mentioned in the chapter 4.3.5, the emotion terms in the GEW represent emotion families, meaning for instance that low intensity anger can mean irritation and high intensity anger on the other hand rage. In the following chapters emotions are however only addressed in their emotion family names to avoid using too many emotion terms and therefore making analyzing and reading the results more complicated. For instance, if it's mentioned that a factor evoked anger in a participant, it could in reality mean that the participant was only mildly irritated. Using emotion terms like fear, anger or disgust in an online shopping context might sound exaggerated, but the reader should notice that fear experienced in online shopping context shouldn't directly be compared to fear experienced for instance during a pandemic. However, the appraisal patterns and behavioral responses are the same for fear regardless of the context in which fear is experienced. In different contexts fear might just be experienced with different intensities and nuances. The intensities, which participants were able to mark down alongside the emotions, are studied later in chapter 5.2.

The 374 factors were divided into 43 sub-categories and 6 main categories. *Content*, *navigation* and *visual* –main categories include factors that are related to the online store design. These categories were reviewed in the literature review in chapter 2.4 and were

[6] Irritation (10) → Anger (10); Impatience (3) + Overload (2) + Effort (1) + Haste (1) → Frustration (7); Positive (1) → Contentment (1); Negative wonder (1) + Unbalance (1) + Uncertainty (6) → Confusion (8); → Curiosity (1); Feeling of success (1) → Pride (1); Experimental (1) + Open mind (1) + Curiosity (2) → Interest (4); Self-disgust (1) → Disgust (1); Distrust (1) → Suspicion (1); Discontentment (1) → Disappointment (1); Anxiety (2) → Fear (2); Excitement (3) + Liveliness (1) → Joy (4)

[7] This number indicates how many times the emotion was mentioned.

clearly present in the data. There were however also many factors that weren't reasonable to be placed under these three categories and instead new three main categories were added. *Smartphone* -main category includes factors that can be associated with the device which is used to browse the online store. *Product* -main category includes factors which, as the name suggests, are related to the company's product range, -availability and -prices. The last main category includes the *environment and internal state* -factors. This category includes factors that aren't related to the system, but to person's personal skills, beliefs, attitude and to the environment where the shopping happens, in this case the experiment setup. This means that all the three parts identified by Hassenzahl and Tractinsky (2006, 95) that comprise user experience, surfaced also in this research.

The next chapter goes through each of the main categories and their contents one by one to answer the second and third research questions, *What factors affect online shopping experience on smartphone?* and *What emotions evoke from factors affecting online shopping experience?* Each main category is presented in its own table, which lists the factors that go under that category. In the tables the factors are presented with the emotions they can evoke, positive and negative emotions having their own columns. Then it is explained, in which situations these positive and negative emotions can evoke.

Once the main categories and their contents are familiar, it's time to answer the purpose of this research "*what factors and emotions are significant in consumer's online shopping experience on smartphone*." This chapter compares the categories to find the most important emotions and factors. In this chapter is taken account the intensities of the felt emotions, which participants marked down with each emotion assessment. The mathematical formula for the *significance coefficient* by which the most significant emotions in a shopping experience were determined, is presented in Appendix 3. After this the factors are examined from shopping outcome's perspective.

5.1 The significant factors affecting the shopping experience

5.1.1 The content factors

Based on Table 1 in chapter 2.4, in the content category there were factors included which offered information for the participants. The positive/negative emotion -ratio with content factors was 51/37 meaning that content factors were in general found more positive than negative. From positive emotions relief (8), joy (8) and pleasure (7) were assessed most. The most assessed negative emotions were anger (9), confusion (9) and disappointment (6). Content factors are presented in table 7 below.

Table 7 The content factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Assessed positive emotions	Assessed negative emotions
Product descriptions	9	16	Joy (4), Interest (3), Admiration (3), Contentment (2), Pride (2), Surprise (2), Amusement (1), Relief (1), Love (1), Trust (1)	Anger (2), Confusion (2), Hate (1), Guilt (1), Disappointment (1), Suspicion (1)
Size guide	5	10	Pleasure (2), Relief (2), Interest (1), Contentment (1), Pride (1)	Confusion (2), Anger (1), Disappointment (1), Frustration (1), Sadness (1)
Price information	5	6	Contentment (1)	Disappointment (3), Anger (3), Confusion (1)
Shipping options	5	6	Joy (2), Relief (2), Admiration (2), Trust (1), Pleasure (1)	Sadness (1)
Product recommendations	4	6	Pleasure (1)	Anger (2), Fear (1), Confusion (1), Boredom (1), Frustration (1)
Company information	4	5	Pleasure (1)	Confusion (1), Frustration (1)
Delivery information	4	5	Relief (2), Pleasure (2), Amusement (1), Joy (1)	Anger (1), Confusion (1), Fear (1)
Website name	4	4	Amusement (1), Interest (1)	Suspicion (1)
User reviews	3	3	Contentment (2), Relief (1)	Disappointment (1)
Campaigns	2	3	Interest (1), Joy (1)	Confusion (1), Frustration (1)
TOTAL	**45**	**64**	**51**	**37**

In the table the *participant mentions* -column tells how many participants mentioned this factor at least once across all the tests. This research was conducted with 10 participants, which means the maximum amount of mentions for each factor in this column is 10. The *total mentions* -column tells how many times the factor was mentioned in the first place regardless of who mentioned it. The *assessed emotions* -column tells what emotions were assessed to the factor. The number inside the brackets tells how many participants assessed this emotion to the factor at least once across all the tests, similarly to the *participant mentions* -column. The numbers in the *participant mentions* -column and in the *assessed emotions* -column might not always match, because sometimes participants mentioned a factor without assessing any emotion to it. These mentions were still included in the *participant mentions* -column, because participants talked about these factors as factors that affected their shopping experience. The factors are arranged in the table by the amount of participant mentions, starting from the factor that has the most

mentions, secondarily by the number of total mentions and thirdly by alphabet. The same pattern is used in the following tables as well. Next, each factor is presented separately starting from the top.

The most mentioned content factor was *product descriptions*, which is understandable, because learning about the product's details is quite relevant for a purchase decision. Product description -factor refers to the written information about an individual product in the product page. Because the visited online stores label themselves as ethical stores, participants wanted to find out what makes the products ethical. From the product descriptions participants looked for information about the product's country of manufacture and production materials. If the production methods were ethical and the product description included a proof of it, like a link to the production factory's website, very positive emotions including pride, love, trust and admiration could elicit. On the other hand, if product's ethicality wasn't obvious from the product description, online store's ethical brand could turn against the company and evoke negative emotions in the participants, like in participant 3 below.

"Well, it was produced in India, this garment, so it caused a little bit like… eh… suspicion, like has this really been produced in an ethical way, if this in reality is just their marketing gimmick." (Participant 3)

Negative emotions could also evoke, if the product description was written carelessly. For instance, one participant experienced hate, because the product was told to be black, but in the product picture it seemed green. Other participant felt angry, because the product name was misleading, and you couldn't figure out from the product description what kind of a product was in question. If the company had invested in their product descriptions, it could evoke positive emotions. One participant experienced joy and amusement, because the product descriptions were humorous and other felt joy because he learned new things about different fabrics like how to wash them.

The second most mentioned factor was *size guide*, which could also be considered quite relevant for a purchase decision. One disadvantage in online shopping is that you're not able to try on the clothes you're about to buy. A proper size guide helps to buy the right sized garment. According to the participants, a good size guide didn't just tell the garment's size in traditional size markings (S, M, L etc.), but also gave sizes in centimetres, like garment's bust size and length. A good size guide evoked positive emotions in the participants, like pleasure and relief. Vice versa negative emotions evoked, if the product page lacked a size guide or if the garment's size was told in unfamiliar markings, like in inches. The lack of a size guide could evoke for instance confusion, anger or disappointment.

Perceptions about the size guide or the lack of it especially showed how differently people browse clothes online and how they find information. For instance, one website tells the sizes also in centimetres, but two participants didn't find this information. These participants felt confused and disappointed, because they weren't sure what sized garment to buy. However, two other participants found the size guide and felt relief because with the help of the size guide they were confident about the size they had chosen or pride, because it isn't a self-evident truth that every site has a size guide. It isn't also self-evident that everyone will look for a size guide from the same place, so finding the best placement for a size guide or other significant website factors is important in creating the best shopping experience.

The third most mentioned factor was *price information* and like the two factors before, this factor too is relevant for the purchase. Price information -factor includes, in addition to the product price, information about taxes and shipping costs. All mentions about price information with one exception were negative. This one participant felt content because the shipping cost was already told at the front page, so she was prepared for it and the shipping cost would not have been an irritating surprise at the end of the checkout phase. This was, however, the case with the rest of the mentions about price information. Revealing the total price only at the end of the checkout process can evoke disappointment, anger and confusion. One page told about the shipping costs only at the end of the checkout and on another page the price of the order got suddenly bigger, because of the added taxes. For instance, participant 8 felt disappointed when the total price grew bigger unnoticed.

"It's irritating that you couldn't see the final price, until when I started filling my delivery information, then you could see the price up there. That was also written in a small print, so if I hadn't myself noticed it, I might had missed it." (Participant 8)

Fourth most mentioned factor in the content category was *shipping options*. One could have included these mentions in the delivery information factor, but the shipping option was clearly brought up separately, which is why it was put as its own factor. Shipping options were mentioned mainly in a positive way. Two participants experienced relief and trust, because the online store offered a familiar shipping option to a familiar location, in this case Smartpost service to a nearby store. Admiration, joy and pleasure evoked if the online store offered a shipping option that the participant favoured. These were a faster extra-shipping option, option to pick up the parcel directly from the store or the above mentioned Smartpost service. One participant felt sadness, because it was impossible to home deliver.

The next factor, *product recommendations*, isn't necessarily relevant for a purchase, but aims to enhance the shopping experience. However, in this experiment product recommendations also evoked negative emotions and were harmful for the experience, making it harder to complete the shopping task. For one participant, when she scrolled down on the product page, new products started to appear. This caused fear and confusion, because the page didn't message clearly, that you're now looking at the product recommendations. Participant feared that she lost the product she had just found and was confused, if she was now at the product page or not. For another participant, boredom ensued, because the recommended products weren't at all to participant's liking. Vice versa, when the products recommended were nice and eased the shopping experience, it evoked pleasure. Also, the complete lack of product recommendations caused frustration and anger. Models might be wearing clothes that weren't available in the store at all or there was no recommendation link to the rest of the products in an outfit, like participant 10 experienced. He had to look for the products manually.

"There at the product page, where are the trousers, there is a picture of that guy with the full outfit, he's wearing a grey hoodie and grey pants, so then I looked like I now have these grey pants in the shopping cart, so let's add that grey hoodie also. But then I scroll that same page and… There is no direct link to buy the full outfit, I have to find it myself, which wasn't easy and then it wasn't in the storage and there came that frustration." (Participant 10)

Company information -factor was mainly related to participants' need to find proofs about company's ethicality. Therefore, it could be that on a website, which doesn't offer ethical clothes, the importance of company information could be different. Two participants thought that company information on one website explained well company's values and gave a good overview of the products, which evoked pleasure. Two other participants mentioned that there should be company information on the first page of a website, which would tell a visitor why the website has branded itself as an ethical store. Now this information wasn't found. These two participants however didn't assess any emotions to these mentions. One participant perceived company information negatively and felt confused and frustrated, because the information made following the website harder. He just wanted to shop, not read about the company. The opposing reactions about the company information again highlight differences in customers' shopping styles. Some require more information to support their purchase decision than others, to whom excess information can only affect negatively.

The seventh most mentioned factor was *delivery information* and four out of five times, delivery information was mentioned positively. Delivery information evoked

relief, pleasure and joy, if the information told you how long receiving the product will take, retold in detail the contents of your purchase and how heavy or big the arriving parcel will be.

"There were really clearly mentioned all kinds of information and it's reassuring, when you have information. I like it when you get enough information, how big parcel is coming, how heavy parcel is coming, you know immediately that okay, if I go get that parcel, I know that I'm able to carry it myself and I don't have to take a bus home." (Participant 1)

On one website, the delivery information was lacking in the checkout page, and a participant didn't know how she needed to fill the delivery information and how she would receive her order to the right address. This evoked confusion and anger. One participant felt fear, because the review of her order didn't show product images and she couldn't remember just from based on the product names what the products were. From the product images she could be convinced that she has the right products in her shopping cart.

Website name -factor was mentioned four times. One could argue that a website's or a company's name isn't exactly content. However, because a name itself can give information about the website, the factor was decided to be included in this category. Website's name can determine with what emotion your shopping experience might start. For instance, participant 6's shopping experience started with amusement.

"It (website) also has an amusing name, which I was already thinking at the beginning. "Kind of Green", well, are you now (green) or not! (laughter)" (Participant 6)

Websites' name also evoked interest and suspicion. Suspicion evoked in one participant, when the first impression from the website didn't match the expectations laid by the website's name "Karma". Participant linked the name to ethicality, but couldn't find anything related to it from the first page. The same participant however later felt relief, when product descriptions finally convinced him of the website's ethicality.

The next factor is *user reviews*, which like product recommendations are meant to improve the shopping experience but can actually end up hampering it. If there were user reviews, content and relief evoked, because user reviews gave participants useful information and reduced doubts regarding the purchase. However, if there was an option to write reviews on a product page but nobody had reviewed a product, it evoked disappointment.

"Related to the disappointment, there were no reviews from any of the products. Slight disappointment, doesn't anybody use or review these products? From a review you could after all get additional info and certainty." (Participant 8)

Participant 8 didn't feel such disappointment on other websites, even though these sites also didn't have any user reviews. However, there wasn't even a possibility to write a user review on these sites, which is probably why the participant didn't know to miss them.

The last factor in the content category is the *campaigns* factor. Campaign's aim is to usually promote products or some good cause. However, campaigns can suffer the same fate as product recommendations or user reviews: they can actually worsen the shopping experience. One website had a "pay what you want" -campaign, which was confusing at first, because it wasn't obvious what the campaign's purpose was. After reading more about the campaign, confusion disappeared and campaign was perceived positively, because it promoted a good cause. In another participant the effect was opposite: when he first saw the campaign, it evoked interest and joy, but after reading more about it, interest and joy diminished: the campaign did not succeed in presenting good reasons to pay more for a product.

Another campaign related to this factor was related to discount codes. Participant became frustrated, because just by knowing some code he could have got the products cheaper.

5.1.2 The navigation factors

Based on Table 1 in chapter 2.4, in the navigation category there were included factors which were related to the functionality, complexity, structure and organization of the website. Navigation factors evoked the most emotional reactions and were mentioned the most often. The negative/positive -emotion ratio was 124/66 meaning that negative emotions were assessed almost double the amount compared to positive emotions. Anger (29), disappointment (21) and confusion (20) were assessed the most from the negative emotions and pleasure (16), joy (11), relief (10) and contentment (10) from the positive emotions. Navigation factors are presented in the table 8 below.

Table 8 The navigation factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Positive emotions	Negative emotions
Checkout process	10	16	Pleasure (6), Joy (4), Relief (4), Contentment (3), Admiration (2), Trust (1)	Anger (3), Disappointment (3), Confusion (2), Fear (1), Hate (1), Frustration (1)

General Navigation	8	28	Pleasure (5), Joy (3), Contentment (3), Relief (3), Compassion (3), Amusement (1), Interest (1), Surprise (1)	Confusion (4), Disappointment (4), Anger (3), Shame (2), Fear (1), Contempt (1), Frustration (1), Sadness (1), Disgust (1)
Presence / Absence of compulsory registration	8	15	Pleasure (2), Relief (2), Joy (2), Interest (1)	Anger (4), Hate (3), Confusion (3), Disappointment (2), Suspicion (2), Fear (2), Contempt (1)
Product categorization	8	15	Interest (2), Amusement (1)	Anger (5), Confusion (3), Disappointment (2), Fear (1), Contempt (1), Boredom (1), Frustration (1)
Signalling	6	13	Amusement (1)	Anger (3), Fear (2), Confusion (3), Contempt (2), Disappointment (2), Frustration (2), Hate (1)
Product browsing	6	10	Pleasure (2), Joy (1), Contentment (1)	Confusion (2), Contempt (2), Disgust (1), Disappointment (1), Frustration (1)
Website's errors	5	6		Anger (3), Confusion (2), Disgust (1), Shame (1), Contempt (1), Disappointment (1)
Checkout questions	4	8	Amusement (2), Joy (1), contentment (1), Trust (1)	Anger (2), Frustration (2), Hate (1), Confusion (1), Contempt (1), Disappointment (1)
Product search filters	3	4		Anger (2), Hate (1), Disappointment (1), Frustration (1)
Zooming	3	4	Relief (1)	Anger (2), Disappointment (2), Disgust (1), Frustration (1)
Colour palette	3	3	Contentment (2), Interest (1), Pleasure (1), Surprise (1)	
Image browsing	3	3		Anger (2), Disappointment (2)
TOTAL	**67**	**125**	**66**	**124**

Checkout process was mentioned by every participant and it's a factor which everyone needs to face, if they wish to buy something. Checkout process -factor covers the functionality of the whole checkout page. In this experiment, checkout process elicited more positive than negative emotions. According to the participants of the test, a good checkout page is easy-to-use and quick. With these two attributes was often mentioned the familiarity, which means that the checkout page followed industry standards and participants

were used to filling similar checkout forms. When checkout process worked, it could evoke pleasure, joy and relief among others. If the checkout process was too long, hard-to-use or unfamiliar, it evoked negative emotions like anger, disappointment and confusion. One participant hated a difficult checkout process, when he wasn't able to change the number of t-shirts anymore in the checkout page, but instead he had to return all the way back to t-shirts product page to make the change. Other participant was angry and confused, when she was asked about her home country before anything else. She found this order illogical. The emotion assessments to the checkout process -factor weren't always this black and white. One participant for instance felt joy and anger from the checkout process: joy, because the checkout was easy and anger, because the checkout process was too long.

General navigation -factor refers to the functionality and organization of the whole website. When participants talked about the websites' navigation in general, without assessing the emotion to any more specific factor, the mentions got put under this factor. When judging website's general navigation, participants applied the same evaluation criteria as with checkout process. Pleasure, joy and contentment evoked, if navigation on the website was easy and the participant knew where to go or didn't get lost in the website. Relief evoked, if the website was familiar in design and didn't require extra effort to navigate.

If participants got lost on the website, it evoked negative emotions. Some participants didn't know where to go next, where to find the category menu, or how to advance from the first page. Getting lost evoked confusion, anger, shame and frustration. Reason for getting lost was that the website felt unfamiliar or illogical. For instance drop down menu was on one page in the middle and not on the top left corner like it usually is. On another page you couldn't find products from the home page, but instead you had to go through a different link to enter the actual store. Unorganized structure evoked contempt and disgust in two participants. One participant experienced even fear, when the website felt unfinished: you had to be on your toes all the time, to avoid making mistakes.

General navigation -factor showed that participants don't just evaluate the website one factor at a time but take into account website's bigger picture. Four participants set expectations based on the first impression they had when they entered the website, like participant 9 below.

"Maybe I also felt a bit compassion, because in the end the website wasn't executed in the best way… But you still wanted to dig their vibe. They had a good vibe. It was also a little bit disappointing, that you wanted- expected quite a lot, but in the end the website didn't work that well." (Participant 9)

Participants felt disappointment and sadness, if website's front page looked nice and interesting, but further delving into the website showed that website's navigation quality wasn't on the same level with the first impression. If participants liked the website a lot and wanted it to succeed, they could feel compassion, like participant 9 above.

The presence of a *compulsory registration* evoked only negative emotions, with exception of one participant, who was only interested why the company wants to collect information about her: she is so used to giving information on the internet, that she doesn't mind compulsory registration. Other positive emotions assessed to this category, joy, pleasure and relief, were related to the absence of compulsory registration, because you were able to shop on the website without registration. Registration was compulsory on one website and had to be done before you could even enter the website. Participants were confused and suspicious why they have to give information before even seeing what the website has to offer. Registration at the very beginning of the shopping experience caused confusion, because participants were used to face registration at the end of the shopping experience, during the checkout process, not at the home page. One participant felt shame, because of how confused she became from the registration. Other negative emotions stemmed from the fear of losing your security or receiving spam mail after giving your email address. Compulsory registration also caused emotions such as anger, disgust and contempt, thus companies should ask themselves if they want to start a consumer's shopping experience with such emotions.

The fourth most mentioned factor was *product categorization*, which in this experiment evoked mostly negative emotions. Interestingly, unfamiliarity was seen in this factor as a positive attribute: two participants found one website's product categorization to only tops and downs as a simple and interesting way to categorize products. Four participants on the other hand found this way to categorize products as too simple and made finding a product of your liking slower. For these participants, tops and downs -categorization evoked confusion, anger, frustration and disappointment. The differing opinions regarding this categorization shows how differently people process information.

Even if unfamiliarity wasn't a problem with the product categorization, difficulty and slowness instead were. Participant 9 was confused about unclear categorization.

"I became confused when it felt like the categories had pretty much same products. There were for instance "trousers" and "sports" and they were practically the same thing. It's also related to anger. It was a bit stupid that those same products had been dropped to different categories, so maybe you could completely take away the sports category. You could make it a bit clearer that way." (Participant 9)

Th other participants too assessed confusion, contempt and disappointment, if the category names didn't match the products inside, there were useless categories or if the categories were overlapping. One participant for instance pondered, if she should look for a jacket from women, clothes or tops category. Another participant was amused, because there were no products at all in a category, so having this category was pointless.

Signaling factor refers to the visual or written guidance to navigate on the website or the lack of it. Like the previous factor, signaling too evoked mostly negative emotions. Only one participant was amused when he accidentally went to women's clothing, because there was no clear button to enter men's clothing. Three participants mentioned a misleadingly written navigation button on one of the websites. On the checkout page, after previewing the shopping cart, the button says "order products" even though the participant hasn't yet added payment or delivery information.

"There was written "order products", which was really weird, because I was like okay, I haven't put any of my information here, but when it says here that "order products", it sound like I'm now committing to this, I have to buy the products. In my opinion, it should definitely be here (at the end of the checkout process)." (Participant 5)

This caused fear, confusion, anger and frustration. Participants feared that if they pressed the button, it would take the delivery and payment information from the phone's memory and the products would be purchased. It could be, that the misleading navigation button wouldn't have had evoked such emotions in a real-life situation, when participant actually considers purchasing the products. Other mentions in this category came from not receiving any signal for making an error or when a product to the shopping cart was added. These left the participants in doubt, "what have I done wrong" or "do I now have the product in the shopping cart?"

Product browsing -factor means how easy it's to browse through and view different products. Similarly to many other factors inside the navigation category, participants could be satisfied with solutions that make the browsing quick and easy. Two participants felt pleasure, joy and contentment, because one of the websites you could browse product by swiping them horizontally. This was smooth and easy. If you had to browse the products vertically, it was found slow and laborious. This evoked in four participants who mentioned this either confusion, contempt, disgust or frustration. For a solution one participant proposed showing two pictures at a time instead of one. However, on the next website which did this, she wished that the website showed only one product at a time, because showing two products next to each other made the product pictures too small. Not being able to continue from where you left off after you return from a product page evoked confusion and disappointment. If this was possible, contentment evoked.

Website's errors naturally didn't evoke positive emotions. All the errors which happened during the experiment happened during the checkout process. Four times there was trouble with the shipping addresses, when a website didn't recognize the postal- or country code participant had entered. This evoked confusion and anger. One time a checkout page completely froze, and another time one participant couldn't progress, because the website gave an error message that all information hadn't been entered. The latter showed how different appraisals of an event's agency affects which emotions a person will experience. The participant first felt shame, because he thought he had himself made a mistake. However, during the video-recall participant noticed that he had actually filled all information correctly and the mistake was due to the website. After noticing this, participant didn't assess shame anymore and instead felt hate, contempt, disgust and disappointment at higher intensities.

Checkout questions -factor is basically a part of the checkout process -factor and is therefore related to the quickness and effort attributes. Questions asked during the checkout process were however mentioned enough times, so it was meaningful to create a separate factor from them. If participants thought that the questions asked during the checkout were unnecessary, negative emotions evoked. Vice versa, if the checkout had only necessary questions, joy and contentment evoked. Participants were used to websites fishing extra info from their customers, so it was a positive surprise, if the checkout didn't ask any excessive questions. It matters too, how you present the questions like participant 1 explains.

"It (checkout) didn't force me to register, it didn't at any point require more information from me than Everlane, but this never- I never got a feeling that they demand information from me. "NOW! Give us your email!" This was more like, these are the information we need from you, let's carry on. I never questioned why they need this information from me. In that sense it was trustworthy." (Participant 1)

The unnecessary checkout questions, which participants mentioned were "do you like men or women's clothing?" and "in which province do you live in?" These questions were irrelevant and outdated and felt frustrating to answer, because they made the checkout process slower. One participant found the latter question amusing, because Finland hasn't had provinces in years. Another amusing question was "what mailing option you want to choose?" when there was only one mailing option available. Questions about discount coupons and voluntary registration were also regarded as unnecessary.

Product search filters are tools which make product searching easier. This factor was only brought up when product searching didn't work as hoped. One participant felt anger and disappointment, because there were no filters in product searching and it made finding the right clothes harder. If relevant filters, like colour and price were missing, it

evoked anger and hate. Two participants mentioned that option to filter products based on their newness was irrelevant and frustrating.

Zooming factor refers to product image's own zooming option. With it, it's easier to look at the details like material or print of a product and better judge the purchase decision. If the image doesn't have a built-in zoom, you'll have to use your smartphone's zooming option and there's a change that the product image will look blurry. This was among others frustrating and disappointing for participants, because you had to judge the products with insufficient information. For this reason, one participant then felt relieved, when zooming on another page worked.

One of the websites had a *colour palette* feature, which made browsing the products easier. During product browsing, under the product images is a colour palette from which you can switch the colour of the product and the product image updates immediately. It allows you to check the colour variants of a product without having to go to the product page. Some stores also present different colour options as multiple products, which participant 4 mentions.

"I thought this (colour palette) was pleasing, it didn't need to buffer, or that it was fast, and it was nice that the colours were next to each other. Because in some stores you see that the different colour is multiple times the same clothing. So, this was clear." (Participant 4)

Participants found colour palette a pleasurable way to check different colour options. It also evoked interest, because you don't often see such a feature.

The last factor in the navigation category is *image browsing*, which as the name suggests is related to the functionality of choosing and switching between product images. Participants felt anger and disappointment, because instead of the product image changing on the product page, it opened a separate pop-up window for the image. This was clumsy, and it would have had been better, if you could just swipe the images, instead of separately opening and closing them.

5.1.3 The visual factors

Based on Table 1 in chapter 2.4, in the visual category were included factors which were related to the websites' aesthetics. The positive/negative emotion ratio with visual characteristics was 55/30. Positive emotions that evoked the most were interest (13), pleasure (12) and contentment (9). The most experienced negative emotions were disappointment (11) and boredom (6). The visual characteristics that were mentioned are presented in the table below.

Table 9 The visual factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Positive emotions	Negative emotions
Product images	10	15	Interest (2), Pleasure (3), Contentment (1), Compassion (1)	Disappointment (3), Anger (2), Frustration (1), Sadness (1)
Front page	9	18	Pleasure (5), Interest (5), Admiration (4), Contentment (4), Joy (3), Pride (1)	Disappointment (2), Boredom (2), Confusion (2), Disgust (1)
General style	8	20	Pleasure (4), Interest (3), Contentment (3), Joy (2), Surprise (2), Amusement (1), Pride (1), Admiration (1), Trust (1)	Boredom (4), Disappointment (3), Hate (1), Contempt (1), Frustration (1)
Text font	6	6	Interest (1), Joy (1)	Disappointment (1), Hate (1)
Advertisements	4	5	Amusement (1), Interest (1)	Disappointment (2), Anger (1), Disgust (1)
Payment option - images	4	4	Contentment (1), Trust (1)	
Product videos	2	2	Interest (1)	
Memes	1	1	Amusement (1)	
TOTAL	**44**	**71**	**55**	**30**

Product images were mentioned by every participant and it was the most mentioned factor in the visual category. Product images are the images shown on a product page and aim to give a good look at the product. Like mentioned in table 1 in chapter 2.4, visual design's relevance for purchase is low and is mainly concentrated on making the shopping experience pleasurable. This might apply to the rest of the factors in this category, but product images are an exception. They are highly relevant to a purchase. Customers usually want to see how a product looks and product description alone is rarely enough to make a purchase decision. Product images' relevance for purchase might explain why they were the most mentioned visual factor.

According to participants, good product images give you a clear look at the product you're considering, so you don't have to buy a pig in a poke. You can get a clear look at a product if the images are large enough and there are many images of the product from different angles and with and without a model. This evoked pleasure, contentment and interest. Negative emotions evoked, if the product images were unclear and misleading, like participant 5 experienced.

"The model was wearing a nice striped shirt, which I could buy, but then I was like, okay, this was just for illustration, and the actual product was the trousers, so that was

irritating. In my opinion if you're not like a shoe store, all the products which the model is wearing should be of your brand and available on the website….This online store had okay images, but like most of the online stores, those models were of the smallest size, because I was looking from there my own size, and I was like the second biggest size there was, so surely this brand doesn't offer products to bigger sized people." (Participant 5)

Misleading images evoked anger, frustration and disappointment. Two other participants also mentioned that showing multiple products in the same image and having only thin models wearing the products makes the shopping more difficult: you don't know what product is in question and if it will look good on your body. Four participants mentioned that the product images were too small and therefore unclear. One participant felt sadness and compassion, because the site was otherwise likable, but the product images were bad.

The second most mentioned factor was *front page*. This factor is related to the first impressions websites gave to the participants. Participants' evaluations were based on front pages' aesthetics, which is why front page -factor is placed under visual category. Front page -factor received the most emotional assessments in the visual category, which emphasizes first impression's significance in a shopping experience.

The same attribute applies to a good front page as to a good product image: clarity. A good front page clearly tells what the online store is about and what style of clothes you can find:

"The front page was good. There was immediately in a nutshell that, okay, this is ethical street fashion and then you were like okay, now I know what your value promise is. When the previous pages were like, here are some certificates. I don't care, if you have a Fairtrade-certificate or not, but if you have things I want to buy. The whole first picture where is this styled guy showed what is the style you can get from the store. The layout and visuality… After that (front page) the browsing was maybe a bit laborious. But it was worth the trouble, because after the front page you knew that you can find from the store things you like, so you were ready to stand some trouble." (Participant 4)

The above opinion is similar to other mentions in this category. A good front page is also visually pleasing and evokes interest towards the website. A bad front page on the other hand is visually boring and you can't figure out based on the front page what the online store is about. The front page is boring and confusing and doesn't encourage you to explore it more.

The third most mentioned factor was *general style*, which like general navigation is related to the whole website and its aesthetic style. Bad general style feels unimaginative and boring and doesn't entice you to explore the website more. Similarly to the front page factor, the online store's aesthetics should be clear and true with the online store's products and brand.

"Boring with the capital B. There is just white space and I have to zoom because I can't see what there is. And pictures just against white background, super boring… there's a picture, there's a picture. There's a little bit of text, help yourself. It's like, the personality is completely missing. I don't know at which website I'm doing business in, because you can't figure it out from the layout." (Participant 10)

Bad aesthetics can make you feel bored and therefore drowsy. Bad aesthetics also make the website look cheap and give you a feeling that the website doesn't offer quality products. A website with a good general style communicates high quality and can therefore evoke trust or admiration, which is a superior emotion to trust. A website with a good general style is pleasing to look at and makes you want to further explore the website.

Text font -factor didn't get many emotional assessments but was mentioned the fourth most times as a factor affecting the shopping experience. According to two participants, with the text font size you can direct customers' gaze to the right direction and ease the navigation on the website. One participant felt joy, because the prices were in big font and clearly visible: the company hadn't tried to hide the price. In another case the text font was in bad resolution and evoked disappointment, because it made the online store look cheap. Another participant thought that the font was presented in an interesting way: the background turned suddenly from white to black and the text font on it went from black to white. This sudden change in the font style evoked interest and participant wanted to know what info the company wanted to highlight with this change. Two participants mentioned that too small text and annoying font made browsing the website difficult. This evoked hate.

Advertisements evoked mostly negative emotions. Advertisements were seen as visual clutter, which distract the actual shopping experience, so again, clarity was brought up. If advertisements disturbed the shopping, they evoked frustration, disappointment and anger. One of the websites had a New York -times article on the front page, which two participants pointed out. When they came to the website, it was the first thing they saw instead of clothes and it was befuddling for a moment. Another page had a Fairtrade ad, which divided opinions. One participant found the ad welcoming and in another participant the advertisement evoked disgust, because ethicality was rubbed in your face from the beginning. One participant found the Fairtrade ad amusing, because of how low quality it looked.

Payment option -images were mentioned only in a positive way and is a factor, which makes the checkout process faster and easier. For participant 1 the lack of payment option -images might be sometimes a reason to abandon the checkout process:

"I liked that those payment options were visually presented. It's really important to me that I visually see the things which are said to me, that if it says you can pay through a

bank, then there are Nordea, OP, blablabla, the banks with their logos. And then I can just click the logo. It has happened to me a couple of times, that if payment options aren't clearly visually presented, I might be "nah, I'm not ordering". If I have to start thinking, "where in here are the payment options", then it opens to me a new window to re-think the purchase decision." (Participant 1)

One participant assessed trust with this factor. Seeing the payment options visually made him more secure towards the website. Other participant assessed contentment for similar reasons: seeing the payment options as images makes you more secure that you have chosen the right payment option.

Product videos got mentioned only two times, even though it was listed in the table 5 in the chapter 4.3.2 as one of the characteristics an online fashion apparel store should have. On the other hand, only one of the tested websites had product videos and these could only be found from the product page after going through all the product images. Nobody mentioned the lack of product videos, which could indicate that product videos aren't that common. Product videos evoked interest in one participant and the two participants who found the product videos mentioned they are good, because videos show you how a product reacts in movement.

Memes are the last factor in the visual category and got only one mention: participant was amused by the funny memes on the website. According to the participant, the memes contributed to the websites overall good atmosphere. Memes were from the company's social media feed and like product videos, social media implementation was one characteristic an online fashion apparel store should have, but still wasn't mentioned that often. Again, a reason for this could be that only one of the websites had memes and they were at the bottom of the page. It could also be that participants were so focused on the shopping task, that they didn't pay attention to factors which didn't support the completion of this task.

5.1.4 The product factors

In the product category were included factors, which were related to the products in the online stores. These factors are an inseparable part of an online store, but aren't related to online store's design. Product factors, which include product range, -availability and -price, were most often the reason to either leave or stay in an online store. The positive/negative emotion -ratio with product factors is 34/27 and the most assessed positive emotions to product factors include interest (7), pleasure (7) and contentment (6). From the negative emotions, disappointment (13) was assessed the most. The assessed emotions are similar to visual factors, which could be due to the fact that online products are appraised through visual elements.

Table 10 The product factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Positive emotions	Negative emotions
Product range	8	22	Interest (6), Contentment (4), Admiration (4), Pleasure (3), Joy (2) Relief (2), Love (2), Amusement (1)	Confusion (4), Disappointment (4), Anger (2), Hate (1), Boredom (1), Disgust (1)
Product availability	7	12	Pleasure (2), Contentment (2), Pride (1)	Disappointment (7), Sadness (2), Confusion (1)
Product price	6	9	Pleasure (2), Amusement (1), Interest (1), Surprise (1)	Disappointment (2), Fear (1) Disgust (1)
TOTAL	**21**	**43**	**34**	**27**

Product range was the most mentioned factor in the product category. Product range -factor includes mentions, which were related to the appearance of the products and size and variety of the product range. If the product range was appealing and matched participant's style, it evoked among others interest and admiration. If the products weren't to participant's liking, it was disappointing. When participants mentioned individual products, they assessed emotions like love, admiration, joy, amusement or boredom. For instance, one participant found an E.T. shirt, which was cute and evoked love. In participant 3 products evoked joy and interest.

"That banana shirt, which I eventually found was nice. (Giggling) So maybe that evoked some joy or it was like funny looking. Hmmm… Well maybe a bit interest, because there were Dr. Marten's boots." (Participant 3)

Finding the right number of products to include in an online store can be hard. Too broad or too small product range can evoke confusion. Too broad of a product category can make you overwhelmed and make decision making harder. Also, if the product range is too small, it makes you wonder, why have the product category at all, if it only includes a few products. A too small product range is also disappointing, because there is too little choice. When the product range is the right size it can evoke pleasure and relief, like in participant 5 below.

"I also liked that there weren't a ridiculous amount of products, like if you're shopping at Zalando, like you can't buy anything from there, because they have ***everything*** *in there. It takes forever if you try to find something from there, when you know that you can always*

find something better from the same website. Here they were like, "we have these four trousers", I feel like it makes it easier to purchase from the website." (Participant 5)

Confusion could also evoke if a product range was unbalanced. One participant was confused about the product range, because it didn't have just clothes, but included weird jewellery and weird bags. Another one was confused about the varying quality of the clothes: some of the clothes looked something which you could get from a local department store, while for some products the high price tag seemed justified.

Product availability evoked mostly disappointment, because sometimes a product participant wanted wasn't available at all or in the required size. Pleasure and contentment evoked, if participant got the last product, or if there were products available in the participant's size. Two participants mentioned that the product availability could be mentioned already during product browsing, so that you don't get your hopes too high when you find a nice product just to see that it's not available.

"The size markings which were available, they could already be shown in the product browsing. That one shirt which I was interested in, there in the end wasn't M-size available at all. Again, I had clicked myself in and that always causes little irritation. How long do I have to- Always when I find something nice, and then there isn't size available anymore. Because at the moment you might already do the purchase decision, that this looks nice, I could take this, then it is there available, we have a nice one here, but by the way not in your size." (Participant 8)

Two participants also pondered the online stores' storage sizes in general. One participant thought that it was weird that one online store's storages seemed quite empty, which caused confusion: why do you have so few products in storage? Other participant felt sadness and disappointment, because the product she wanted wasn't available, but the intensity of these emotions were lowered by the thought that maybe it's just ethical that the company doesn't have too big storages.

Last product factor is *product price*, which evoked negative emotions, if the price range was too high and positive emotions, if you could find a product that was at a discount. Discounts evoked pleasure and interest, because you could get the product you wanted at a cheaper price and save money. High prices on the other hand could evoke disappointment, disgust and even fear. One participant was scared if she accidentally buys the expensive products which she had added to her shopping cart. She also mentioned that on a smartphone it's usually scarier to deal with high prices, because on a smartphone it's easier to make mistakes.

"The higher the price the more I'm scared to do shopping on mobile… Because in mobile it's so easy to do mistakes, so what if I purchase the product twice. So what if I accidentally pay 150. What if my internet cuts off and then my page updates and then it for some reason sends my order twice." (Participant 1)

The high prices also raised some questions for the participants. One participant thought that the high price must be linked with the quality of the clothes. Ather participant was prepared for the high prices, because ethical clothes are usually more expensive. Third thought that it was amusing that immediately the prices are higher when you have a "special Finnish hippie" -store. Fourth participant wanted to find justification for the high prices, because the clothes visually didn't differ from cheaper clothing stores.

5.1.5 The smartphone factors

In smartphone category were included factors which participants associated with their smartphone. This means that even though long loading times could be due to the website, participants still mostly blamed their smartphone for it, which is why loading times -factor was placed under this category. The positive/negative emotion -ratio with smartphone factors was 13/10 and it shows that smartphone factors did not evoke many emotions. From the positive emotions joy (3), pleasure (3) and relief (2) were assessed the most and from the negative emotions anger (4), disappointment (3) and frustration (2). Smartphone factors are presented in Table 10 below.

Table 11 The smartphone factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Positive emotions	Negative emotions
Automatic form filling	8	15	Joy (3), Pleasure (3), Relief (2), Amusement (1), Admiration (1)	Anger (2), Disappointment (1)
Loading times	6	12		Frustration (2), Anger (1), Disappointment (1)
Mobile optimization	2	2	Compassion (1)	Anger (1), Disappointment (1), Disgust (1)
Smartphone usage	1	1	Amusement (1), Joy (1)	
TOTAL	**17**	**30**	**13**	**10**

The most mentioned smartphone factor was *automatic form filling*. Automatic form filling means that your browser returns your previously saved information, if you have allowed your browser to do so. Browser will then automatically fill your contact details

and delivery information making the checkout process faster. If automatic form filling worked, it evoked joy, pleasure, admiration and relief, because it made the tedious checkout process easy and quick to complete. Anger and disappointment stemmed, if automatic form filling didn't work. This made the checkout process slower. One participant also felt amused, because the automatic form filling entered participant's old address instead of her current address. Most participants knew that the automatic information filling is accredited to Google, but a few participants weren't sure whom to give the credit to.

"Well, it was very handy, but I don't know, maybe it wasn't because of the website, but I have all the information saved there, so they come automatically entered, so then it (checkout process) goes quite well." (Participant 6)

If Google is not able to fill the form automatically, it might be due to the user's own browser settings. Not everybody knows that, and the users might falsely accuse the online store for the problems. One participant felt angry, because the checkout form didn't ask her email first and she thought that this was why the automatic information filling didn't work. One reason for the automatic form filling to not work is that Google classifies the website as insecure. A company should look into reasons why Google has made this classification for their website.

The second most mentioned smartphone factor was *loading times*. Slow or fast loading times included the most unclarity whether loading times were due to the website, internet connection or the user's smartphone, like for participant 7.

"Well, it (shopping) started quite slowly. It could be also just due to the internet connection, or the website itself, it's hard to interpret at which end the problem is. But in its entirety the first reaction naturally is mild frustration. When it takes a bit time." (Participant 7)

Loading times -factor was mentioned more times than it got emotion assessments. All the emotion assessments were negative even though loading times were mentioned three times also in a positive way. This could indicate that fast loading times are taken for granted, so when a website works with sufficient speed, we don't pay much attention to it and it doesn't stir emotions in us. When loading times are long, it can evoke frustration, anger and disappointment. For one participant the long loading times in the online store were a reason to not check everything the site had to offer even if the products were interesting. Emotion assessments in loading times and automatic form filling indicate that consumers value speed in the shopping process and if the process isn't fast enough it can harm the shopping experience.

Mobile optimization was mentioned two times. In these two cases the pictures or prices didn't show on the website properly, and participants had to switch their phones sideways to see them. This evoked anger, disgust, disappointment and also compassion. Mobile optimization is on the website's responsibility and not on user's smartphone's, which is why mobile optimization factor could as well be put under navigation category. However, mobile optimization works differently depending on the smartphone being used, which is why this factor was put under smartphone category.

The last smartphone factor, *smartphone usage*, is the only factor which only fits in the smartphone category. This factor was mentioned by one participant in a positive way.

"Well, maybe a bit joy and amusement. I don't know, maybe it's the gamification, it's always fun to use, scroll with the smartphone. So it gives you a good feeling, but nothing strong." (Participant 4)

The above participant assessed amusement and joy with this factor. As explained in the literature review, smartphone usage is used more for enjoyment purposes than computers.

After each test during the interview participants were asked, if their shopping experience would have been different, if they had used some other device. Most of the participants said that on a computer the experience could have been faster and easier due to a bigger screen size. Texts would have had been easier to read on a bigger screen, buttons and text input would have had been easier and a computer screen might have had shown more products at a time making product browsing faster on a computer. Emotions were assessed to mobile optimization and smartphone usage only three times across 30 tests, but smartphone's influence shows in other factors, like product browsing or text fonts and picture size. Even if problems with these factors could be due to smartphone's device limitations, users still mostly blame the company or the website for the problems: user thinks that the problem is not the small smartphone, but that company should have been able to better optimize the experience for the user's smartphone.

5.1.6 The environment and internal state factors

Environment and internal state category's name was drawn from Hassenzahl and Tractinsky's (2006, 95) literature review, which divided the formation of user experience in three parts: system, environment and internal state. If the previous categories and factors all fall under the system, this category includes factors outside of it. These factors are impossible or difficult for a company to alter and the factors include participants' attitudes towards shopping, online shopping, ethicality and domesticity. Also, a company can't affect someone's personal online shopping skills other than by making the shopping experience as easy as possible. The environment in which the online stores were browsed

was an experiment setting. In another setting the assessed emotions could have been different and there could be a completely different factor related to environment in this category instead of the test situation -factor. One could argue that company's ethicality and domesticity are related to the online store and should therefore be placed under some other category, which is true. However, the emotions assessed to these factors didn't just stem from the online store, but from participants' overall reflection of their own relationship to ethicality and domesticity. Also, it wouldn't have been meaningful to create another main category just for these two factors, which is why they were placed under this category.

The positive/negative emotion -ratio with environment and internal state factors was 48/18 meaning that the environment and internal state factors were mainly beneficial for the shopping experience. Interest (10), joy (9) pleasure (5) were the most assessed positive emotions. Because negative emotions were assessed less, the number of assessments per negative emotion were small. The most assessed negative emotions were regret (3), fear (2), shame (2), guilt (2) and anger (2). The emotion assessments to the environment and internal state factors further proves that we don't evaluate user experience just based on the online store's characteristics.

Table 12 The environment and internal state factors and the emotions assessed to them

Factor	Participant mentions	Total mentions	Positive emotions	Negative emotions
Shopping	8	16	Joy (5), Interest (4), Pleasure (4), Contentment (2), Relief (1), Pride (1), Surprise (1)	Regret (1), Frustration (1), Sadness (1)
Ethicality	6	8	Interest (3), Admiration (3), Pride (2), Joy (1), Pleasure (1), Love (1)	Guilt (2), Anger (1), Contempt (1), Confusion (1), Disappointment (1)
Online shopping	4	7	Interest (2), Amusement (1), Relief (1), Joy (1)	Fear (2), Regret (1), Hate (1), Anger (1)
Domesticity	4	5	Trust (2), Interest (1), Joy (1), Relief (1)	
Personal online shopping skills	3	5	Amusement (2)	Shame (2), Regret (1), Disgust (1)
Test situation	2	3	Amusement (2), Relief (2), Joy (1), Contentment (1), Pride (1)	
TOTAL	**27**	**44**	**48**	**18**

Shopping factor includes emotion assessments that are related to the shopping activity itself. Participants found shopping to be mostly fun. Emotions like pleasure and contentment could evoke just from browsing and looking at nice clothes. Most of the emotions, which evoked from shopping, were related to finding a nice product. Finding something to your liking could evoke joy, interest and pleasure. The negative emotions associated with this factor came from not finding anything nice from an online store. This caused two participants frustration and sadness. One participant felt regret, because she didn't pick a nice pair of jeans in her shopping cart when she first found them, and when she later tried to look for them, she couldn't find the jeans anymore. Website features like product recommendations and showing previously checked products might decrease the change of customer not finding anything or losing a product customer had previously checked.

Ethicality factor evoked the second most mentions inside the environment and internal state category. The participants were told before the tests that the three online stores they're going to visit have branded themselves as ethical clothing stores. This set some expectations regarding the websites. One participant thought that ethical clothes are just some "glad rags" but got interested when she found out that ethical clothes can also be stylish. The online stores, which managed to convince participants that they are actually ethical, evoked among others pride, love and admiration in the participants. Like in participant 2, who was convinced about one page's "inside our factories" -feature, from which you could learn about the origin of the clothes.

"Well, maybe the whole concept (evoked interest and admiration). How nicely it was done, and the admiration came from how clear the origin of the clothes was. You could see from there in which factory they have been produced and the whole production chain felt really transparent… They had put out trouble for it. Maybe small-scale guilt, because I don't pay attention to such things." (Participant 2)

As can be seen in the above excerption, ethicality didn't evoke just positive emotions. Two participants felt guilt, contempt and disgust, because they started thinking about the ethicality of their shopping behaviour in general. The shipping of clothes burden environment, so why don't I just buy clothes from brick-and-mortar stores?

The results indicate that just declaring to be ethical isn't enough to convince customers. Customers seek proofs about ethicality. What customers then feel about the ethicality depends on the consumer's beliefs and perceptions. Based on the mentions with this factor customers search for proofs about ethicality mostly from product- and company information.

Online shopping -factor received its own mentions separately from the shopping-factor. When mentions in the shopping-factor were related to the activity itself, mentions in the online shopping -factor are concentrated on the limitations of the online shopping. For

instance, two participants assessed fear and one anger, because in online shopping you can't try on clothes and there's a chance that you might choose a wrong sized product. Other mentions included having to fill your personal information and the need to wait for the clothes to arrive. These evoked hate and anger. One participant felt regret, because one of the visited online stores worked in his opinion so badly that he would be rather shopping in the traditional way.

Online shopping was mentioned in a positive way two times. One participant felt interested, because he wanted to see what the shopping is like from a technical point of view. Another participant had seen so many badly working websites in her life, that she felt joy, relief and interest when she encountered a good online store.

Domesticity was mentioned only in a positive way. Domesticity increases confidence that everything with the purchase will go smoothly and be stress free, like participant 1 brings out below.

"I'll add here the word trust. Then I also added relief, because this was a domestic online store, so I waited for like… Or it's always relieving, when you have a domestic website. You can see the price in euros and in Finnish language and shipping to Finland should be sure. (Laughter) So you don't have to think, if they are even shipping to Finland and how much the shipping would cost." (Participant 1)

The things mentioned in the above excerption surfaced also in other mentions related to this factor. Participants often mentioned that a website "seemed Finnish" and felt interest, joy or trust only based on an assumption. One participant felt joy that the online store had Finnish product descriptions. Another felt trust, because the store offered familiar Finnish brands. If a customer who visits the company's online store is a foreigner, the company can make this customer feel at home by using familiar elements, like customer's first language or domestic brands.

Three participants also assessed emotions to their *personal online shopping skills*. These three participants were either regretful, ashamed, amused or even disgusted with themselves. Participant 10 felt self-contempt, because he got confused with the checkout question asking customer's province.

"I pressed some wrong button, which evoked a little bit of shame, because I'm an idiot, who presses wrong buttons. Here I feel big self-contempt, because I got confused, I searched for Finland Proper, I was like where the fuck is Finland Proper, though they asked for provinces, even though there officially aren't provinces anymore. They are, what are they, regional administration offices, so that is Western Finland. So that's what I felt after this, once I realized my stupidity, I felt self-contempt." (Participant 10)

The same checkout question was brought up earlier with the checkout questions -factor, but with that factor the evoked emotions, anger and amusement, were directed

towards the company, not to self. This shows how different appraisal of an event's agency affects the experienced emotions. Other participant was also amused and ashamed of herself, because she got lost in the menus and couldn't navigate in the online store. One participant regretted that he hadn't done online shopping enough and by his own admission felt like a novice in the online store.

From the three participants, that assessed emotions to their personal skills, two also assessed emotions to the *test situation*. These two participants were overall more aware that they are being observed and probably for this reason paid more attention to their personal online shopping skills. Being aware of the test situation means that creating an authentic online shopping situation wasn't entirely successful. Both of the two participants found doing the test amusing and felt pride, joy, relief or contentment for completing the test, like participant 6 below.

"Contentment that I was able to complete this test. And that I was in the end able to find something from there. I think it's a good thing. I don't know, I was honestly a little bit ashamed that I'm somehow so clumsy. But it could also be due to the website, that I didn't always found something. Maybe I couldn't navigate as well as I thought. Well, it is fun to do this test." (Participant 6)

It needs further research, if people would feel the same emotions in an actual shopping situation and see that as a test and for instance feel pride for completing a checkout process and purchasing a product. The assessed emotions with this factor all had a high intensity. This could indicate that customer who are insecure about their personal online shopping skills might experience strong positive emotions when they successfully finish a shopping task.

5.2 The significant emotions affecting the shopping experience

As mentioned in chapter 3.2, emotions rarely occur alone, but in mixed emotion sets and this was the case also in this research. One factor could evoke multiple emotions in one participant, but these emotions weren't felt to the same extent and some emotions were more dominant than others. The emotions presented in the previous tables ranked the emotions only by the number of *participant mentions* without taking account the intensities of the felt emotions. To determine more accurately the most significant emotions inside the main categories, *significance coefficients* were used. These coefficients were calculated based on the intensities participants had marked down when they assessed their emotions. The significance coefficient indicates how likely the factors inside a category are going to evoke the emotion in question in a customer during customer's online shopping experience. In other words, the significance coefficient expresses how much

importance the emotion has in customer's online shopping experience. The formula for calculating the significance coefficients can be found from Appendix 3.

The emotions are presented in figures similarly to the GEW. These include emotions, which participants assessed outside of the GEW, and which were presented at the beginning of chapter 5. These emotions were placed in their locations by comparing similar characteristics of the emotions and by using the hierarchy of consumer emotions (Laros and Steenkamp 2005, 1441) presented in Figure 4. Boredom is placed next disgust, because boredom is disgust's subordinate emotion. With the same logic, trust is placed next to admiration and frustration next to anger. Also, another emotion assessment tool from Plutchik (2001, 344–350) was used to determine the correct locations for some of the emotions. Plutchik's theories about emotion development processes and survival issues were already handled in chapter 3.3. Plutchik (2001, 344–350) created an emotion assessment tool called the wheel of emotions, which helps to show which emotions are opposites. Plutchik's (2001, 344–350) wheel shows surprise as a mild opposite to interest. In previous research surprise has been determined both positive and negative, but in this research, surprise was assessed more in a positive way, which is why surprise is placed clockwise as the last positive emotion in the figures, furthest away from interest. Confusion is a negative knowledge emotion, which is why it's put on the left side of interest.

The lowest significance coefficient an emotion could get inside a main category was zero. This means that the emotion wasn't assessed even once. There was no upper limit for the significance coefficients, but the highest significance coefficient was received by anger in the navigation category, in which anger received a significance coefficient of 74,4.

The significance coefficient takes in account the number of times different participants have assessed the emotion to the factor. If the significance coefficient for an emotion was an average value of all the intensity values of an emotion, it wouldn't take in account the differences in the participant numbers and would give biased results. For instance, nine participants assessed confusion to content factors and one participant assessed guilt. If the significance coefficient was an average value of all the intensity values, the significance coefficient for confusion would be two and for guilt three. This would indicate that content factors are likely to evoke a bit more guilt than confusion. However, when the participant numbers have been taken in account, the significance coefficient for confusion is 24 and for guilt three. This means that participants are much more likely to feel confusion rather than guilt from the content factors.

5.2.1 The significant emotions inside the content category

The most significant emotions inside the content category are presented in the figure 9 below.

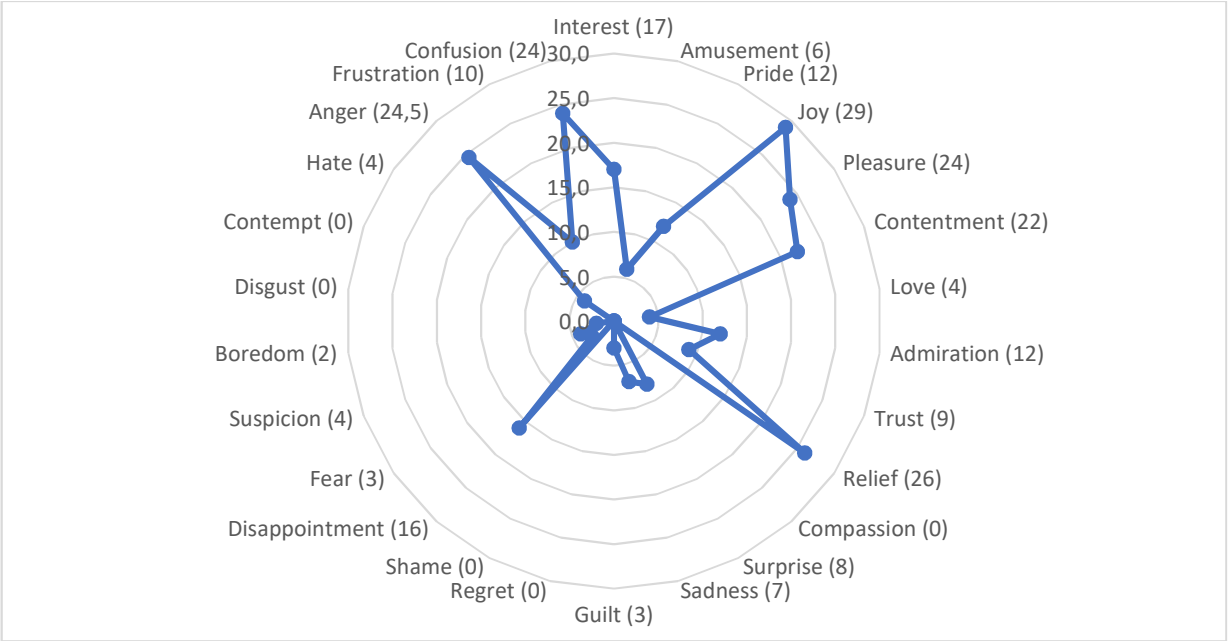

Figure 9 The most significant emotions inside the content category

As can be seen from the figure 9 above, content factors were perceived more positively than negatively. The emotion assessments for positive emotions have distributed broadly between different positive emotions. From the figure can be seen that the most significant positive emotions, which online store's content factors can evoke in an online store visitor, are joy (29[8]), relief (26), pleasure (24) and contentment (22). Different negative emotions were experienced less and the emotion assessments for negative emotions are more focused to certain emotions. These emotions are anger (24,5), confusion (24) and disappointment (16).

Before being able to go through why content factors evoke such emotions, common attributes between the content factors should be looked at. By and large content factors, which are most relevant for completing a shopping task, received most mentions. After that came factors, which aren't that necessary for completing the shopping task, but can possibly enhance the shopping experience. This same *relevance* order also applied to navigation and visual factors. For instance, the top three content factors, which are product description, size guide and price information are all relevant for a shopping task: if you want to buy an apparel, you probably need to know what the apparel is, if it fits you and how much it's going to cost. The least three mentioned content factors, website name, user reviews and campaigns on the other hand aren't relevant for completing a purchase, but can instead enhance the shopping experience: a funny website name can amuse, user reviews can reassure that you're doing the right choice and a campaign, in the case of this experiment, can offer you a possibility to donate money to a charity, which is a nice option

[8] The significance coefficient

to have. You can buy an apparel without these factors, but if these factors work, they can improve your shopping experience in the online store.

Other two attributes, which participants valued in the content factors, were *informativeness* and *clarity*. These two go hand in hand. Good informativeness means that the factors give shopper enough information to make the right purchase decision. Clarity on the other hand means that the information, which has been given to you, is easily understandable and doesn't leave you in doubt. For instance, participants felt relieved if there was a size guide on the product page to help the participant to choose a right sized apparel. However, on another page there could be a size guide, but the size guide showed the sizes in inches, which was unclear and evoked confusion. As another example, product descriptions evoked joy, when a participant actually learned new things from reading them, like how to wash clothes right. Another participant felt angry, because the product names in the product descriptions were unclear and made it hard to determine which product you were looking at.

The most significant negative emotion in the content category is anger (24,5). If looking back at the appraisal patterns presented in chapter 3.3, anger evokes, when you face an obstacle that blocks your way to the goal. You think that the situation is unfair and someone else is responsible for it. You had the control, but the situation took the control away from you and you want to gain it back. (Roseman et al. 1996, 269.) Most of the content factors, which emerged in this research, are relevant for completing a purchase, in other words reaching you goal. If a badly working content factor hinders your shopping in the online store, it probably makes you angry. For instance, the online store might not have a size guide, which makes you angry, because you have to buy the apparel without having enough information. This is unfair, because you would want to learn more about the apparel, but the company doesn't give you that possibility. Gaining back control in online shopping context could mean that you still want to try to push through the shopping process and find the right sized apparel to finish the purchase. The online store gets its sale done, but customer's shopping experience probably isn't that positive, which could mean not returning to the online store in the future.

The second most significant negative emotion in the content-category is confusion (24). Confusion evokes from not having enough knowledge of a situation (Silvia 2010, 78). As said above, informativeness and clarity are attributes which rose up when participants evaluated content factors. Confusion was assessed for instance when participants didn't understand what a campaign was about, didn't know how to fill delivery information, when they were confused about added taxes to the price or when confusingly presented product recommendations made them think that they had lost the apparel they were just looking at. The relevance order was also present in these factors. All of these

factors slow down your shopping and require extra effort from you to learn about the source of confusion and progress forward.

The third most significant negative emotion in the content-category is disappointment (16). Disappointment was also the most assessed emotion in general and one of the top three negative emotions also in navigation, visual, product and smartphone -categories. Disappointment evokes when an event is worse than expected and someone else is to blame for it. Disappointment can cause the feeling of being powerless, tendency to do nothing and a need to leave a situation (Van Dijk & Zeelenberg 2002, 325). Related to the informativeness and clarity, content factors evoked disappointment in the participants, when they expected to get certain information or when the information they got wasn't complete. If there was an option to read user reviews but there weren't none, it was disappointing. If the price was told in the product page without taxes and these were added later, it was also disappointing. Also, participants mirrored their previous experiences to the current shopping experience. If the last visited online store had had a size guide, participants expected to find such from the next online store too. If there wasn't one, participants became disappointed.

From the most significant positive emotions in the content category, joy (29), pleasure (24) and contentment (22) are partly similar. Pleasure is a broad class covering other positive emotions. For instance, Russell's (1980) circumplex model of affect describes its valence value by "how pleasurable an experience is". Some argue if pleasure is an emotion at all, because like pain, it's one component of several other emotions. All actions humans take strive to obtain pleasure or decrease pain. (Frijda 2010, 99.)

If pleasure is a line segment, contentment would be placed before joy on this line. Being content means that a person is satisfied with his/her current situation. Contentment is a milder form of happiness, but longer lasting. Joy on the other hand could be described as a burst of pleasure or contentment and results from a desired outcome. (Jackson 2000, 137-138; Hewitt 2002, 140–141). Joy can evoke from a positively surprising event (Ekman 1975). When experiencing joy, a person feels great pleasure and happiness (Lexico 2020a).

Content factors evoked joy, pleasure and contentment, when the factors worked as expected and facilitated online shopping instead of slowing it down or making it more difficult. In a way joy, pleasure and contentment evoke from opposite situations to anger and confusion. Joy also evoked from situations when participants were positively surprised: finding a campaign promoting a good cause, reading a humorous product description, learning new things from product descriptions, finding surprising information, like links to the production factories from the product descriptions or finding out that you're able to use your favourite shipping option.

The second most assessed positive emotion in the content category, relief, differs from joy, pleasure and contentment. Content design aims to fill the need for reliability (Walter 2011, 5-6), which might explain why content factors that worked often evoked relief. A size guide, detailed information about delivery options or products and user reviews all reduce your doubts and the risk of later regretting the purchase. Relief evokes when an anticipated event didn't occur. A prospect emotion precedes relief and could be for instance the above-mentioned regret. (Ortony, Clore & Collins 1988, 122.)

5.2.2 The significant emotions inside the navigation category

The most significant emotions inside the navigation category are presented in the figure 10 below.

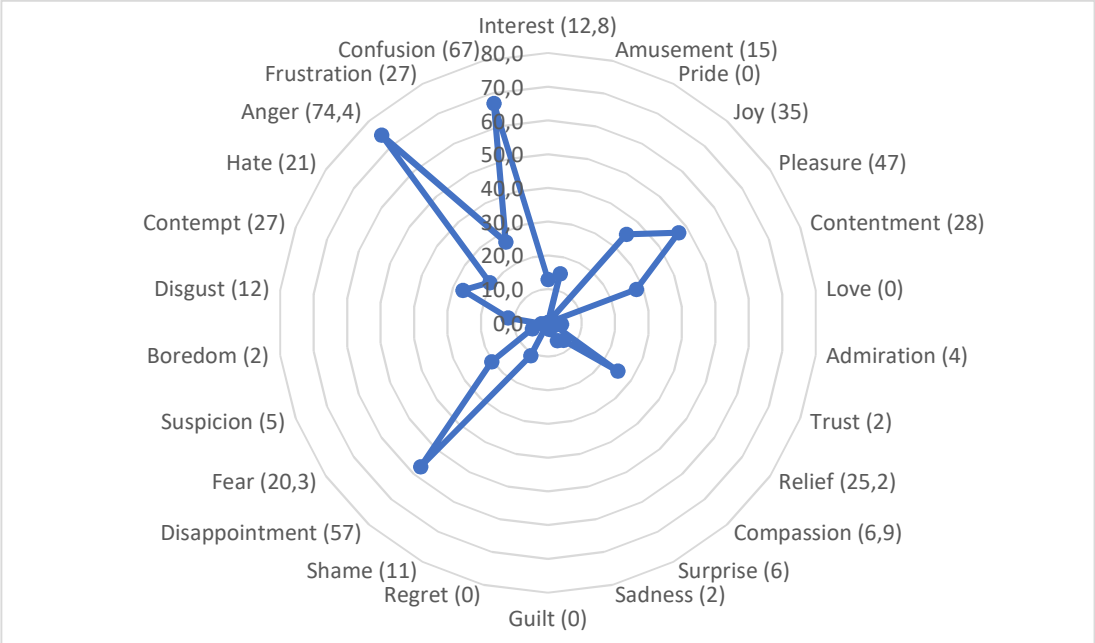

Figure 10 The most significant emotions inside the navigation category

From the figure 10 above can be seen that navigation factors evoked more negative than positive emotions. Also, from the figure can be noticed that the most significant emotions are the same as the most significant emotions in the content category. Based on the significance coefficients, pleasure (47), joy (35), contentment (28) and relief (25,2) are the most significant positive emotions that online store's navigation factors can evoke in a customer. The most significant negative emotions are anger (74,4), confusion (67) and disappointment (57).

The same order of relevance which was present with the content factors applied to navigation factors. Factors, which are the most closely related to completing the shopping task received the most mentions. Checkout process -factor received the most mentions

and it's a factor which everyone has to go through to purchase from an online store. The same goes with general navigation and compulsory registration. In fact, all the navigation factors are somehow relevant for a shopping task. Even the least mentioned factors, zooming, colour palette and image browsing are related to the functionality of the online store and either facilitate or complicate the shopping experience. The difference can be noticed, if compared to the least mentioned content factors, which are campaigns and user reviews, which aren't necessary, but rather something extra. The relevance of the navigation factors could explain why navigation factors received the most mentions and emotional reactions.

Other attributes, which participants used to evaluate their shopping experience, were *effort* and *familiarity*. Effort measures how easy or fast the online store factors make shopping. Extra effort was caused for instance by unnecessary checkout questions, which weren't relevant for completing the shopping task or the need to do a compulsory registration before you can continue your shopping. Also, when zooming didn't work, participants had to use effort to make sense of the textures in the product pictures. Factors like these make shopping laborious and reduce shopping's enjoyment. However, when online store managed to make things easier and faster, in other words reduce effort, it evoked positive emotions. Such factor was colour palette, which allowed participants to easily change the colour of the apparel on the same product page, without having to use effort to search for a duplicate product with a different color. Also, small things like seeing the product sizes and availabilities already during product browsing or the ability to swipe product pictures without having to separately click them open were thought to enhance shopping experience. These factors remove extra, unnecessary tasks and make the shopping experience less burdensome.

Familiarity of the online store also makes shopping faster and easier. A familiar online store follows general usability guidelines and established online store structures, which online store's customers know, and which make them feel right at home without having to use effort to figure out how things work in the online store. In this experiment familiarity was mentioned often during the checkout process. If checkout process was familiar and therefore easy, it evoked positive emotions. Unfamiliarity on the other hand was caused by weird signaling, like deviant texts and oddly placed navigation menus or non-standard checkout forms.

As was mentioned above, the most significant positive and negative emotions in navigation and content categories are the same. When looking back at the design dimensions presented in chapter 2.4, content and navigation design are both highly relevant for completing a shopping task (Eroglu, Machleit & Davis 2001, 179-181). In a similar way to content factors, when navigation factors don't work and slow down your online shopping, they evoke negative emotions like anger (74,4) and confusion (67), because they block

your way towards the goal. When the navigation factors do work and facilitate your shopping, pleasure (47), joy (35) and contentment (28) evoke, because the factors help you to reach the shopping goal.

Disappointment (57) and relief (25,2) were both related to expectations being fulfilled or not. Factors which evoked relief were checkout process, general navigation, absence of compulsory registration and zooming. Checkout process and general navigation evoked relief when participants noticed that navigating on the website and completing the checkout process were easy, fast and familiar to use. Participants compared these to their previous experiences and for instance mentioned that checkout process is usually dragging, but it was relieving to see it was fast on this online store. Participants also compared their recent experiences with the current ones. If the previous online store had a compulsory registration, participants were relieved when there wasn't a compulsory registration on the current online store visited. Same was mentioned with zooming: if it didn't work in the previous online store it was relieving to notice that it worked in the next one.

Disappointment's causes were the opposite to relief. If some factor worked worse than expected, it evoked disappointment. In the case of disappointment participants formed expectations based on the experience so far on the current online store. Participants formed expectations for instance based on a visually pleasant front page, but then became disappointed, when general navigation on the online store left a lot to desire. To avoid such disappointment, the whole shopping experience should be on the same level and navigation factors should match content and visual factors' quality.

Because navigation category is the biggest of the categories in this experiment, there are more than the top three negative emotions which are significant, if compared to all the categories. Frustration (27) and contempt (27) are for instance in the scale of the whole experiment more significant than content category's top negative emotion anger (24,5). Hate (21) and fear (20,3) in navigation category are almost as significant too.

Frustration evokes when you are unable to achieve or change something (Lexico 2020b). Frustration can turn to anger, when person tries to cope with his/her frustration. Hate on the other hand is a longer lasting and intense dislike for something. Fear causes us to leave a situation and contempt makes us want to avoid the source which causes contempt in us. Presumably no online store wants their customers to leave their online store in fear or contempt, or make customers hate their online store. Most of the assessed negative emotions in this experiment evoked from the navigation factors, so based on this experiment, navigation category is the biggest obstacle for reaching a positive shopping experience.

5.2.3 The significant emotions inside the visual category

The most significant emotions inside the visual category are presented in the figure 11 below.

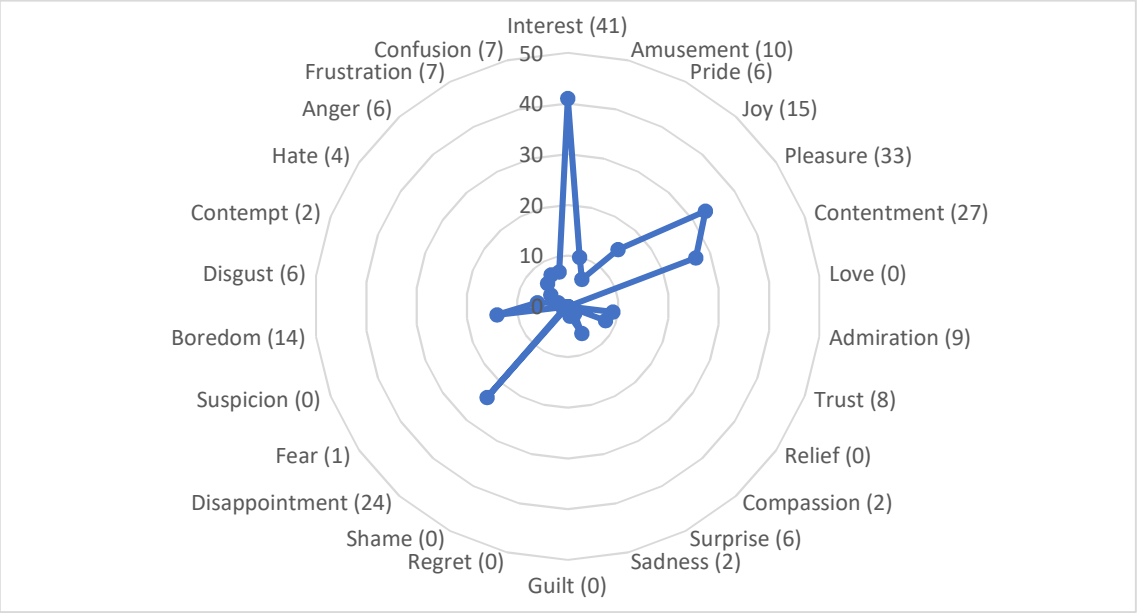

Figure 11 The most significant emotions inside the visual category

As can be seen from figure 11, visual category evokes the least emotional reactions from the online store design dimensions and the emotions are focused on certain emotions. Based on the significance coefficients, interest (41), pleasure (33) and contentment (27) are the most significant positive emotions that online store's visual factors can evoke in a customer. The most significant negative emotions are disappointment (24) and boredom (14).

As with content and navigation categories, the order of relevance could be seen in visual category. The most mentioned factor, product images, is undoubtedly quite relevant for a purchase: you probably want to see how the product looks like before you make a purchase decision. The second and third most mentioned factors, front page and general style, are also such factors which each customer has to be in contact with in order to complete a purchase and which are an unavoidable part of a shopping experience.

There were also two other distinguishable attributes by which participants seemed to evaluate visual factors. These were clarity, which was also used in evaluating content factors, and a new attribute *attractiveness*. Clarity in visual factors was sometimes related to informativeness like with content factors. For example, with the front page factor, good clarity means that customer can easily see from the front page, what the online store is about and what style of apparels customer can expect to find. On a clear front page the

colour theme and pictures all communicate the same message and aren't in conflict with each other. In product images, clarity means that it's clear which of the products on top of a model is starring. General style's clarity means that the online store's visuals are in line with the online store's products. Advertisements can harm the clarity of the online store, because they add visual clutter which makes the online store harder to navigate.

Attractiveness is linked to the most assessed emotion in the visual category, interest (41). Interest is a knowledge emotion, which is, as the name suggests, related to people's goals about gaining knowledge. When on a new territory, for instance as a first timer in an online store, you want to find out what the online store is about. If your attention is focused on something, you are interested. Interest was assessed most with the front page factor. An attractive front page is tied to clarity. Matching colours, beautiful pictures and clear text fonts are pleasing to the eye and therefore attractive. An attractive front page makes you want to enter the online store and learn more about it. Another example of a factor, which was found attractive, is product videos, which are a more unusual way to showcase apparels.

An unattractive factor on the other hand can evoke boredom (14), which is a subordinate emotion to disgust (6) and contempt (2) (Plutchik 1980). If nothing gains your attention, you can become bored. When interested, you want to explore the online store more, while boredom makes you want to avoid the source of boredom, in other words leave the website. Boredom was evoked by front page and general style factors. The reasons why boredom evokes are opposite of interest's: if the general style or front page looked messy and uneven, it wasn't attractive and therefore evoked boredom. Online store's general style also evoked boredom, if the color scheme is bland and makes you feel drowsy. Online store's aesthetics should radiate personality. Without personality online store is not attractive and is therefore boring.

Pleasure (33), contentment (27) and joy (15) received many assessments also in visual category. When online store's visuals were pleasant to look at or facilitated shopping pleasure, contentment and joy evoked. Visual factors facilitate shopping for instance by visually showing payment options, which makes choosing the right payment option easier, or by using product images that an apparel from different directions, which reduces doubts regarding the purchase and makes shopping more pleasurable.

Disappointment (24) was the most assessed negative emotion in visual category. Disappointment evoked in situations, when the visual factors weren't on an expected level. For instance, the online store could be otherwise likable, but general style didn't match the quality of clothes. Another case could be that a participant found a nice apparel, but the quality of product images was bad, and participant couldn't properly judge the product.

5.2.4 The significant emotions inside the product category

The most significant emotions inside the product category are presented in the figure 12 below.

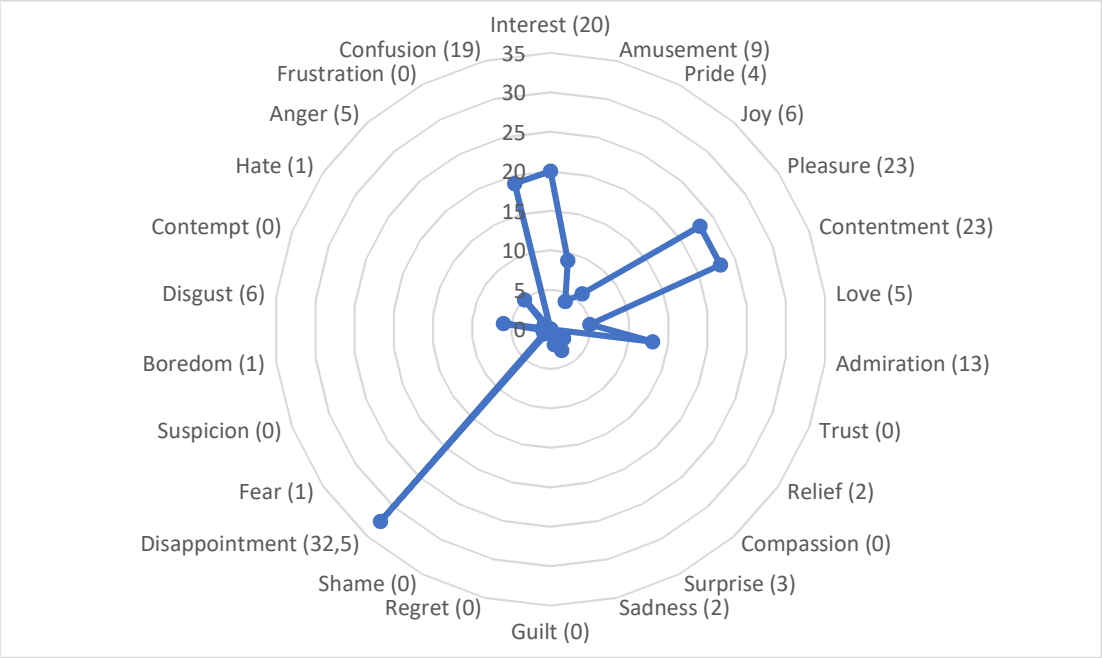

Figure 12 The most significant emotions inside the product category

Like the previous three categories, product category is also judged through company's online store, but making changes to product factors is harder than changing online store's design dimensions. Based on figure 12 the most significant positive emotions in product category are pleasure (23), contentment (23) and interest (20) are the most significant positive emotions that online store's visual factors can evoke in a customer. The most significant negative emotions are disappointment (32,5) and confusion (19).

Product category consists of only three factors, which is why the significance coefficients are by and large smaller than in the previous three categories. Product category has some similarities to visual category in terms of its attributes and most significant emotions. In both categories, disappointment is the most significant negative emotion. Also, the most significant positive emotions in both categories are pleasure, contentment and interest, not in the same order though. Both categories seemed to be evaluated by the same attributes, relevance, clarity and attractiveness. The most mentioned product factor was product range, the second most mentioned factor product availability and the third product price. This makes sense: First, a person is probably going to notice a product he/she likes, then check its availability and if the product is available, look at its price and ponder, if the product is worth the price tag.

Product factors' clarity was evaluated a bit differently than in the visual category. In the case of product range, clarity means that the product range is the right size and there is coherence between the products and quality. A too big product range can cause the customer to become overwhelmed by the available choices. On the other hand, a too little product range can also be confusing and make the customer wonder why the online store has only a few products. The same applies to product availability: if many of the products a customer goes through only have a few units or no units available at all, it can raise a question, if everything is alright with the company. Coherence is important, and product range's products need to be same quality and the products' prices need to be in line with this quality. If the product looks cheaper than its price tag lets you assume, it's confusing. Confusion (19) in general was assessed, when product factors were unclear.

Like with visual factors, attractiveness in product factors is linked to interest (20). Simply put, if participant found a product in the online store attractive it evoked interest. The similar emotion assessments between product and visual categories are due the fact that products can be experienced online only through vision and can't be touched and felt. Attention to products is drawn with visual cues, in other words with product images. Interest evokes if the product range matches customer's style, and disappointment evokes when customer can't find anything to her/his liking.

Disappointment (32,5) was assessed with every product factor. Mostly disappointment evoked, if a product participant wanted was sold out. Participant had already got excited about finding a nice product, but became disappointed when he/she got excited for nothing. Other source for disappointment were prices, which evoked disappointment if these were too high compared to quality.

Pleasure (23) and contentment (23), which have been present in each category, evoked if things went in a favorable way. Pleasure and contentment were assessed for instance, when product price was affordable, product had many sizes available or if the product range was to participants liking in general.

5.2.5 The significant emotions inside the smartphone category

The most significant emotions inside the smartphone category are presented in the figure 13 below.

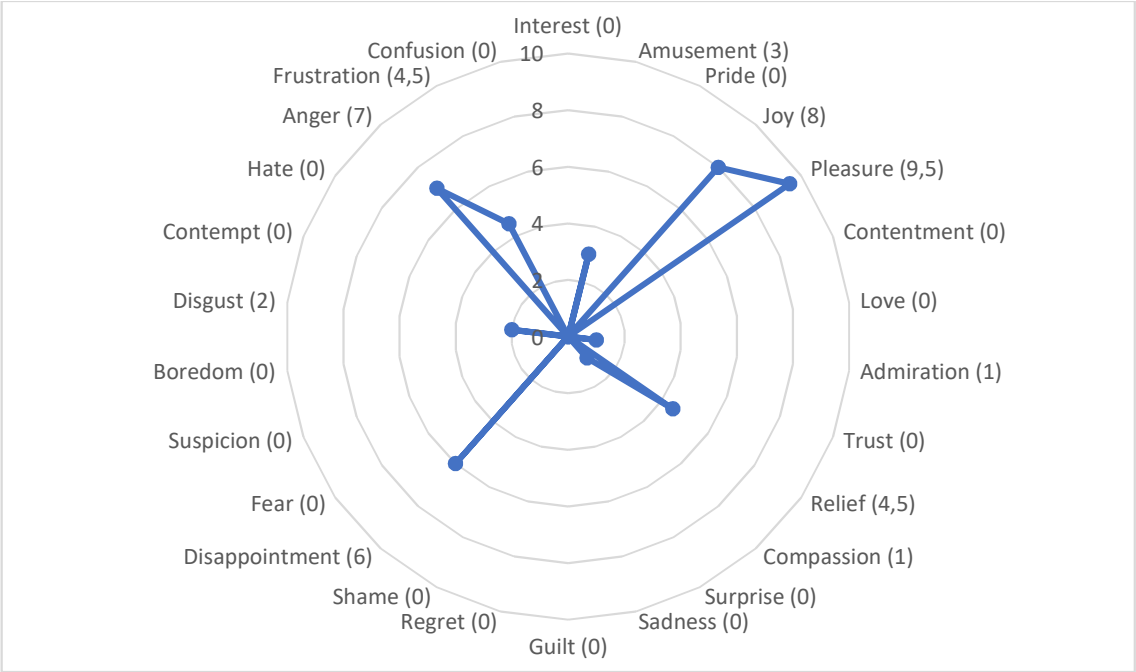

Figure 13 The most significant emotions inside the smartphone category

As can be seen from the figure 13, smartphone category had only a little impact on the online shopping experience. Smartphone category's most assessed emotion's, pleasure's (9,5), significance coefficient is smaller than in any other category. Other significant emotions which stick out from figure 13 are joy (8) and relief (4,5) and anger (7), disappointment (6) and frustration (4,5).

If compared to navigation category, the significant emotions in smartphone category are quite similar. Only navigation category's confusion is replaced with frustration. Navigation category's effort attribute also applied to smartphone factors. When automatic form filling works, it reduces the effort to complete the checkout process. When online store's loading times are fast, it takes less effort for instance to browse products. Good mobile optimization makes the online store run well on a smartphone and the shopping experience effortless.

Like with the navigation factors, when smartphone factors don't work and cause the customer to use extra effort to complete the shopping task, it can evoke anger (7). Pleasure (9,5) evokes, when things run favourably. Frustration (4,5) evokes when you're unable to change something and in smartphone category frustration was evoked by long loading times. Disappointment (6) evoked when something didn't work as expected. Participants compared their shopping experiences on the previous online stores. If automatic form filling worked on the previous online store, it was disappointing to notice, if this wasn't the case in the currently visited online store. Relief (4,5) evoked when participants were expecting a laborious checkout process, but instead were able to quickly complete it with

automatic form filling. Joy (8) evoked for similar reasons. Joy can work like relief and is also partly tied to person's expectations (Ellsworth & Smith 1988, 304).

One participant also mentioned that smartphone usage itself evoked joy and amusement (3), because using smartphone is fun. Such factors, which are related to the activity itself are also found from environment and internal state category, which is handled next.

5.2.6 The significant emotions inside the environment and internal state category

The most significant emotions inside the environment and internal state category are presented in the figure 13 below.

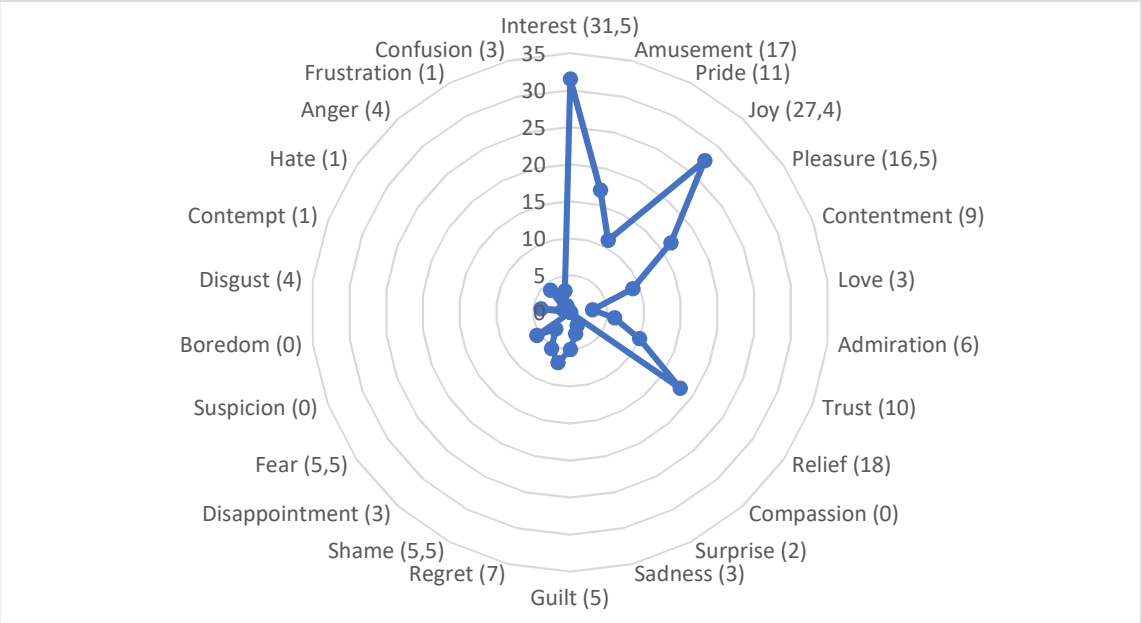

Figure 14 The most significant emotions inside the environment and internal state category

Figure 14 shows that most of the emotions assessed inside environment and internal state category are positive and the negative emotions' significance coefficients are relatively small. Environment and internal state category's most significant negative emotions seem to mostly consist of self-conscious emotions, like regret (7), shame (5,5) and guilt (5) in addition to fear (5,5). The most significant positive emotions are interest (31,5), joy (27,4), relief (18) and amusement (17).

Like with the previous categories, environment and internal state factors also have some common attributes which seemed to determine, what emotions evoked in participants. These attributes are *enjoyability* and attractiveness. There wasn't any clearly distinguishable relevance order between the environment and internal state factors. Most

mentioned factor was shopping, which is self-evidently relevant for completing a shopping task. However, also the other factors inside environment and internal state category can be perceived as relevant factors. It's hard to evaluate, if personal online shopping skills, test situation or ethicality is more closely related to completing a shopping task than the others. All of these factors are equally present throughout the whole shopping, even though they received different amount of mentions, as can be seen from table 12 in chapter 5.1.6.

Enjoyability is connected to the effort attribute. The more effort the shopping requires, the less enjoyable it is and vice versa. But if effort is related to the functionality of the smartphone and online store's navigation, enjoyability is related to the activity being performed. An enjoyable activity itself evokes positive emotions. Online shopping experience isn't only affected by the online store's factors, but a customer who enjoys shopping in general might feel positive emotions just by browsing products or finding an especially nice product. By making the online store's factors as functional as possible, the company can however make sure that customer's shopping mood continues to stay positive.

Different emotion assessments to shopping and online shopping factors prove that emotions evoked by an activity are related to a context. Shopping and online shopping include the same activity, but the other is limited to online. In general, shopping evoked mostly positive emotions and online shopping mostly negative emotions. Emotions assessed with the shopping factor evoked from the activity itself, mostly from looking for and then finding a nice product. Emotions assessed with the online shopping factor on the other hand evoked mostly from the limitations which online sets for the shopping activity. You can't try a product before purchasing it, you can't take the products immediately with you and you have to enter your information online, which you don't have to do in traditional shopping. In other words, online shopping's limitations lowered the enjoyability of shopping.

The third activity related factor is test situation. Test situation is the environment, where the shopping activity happens. However, completing a test is also an activity itself and two participants found the experiment's shopping tests enjoyable.

If looking back at chapter 3.3 and Roseman et al.'s (1996, 269) emotion system model, the evoked emotions differ depending on if an event is circumstance-caused, other-caused or self-caused. Emotions evoked by shopping and online shopping factors could be seen as circumstance-caused. For instance, not finding a suitable product isn't the company's or customer's own fault, the clothes offered in the visited online store just didn't happen to be customer's style. Circumstance-caused events, when motive consistent, evoke among others joy and surprise and events that are motive inconsistent evoke for instance frustration and sadness.

Completing the shopping test is a self-caused event, which is why emotions like relief and pride were assessed with the test situation factor. Personal online shopping skills factor received emotion assessments like shame and regret, which are self-conscious emotions. Self-conscious emotions were also assessed with ethicality factor, when participants started to think about the ethicality of their shopping habits in general.

Even though a company isn't to blame in customer's self-caused events, the company can still affect them. The company can make the shopping experience as easy as possible, to prevent the customer for instance from feeling shame, when customer's personal online shopping skills are lacking. This way online shopping's effort reduces and customer's enjoyability rises.

Attractiveness was the other factor present in the appraisal of environment and internal state factors. As mentioned before, attractiveness also affected the evaluation of visual and product factors. Like within these categories, also in environment and internal state category attractiveness and interest (31,5) are linked to each other. Company's ethicality and domesticity were such factors which were found attractive. Attractiveness is also associated with the shopping factor and finding nice products.

5.2.7 The most significant categories affecting the shopping experience

Now that every category's significant emotions have been gone through, the categories' significance for the shopping experience can be compared. This comparison is presented in the figure 15 below.

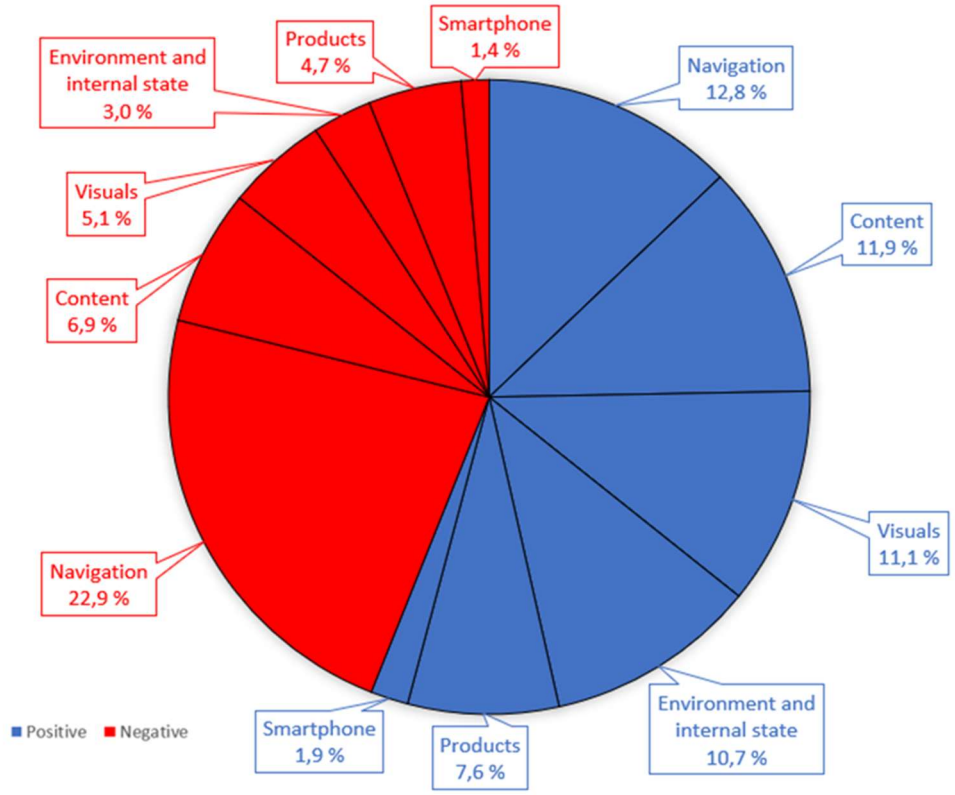

Figure 15 The categories' significance in the shopping experience

Figure 15 shows each category's percentual share of all emotion assessments, the significance coefficients included. The blue color in the figure means positive emotions and the red color negative emotions. From all the emotion assessments, 56% were positive and 44% negative. A little bit over half of the negative emotions evoked from the navigation factors. Navigation factors in total evoked over a third, 35,7%, of the emotional reactions, meaning when measured this way, navigation factors affect shopping experience the most. The second largest share, 18,8%, of the emotional reactions came from the content factors. Visual factors' share was the third largest, 16,6%. These numbers mean that over two thirds, 71,1% of the emotional reactions during a shopping experience evoked from factors related to online store's design dimensions.

Factors related to smartphone affected shopping experience the least, evoking only a total of 3,3% of the emotional reactions during the shopping tests. The big difference between the assessed emotions in categories related to online store design dimensions and smartphone category indicates that customers expect online store's shopping experience to be good regardless of the limitations of smartphone. In other words, if for instance product pictures are too small and evoke negative emotions in a person, the customer is more likely to blame online store's design rather than customer's own smartphone screen for it.

Product category's factors are not related to the design dimensions, but are still an inseparable part of the online store's shopping experience. When designing the online store's shopping experience, company shouldn't just concentrate on online store's visuals, navigation and content, but also take in consideration how factors outside of the design dimensions affect the shopping experience. Product category's share of the emotional reactions is 12,3%, so it's important to think for instance what an uneven product range looks like in the eyes of a customer and what emotions it can make the customer feel.

Navigation, content, visual and product categories are all part of the online store. Customer browses the online store through own smartphone. However, there are also factors outside of the online store and smartphone that affect the shopping experience. These can be factors which can be associated with the customer itself, like customer's own skills or values. Environment, in which the online shopping happens also affects, as does the activity itself. These factors were put inside the environment and internal state category, which evoked 13,7% of the emotional reactions. The factors in this category are hard or impossible for the company to directly affect. Company for instance can't decide in what kind of an environment customer browses the online store, is it during a lunch break at work, while casually at home or during a test situation like in this experiment. However, the company can make the online store as functional as possible, which makes online shopping under a time limit, like during a lunch break, more enjoyable.

There were similarities between the categories and the emotions they evoked. The most significant positive emotions in both navigation and content categories were pleasure, joy, contentment and relief and the most significant negative emotions in both categories were disappointment, anger and confusion.

The attributes, which were used to evaluate the navigation factors were effort and familiarity. The attributes to evaluate content category on the other hand were clarity and informativeness. Though the attributes in these two categories are different, both categories have many factors which are relevant for completing a shopping task, which is likely the reason why navigation and content category received the most mentions and emotion assessments. In order to complete a purchase in the online store, you need to be able to move around in there and have enough information. Navigation and content categories are therefore essential for customer to even be able to complete the purchase.

Visual and product categories for their part share the same emotions and attributes. The most significant positive emotions in both categories are interest, pleasure and contentment and the most significant negative emotion is disappointment. To both categories apply the same attributes, attractiveness and clarity. The order of relevance is also visible in these categories, but there are less relevant factors for completing a shopping task in visual category than there are in navigation and content categories. One could argue that

product factors are quite relevant for shopping, which they are. However, relevance for completing a shopping task is different. As will be told in the next chapter, product factors are the biggest reason to either stay in or leave from an online store. Finding a nice product is only one part of the shopping task. Before finding the product, it has to be searched for and to complete the shopping task the product still needs to be purchased. For purchase decision, product category is the most relevant category, but for completing a shopping task, it's not.

Product and visual factors are both related to making the online store attractive. You can make the online store work with navigation and content factors, but without working visual and product factors, the online store might not be interesting. Disappointment was the most assessed negative emotion in product and visual categories, and anger in content and navigation categories. Anger evokes from facing an obstacle, and disappointment from expectations not being fulfilled. This for one's part shows the different role the categories have in completing a shopping task.

Environment and internal state category is hard to compare to any one category, but the category is linked to every other category. The most assessed emotions in this category were joy and interest. Joy evoked, when participants found shopping enjoyable. Joy also evoked, when navigation and content factors worked and made shopping in the online store effortless. Participants found domesticity and ethicality mostly positive. If these two factors were present in an online store, it was found attractive, in a similar way how visual and product factors are attractive and entice to learn more about the subject.

This chapter looked at which emotions are significant in each category and for what reasons the categories evoke these emotions. The online store design dimensions affect the shopping experience the most. However, that still doesn't tell, if the design dimensions are the biggest reason to purchase from an online store or not. This matter is examined next.

5.3 The significant factors affecting the shopping outcome

The previous chapter looked at categories and what is their importance for a shopping experience. As was gone through in chapter 3.4, emotions and shopping experience affect in many ways to our shopping behavior. Emotions have a mediating effect in purchase decision (Sherman, Mathur & Smith 1997, 361–362), but that still doesn't mean that a factor, which evokes the most emotions, would also have the most influence in customer's purchase decision. Also, positive emotions don't always automatically lead up to a positive shopping outcome. For instance, a negative shopping experience in an online store can actually speed up customer's decision to carry out the purchase, so that the customer doesn't have to bear with the bad experience anymore (Mano 1999, 167).

Factor's importance for the shopping experience doesn't necessarily tell if the factor is critical for the shopping outcome. The shopping outcome in this research is divided to approach and avoidance behavior based on the S-O-R model presented in chapter 3.1. Approach behavior in this case means that a customer wants to spend time in the online store and avoidance means that the customer wants to stay away from the online store. The shopping outcome can be an intention to purchase from an online store or a decision to continue browsing the online store.

Factors, which are critical for approach or avoidance behaviour were collected from questions *"Could you imagine yourself purchasing something from the online store? Why / Why not"?* and *"Would you have left the online store earlier, if you hadn't been in this experiment? Why / Why not?"* The critical factors are presented in the table 13 below.

Table 13 The factors that can lead to an approach or avoidance behaviour

Factor	Category	Approach	Avoidance	Total
Product range	Product	15	12	27
General Navigation	Navigation	4	8	12
Price	Product	4	5	9
Ethicality	Environment and internal state	5	0	5
Front page	Visual	2	3	5
Product descriptions	Content	3	1	4
General Style	Visual	3	1	4
Product availability	Product	0	2	2
Loading times	Smartphone	1	1	2
Compulsory registration	Navigation	0	2	2
Online shopping	Environment and internal state	0	2	2
Shipping option	Content	1	0	1
Product categorization	Navigation	0	1	1
Text font	Visual	0	1	1
Domesticity	Environment and internal state	1	0	1
TOTAL		**39**	**40**	**79**

In the above table, the highest possible number of participant mentions for each factor is 30, because there were ten participants who each completed three shopping tests. Multiple mentions of a same factor from one shopping test were not counted in. In the above

table shows, that there were almost the same amount of factors that caused approach behavior as there were factors that caused avoidance behavior. There was no intensity measured for the critical factors, and most likely some factors affected participants' opinions about approach and avoidance behavior more than others.

If looking at the results on a category level, factors belonging to product category affect shopping outcome the most. Product factors were the reason for approach or avoidance behavior 48% of the time. The categories that follow are navigation category, 19%, visual category, 13%, environment and internal state category, 11%, content category, 6%, and smartphone category, 3%. Next, the critical factors are examined one category at a time starting from the product category. This order of magnitude differs from the shopping experience's order.

Clearly the most common reason to either approach or avoid an online store is online store's product range. This factor was mentioned 27 times meaning that every participant mentioned the factor after almost each shopping test. If the product range appeals the consumer, it causes approach behaviour and consumer wants to continue browsing the store and perhaps even purchase from there. If the product range doesn't appeal, consumer doesn't want to continue browsing the online store and has no intention to purchase anything. This makes sense, because the whole purpose to browse an online store is to look for products, which you could buy and usually the reason to buy something is because you like it.

In addition to product range, product price and availability also received mentions. Product price causes approach or avoidance behaviour based on consumer's perceptions on price. If the price range is too high it puts off the consumer. If the price is below consumer's price limit, consumer could consider buying from the online store. Price was in general related to the intention to purchase from an online store. Only one participant mentioned that after seeing the prices she wouldn't even had continued browsing. Price can be the only hindrance for buying, because a few times participants mentioned that they could consider buying something from the online store in the future, if the prices just weren't so steep.

Product availability was mentioned twice as a reason to leave from an online store. In these cases, participants could only find one or two products, which were nice, but there weren't any right sizes available. Because these were the only products participant found attractive, there wouldn't have had been any other reason to stay in the online store.

Navigation category was the most mentioned category in general and most significant category in regards of the shopping experience. However, navigation category isn't the most significant category in regards of the shopping outcome. General navigation factor received the second most mentions and caused more avoidance than approach behaviour. Under general navigation factor was put mentions that concerned online store's

navigation on a general level. Bad navigation was a few times the decisive factor to not think about purchasing from the online store, even if the clothes on offer were otherwise ok. If you can get similar clothes from another online store, which has a better navigation and shopping therefore requires less effort, you'd much rather shop your clothes from there.

The two other factors which were mentioned from the navigation category were a bit more specific. Two participants mentioned that in an actual shopping situation, compulsory registration presented at the beginning of a shopping experience would have driven them away immediately. As previously handled compulsory registration evoked mainly negative emotions in the participants and when an online store didn't have a compulsory registration, it was found only positive. Product categorization was mentioned by one participant only and it caused a similar reaction for the participant to immediately want to leave from the online store. The products were categorized to only tops and bottoms, which participant thought was a way too broad way to categorize products. The products were also in an illogical order and it would take too much effort to search for products to even bother using the online store.

Visual category was the third most significant category for the shopping outcome. Visual category too had three critical factors which affect the shopping outcome. The most mentioned visual factor was front page, which is related to the first impression a customer immediately gets, when he/she enters the online store.

The responses to this factor highlighted the differences in participants' tastes. What others thought was attractive, others could see as off putting. One of the online store's had a banner on the front page, which advertised ethicality of the online store's products. One participant found this banner welcoming, but other thought that with this banner the online store rubbed ethicality to your face and after seeing it you feel like rather leaving from the online store than start exploring it.

From a front page that causes approach behaviour you can figure out the online store's style and value offering with the first glance, which makes you interested towards the site. You immediately know what to expect and don't have to use effort to figure it out. A front page, which makes you avoid the online store, looks messy, unclear and boring and has nothing that would make you attracted to the online store.

The other two critical visual factors were general style and text font. Like with the front page factor, an online store, which general style is unclear and boring, causes avoidance behaviour and vice versa. However, when the front page factor is related to the attractiveness attribute, general style is more related to clarity and effort: a clear general style makes the online store less effortful to browse. For two participants online store's simple color scheme and showing less amount of graphics at a time made an online store more pleasant to browse, because you don't get overwhelmed on the site.

Text font was mentioned once, and as a factor, which caused avoidance behaviour. The factor wasn't mentioned alone, but participant mentioned it together with product categorization. The text font in the product categorization menu was too small to read for the participant, so that in a real shopping situation she wouldn't had bothered to browse the online store more.

Environment and internal state category too has three critical factors for shopping outcome, which are ethicality, domesticity and online shopping. Previously in chapter 5.1.6 was debated, if ethicality and domesticity factors would better fit some other category that is more closely related to the online store. These factors were however put under environment and internal state category, because at least with ethicality factor, participants started to ponder the ethicality of their shopping habits in general and the evoked emotions didn't just stem from the online store. However, when shopping outcomes are examined, there weren't any self-conscious emotions present in participants' answers, and ethical and domestic products were simply found attractive. Participants would rather purchase products, which are ethical than products, which are not. Online shopping factor evoked mainly negative emotions, and also caused avoidance behaviour in two participants, because of online shopping's limitations. During a shopping test, one of these participants was looking at shoes. However, in a real-life shopping situation she wouldn't purchase shoes online, because she wants to try them on first, which is only possible in a brick & mortar store. The other participant compared the visited online store to brick & mortar stores. On this online store, buying clothes wasn't cost efficient or easier than buying clothes from a brick & mortar store, which is why there wasn't any benefit for the participant to purchase his clothes from this particular online store in the future.

Content category was the second most important category in regards of the shopping experience, but for shopping outcome the category wasn't as critical. Content category has two critical factors for shopping outcome, which are product descriptions and shipping options. One participant mentioned shipping option as a factor which could make her more convinced to purchase from the online store. The online store, in which the shipping options mattered, was based in the USA. The online store offered an express shipping option for free, which lets you receive the products in 3–5 days. This means that you don't have to wait for the products long and worry about delivery costs over the seas.

Product descriptions received four mentions. All the mentions were related to finding clear info about the ethicality of the products. If the ethicality of the products was well argued in the product descriptions, it could cause approach behaviour. Once, one participant couldn't find good arguments, why the products were ethical, which is why in a real shopping situation he would shop his products from elsewhere.

Smartphone category's significance for shopping outcome was almost the same as significance for shopping experience, 3%. From smartphone category's factors, loading

times affected twice the shopping outcome. Participant, to whom loading times affected, experienced loading issues at a beginning of the shopping experience, and in a real shopping situation would have left the online store immediately. This was the first reaction participant got from the online store. The other participant on the other hand mentioned loading times as an approach behaviour causing factor. This participant compared the loading times to the previously visited online store and was positively surprised, that the online store's loading times were much faster this time. Participant however pondered, if this was due to the internet connection becoming better, or if the faster loading times were due to the online store itself.

Now that the categories and factors, which are critical for the shopping outcome have been go through, attributes between them can be examined. When a customer decides to stay or leave from an online store, there is 48% change that this is due to online store's product range, prices or product's availability. The common attributes between product factors, presented in the previous chapter, were clarity and attractiveness. One of the most significant positive emotions in product category was interest, which mainly evoked, when participant found an attractive product. The most significant negative emotion on the other hand was disappointment, which evoked when nothing attractive was found. Visual category has the same common attributes and significant emotions as product category. Also, in environment and internal state category could be noticed that some factors were evaluated by their attractiveness. Such factors were in addition to shopping factor ethicality and domesticity, which can cause approach behaviour, as was gone through above.

Based on these observations, attractiveness and interest play an important role whether a factor has a critical role in causing approach or avoidance behaviour. There needs to be a selling point, be it an attractive product, price, ethicality or domesticity. Approach and avoidance behaviour causing product descriptions were also related to the fact, if they could convince the participant about products' ethicality or not. First impression is important, because if a customer can't find anything attractive from the front page, he/she might leave the online store.

As was handled in the previous chapter, navigation and content categories include many factors which are important for completing a shopping task, and these two categories evoked the most emotions in participants. However, these two categories aren't as significant for causing approach or avoidance behaviour, as has been noticed in this chapter. These categories play an important role in how the shopping experience in the online store will be like. However, if the online store has a critical factor which causes approach behaviour, like an attractive product, customer might stand a negative shopping experience to get this product.

In general participants could more often return to an online store to do a purchase there rather than return to the online store to just browse it more (Appendix 4). If participant had evaluated the experience in an online store as negative, he/she wouldn't consider returning there to just browse it more. However, despite the negative shopping experience, participants could sometimes consider returning to the online store to purchase something. This could indicate that people appreciate their time. Even when the shopping experience was positive, participants still sometimes didn't want to return and browse the online store more. Willingness to buy despite a negative shopping experience could mean that some participants regarded an online store as reliable, but maybe also frustrating and uninteresting. If your goal is perhaps to just buy something, which you have already decided, you might be able to tolerate the shortages in the shopping experience. However, if you don't know what to buy and you're browsing products just for enjoyment, you're less tolerant of a negative shopping experience.

Tolerance was mentioned several times when participants were asked *what is your mood now? Do you think that your mood affected the shopping experience?* Mood was measured, because as mentioned in chapter 3.1, mood can affect the emergence of emotions. Every participant's preliminary mood was positive. Participants described their moods as positive, joyful, excited, active, content, calm and funny. Two participants mentioned that they were also a bit tired. Most of the participants mentioned that their positive mood made them more tolerant towards small mistakes in the online stores. If the preliminary mood had been for instance irritated, they might had perceived the mistakes in the online stores more negatively.

One participant noticed that his mood might have affected his chosen products. The participant thought that he chose comfortable clothes, college shirt and sneakers, because his mood was calm. In another online store he chose plain products, because he wasn't interested in the products or in the online store. In chapter 3.4 was mentioned that customer's mood can have an influence in what kind of products customer decides to shop. This participant's answers support this finding.

Participants didn't think that the previous shopping experience changed their general mood for better or worse except for one participant, who felt that the online store's ethicality made him generally feel more positive. This participant thought that it's nice to see when companies support a good cause.

6 CONCLUSIONS

6.1 Theoretical contribution

The purpose of this study was to inspect what factors and emotions are significant in the customer's online shopping experience on a smartphone. The more significant a factor and an emotion is, the more impact they have in customer's online shopping. Figure 16 below is comprised from the results of this study.

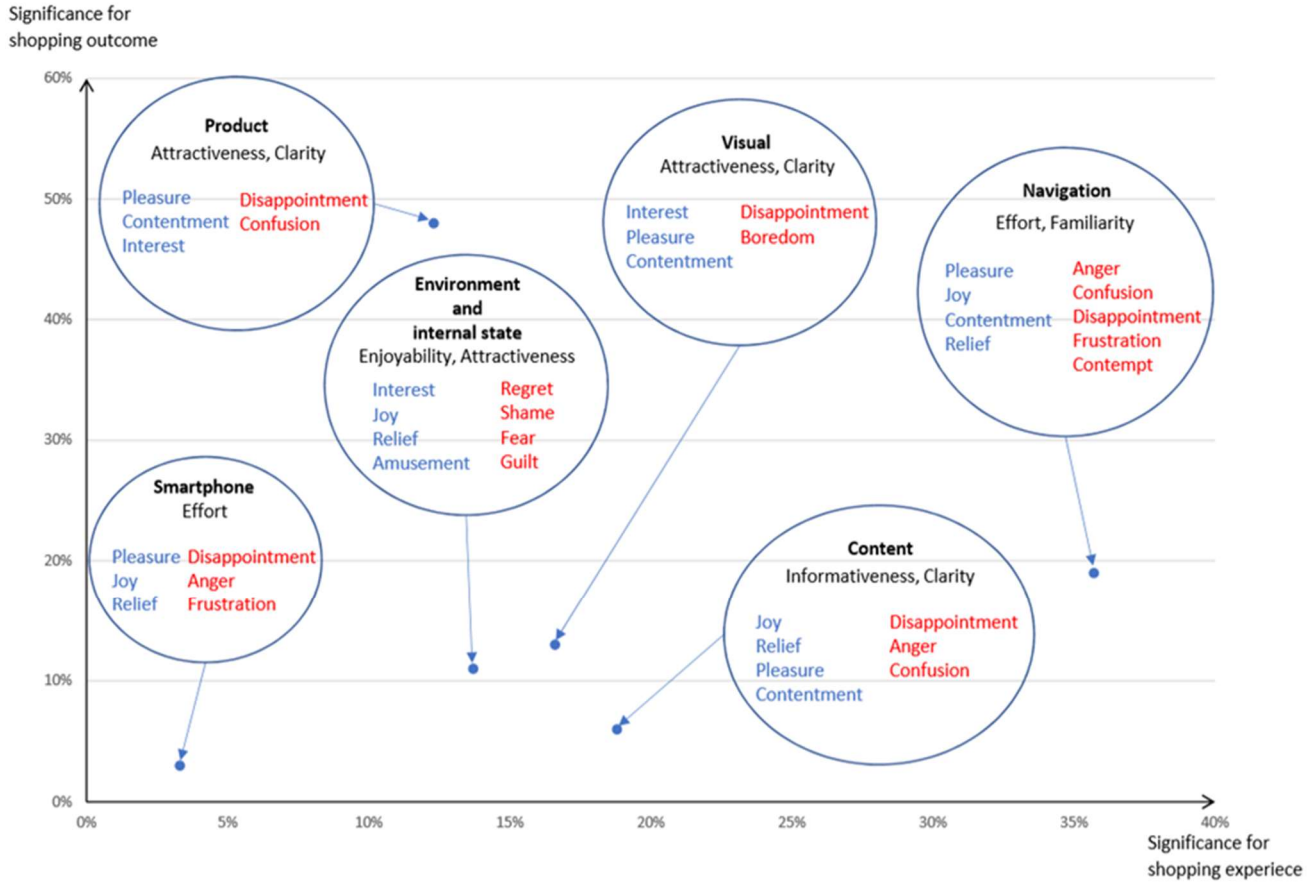

Figure 16 The significant factors and emotions affecting the online shopping experience

This research adopted the logic behind the Stimulus-Organism-Response model presented in chapter 3.1. Based on this model, a shopping environment contains stimuli that affects consumer's internal evaluations and results in avoidance or approach response (Mehrabian & Russell 1974, 31). In figure 16, the categories represent the stimuli. The categories contain factors, which were presented in chapters 5.1.1–5.1.6. Below the

categories' names are attributes, which are typical for the categories and which can affect consumer's internal evaluations.

The emotions listed under the category names and attributes, represent S-O-R model's organism part. These emotions evoke from the positive or negative internal evaluations of the stimuli. To figure 16 is added the most significant emotions from each category based on chapter 5.1.7.

In figure 16 response is presented as the significance for shopping experience and shopping outcome. In chapter 3.1 was gone through, how Holbrook and Hirschman (1982, 136–137) have developed the S-O-R model by dividing organism to cognition and affect, and response to conscious and unconscious behavior. In this research, significance for shopping outcome is related to conscious behavior and cognition, while significance for shopping experience is related to unconscious behavior and affect. The dots in figure 16 represent how much significance each category has for both shopping experience and shopping outcome. The locations for these dots are based on the percentages taken from chapters 5.1.7 and 5.2.

Significance for shopping outcome is easier to understand, because it's based on conscious evaluation. In chapter 5.2 participants were asked, what could either make them stay or leave, or purchase or not purchase from an online store. Participants' mentions were then divided to approach and avoidance behavior and the categories' significance for shopping outcome was determined by how many mentions each category got.

Significance for shopping experience is based on unconscious behavior. Consumer's affective side, in other words emotions, affect this behavior. Therefore, category's significance for shopping experience was determined by how many emotions the category evoked and how intense these emotions were. The most significant emotions shown under each category in figure 16 can give clues how customers might react. For instance, a customer who feels disappointed has a higher chance of leaving the online store (Van Dijk & Zeelenberg 2002, 325) while an angry customer has a higher chance of switching service provider, complain and spread negative WoM (Bougie et al. 2003, 390).

Like Hassenzahl and Tractinsky's (2006, 95) literature review presented in chapter 2.3 showed, shopping experience isn't only affected by the online store: *shopping experience is also affected by the environment where the shopping is done, by the device being used and by the customer's internal state*. As the existence of environment and internal state and smartphone categories show, Hassenzahl and Tractinsky's findings could also be confirmed in this study. When designing an online store's shopping experience, company should take in account what kind of smartphones the company's customers might use, in what environments the shopping might happen and what kind of internal qualities the customers might possess.

In chapter 2.4 in table 1 was collected information about how to design an online store and what significance these design dimensions might have for a customer. From the existing studies was comprised three design dimensions: content, navigation and visual. These three dimensions were also clearly present in this study, and they affected the shopping experience the most. In other words, *the best way to affect in the customer's shopping experience is to make changes in the navigation, content or visual factors.* For instance, if company wants customers to be more interested in their online store, company could check which factors affect attractiveness the most and then for instance make changes in the online store's front page. This works also the other way around. If customers give feedback that the online store is irritating, the company can check if there is something wrong with the navigation or content factors.

There were however three factors, which were related to the online store, but which couldn't be put under the design dimension categories. These three factors formed the product category. To this researcher's knowledge, existing studies have only concentrated on the design dimensions and how these affect the shopping experience. However, products themselves and their importance for shopping experience haven't been taken in account. Product factors can't be changed as easily as design dimensions in an online store. Changes to product range, prices or availability might require changes on a whole company level. Still, as figure 16 shows, *product category is the most significant category for shopping outcome*, so making improvements to this category likely increases customers' willingness to purchase and browse the online store. Also, knowing what significance product factors have for customer's shopping experience, helps improve online store's shopping experience towards the desired direction.

There were similarities between the categories. Navigation and content categories evoked similar emotions when compared to each other as did visual and product categories. As figure 16 shows, *the navigation category is the most significant category to consider when planning an online store's shopping experience* after which comes content category. Both navigation and content category included many factors which are relevant for completing a shopping task. By shopping task is meant that customer has a goal in the online store, which he/she wants to accomplish, for instance successfully purchase a product. In chapter 2.4 in table 1 was mentioned that navigation and content categories are both highly relevant for a shopping task while visual category's relevance is low (Eroglu, Machleit & Davis 2001, 179–181). This was also noticed in this study. Also, this study's findings are in line with the technology acceptance model, TAM, presented in chapter 2.2. According to TAM, perceived usefulness and perceived ease of use are the strongest predictors of behavioural intention to use a certain technology, in this case an online store on a smartphone. Usefulness can be associated with content design and ease of use with navigation design. Good, working content factors give clear information regarding the

purchase, which is useful. Navigation factors, which are familiar for customer and don't take much effort, are easy to use. Therefore, when compared to TAM, it makes even more sense why navigation and content categories are the most significant categories for shopping experience.

Chapter 2.4 also looked at user's need levels (2011, 5-6), which are based on Maslow's hierarchy of needs, and compared these with the design dimensions. At the bottom level is the need for functionality, after which comes the need for reliability, usability and pleasure. Content design answers for the need for reliability, navigation design for usability and visual design for pleasure. Based on the user's need levels, online store's content factors are more significant than navigation factors. However, in this study it was the other way around. Also, as gone through in chapter 3.4, Verhagen and Bloemers (2018, 551–553) argued that in online shopping customer's hierarchy of effects is always think-feel-do, which means that customer always wants to fill his/her need for reliability first, before forming affection to the online store and purchasing there. The lesser significance of content factors in this experiment could be due to the fact that in the shopping tests there wasn't real money involved and the participants didn't actually purchase anything. In an actual shopping situation customer has a monetary input, which could make the content factors more significant for both shopping experience and shopping outcome.

Unlike navigation and content categories, visual and product categories don't have as many relevant factors for completing a shopping task. Even though these categories' significance for the shopping experience was smaller, both these categories possess an attribute which seems to be important for shopping outcome, attractiveness. Based on the results in chapter 5.2, factors that are attractive and evoke interest, seem to cause approach behaviour in customers and vice versa. Based on this, it could be said that *visual and product factors are related to capturing customers' attention and keeping them interested in the online store, while navigation and content factors are related to customers' shopping task and making sure they can successfully purchase the product.* The emotions these categories evoke also support this suggestion: visual and product categories evoke knowledge emotions such as interest and confusion, which are related to gaining information from your surroundings. Navigation and content categories on the other hand evoke emotions such as anger and relief, which evoke from facing or being able to avoid an obstacle on your way to a goal.

The characteristics of online fashion apparel stores, presented in the chapter 4.3.3 in the table 5, were used to help choosing the online stores for the shopping tests. In the table 5 was only included characteristics, which weren't common between all of the considered online stores. In general, the characteristics presented in table 5 didn't get many mentions in this study. These characteristics included among others product videos, user reviews, style advise, trend information and social media implementation. User reviews, product

videos and social media implementation, in this study mentioned as memes, only got a few mentions. Style advise or trend information weren't mentioned at all. Some of these characteristics, like product videos and social media implementation were placed in hard to find locations. Both of these factors evoked positive emotions in participants, so if these factors have had been placed better, they might have had a bigger impact in the shopping experience.

User reviews and social media implementation fall under social-cue design, which according to Karimov, Brengman and Van Hove (2011, 275) is an important dimension in online store's design. Also, Cyr et al. (2018, 810) mention social presence as a peripheral way to convince a customer. However, in this study's results social-cue design and human like features didn't seem to have importance. As with content factors, this could also be due that in the shopping tests there wasn't any monetary input involved, which is why participants didn't have to search for reassurance from human features.

The context of this study is m-shopping, in other words online stores browsed with a smartphone. There are many previous studies, such as the ones presented in the chapter 2, which have researched how m-shopping could be improved and its adoption increased. For instance, Choi's (2018, 117–118) study suggests that to get more people adopt m-shopping, unique benefits should be promoted. However, in this experiment such factors didn't get much mentioned and overall *smartphone category's significance for both shopping experience and shopping outcome was small*. There were only four factors which could be associated with smartphone category and even with some of them participants weren't sure if the factor was due to the online store or participant's own smartphone. In online shopping factor the mentions were related to the limitations of online shopping in general, but not especially to the limitations of mobile shopping. It could mean that participants find m-shopping a natural way to shop, which is why they didn't pay much attention to smartphone's limitations or benefits and therefore smartphone category didn't get many mentions. Other explanation could be that smartphone's limitations are included in the mentions related to navigation, content and visual factors.

To this researcher's knowledge, there hasn't been another study which has as accurately documented significant factors and emotions from customer's online shopping. There are many studies which have researched how emotions affect online shopping behavior, but the current body of research still lacks information about what these emotions are and what causes them (Lievonen 2017, 396–397). The taxonomy of factors and emotions provided in this study can be used by other researchers and managers alike. By knowing which factors are the most significant for online shopping and what emotions these factors evoke, companies can more accurately plan and design their online store's shopping experience. By having a preliminary list of significant factors and emotions for

online shopping, it's easier for other researchers to start their own study related to the subject.

6.2 Managerial implications

As mentioned at the end of the previous chapter, this research offers a taxonomy of emotion evoking factors, which are significant for shopping experience and shopping outcome. With the help of the taxonomy provided in this research, it's easier for managers to conceive from which factors their online store's shopping experience is comprised and why consumers might feel how they feel.

By cultivating the right factors and emotions, company can direct consumers' actions to the desired direction. Is there a need to draw consumers' interest towards something? Try using interest evoking visual factors. Do consumers say that the product page is confusing? Try improving the size guide.

As can be seen from figure 16, navigation category is clearly the most significant category in regards of the shopping experience. Navigation category was also the only category that evoked more negative than positive emotions, meaning that based on this experiment, *navigation category requires the most attention if online store's shopping experience wants to be improved*. It also means that by minimizing the negative emotions evoked by online store's navigation, a company might be able to gain competitive advantage.

Improving navigation factors means reducing the effort they cause, in other words making the online store as quick and easy to use as possible. Familiarity is tied to this. Weird signaling, like deviant texts and oddly placed menus or a non-standard checkout process can make the shopping feel unfamiliar and therefore evoke negative emotions. Unnecessary checkout questions, clicks, pop-up windows and compulsory registration make shopping more laborious, which evokes negative emotions. Company should try to follow general usability guidelines to make the shopping experience more familiar and therefore less stressful. Effort was often due to extra tasks, which participants had to do in order to reach their shopping goal. For instance, product and size availability could be shown already in the browsing phase, so customer doesn't get irritated or disappointed when finding out in the product page that the product isn't available. Product's color could be changed with a color palette, without having to find a duplicate product with a different color. Browsing should continue from where the customer left off to avoid the extra task of having to start from the beginning.

When planning an online store's shopping experience, managers should not only pay attention to the online store's factors, but also to the environment where the browsing happens and customer's internal state. Browsing could happen leisurely at home or under a stress at work, if the online store for instance sells products for businesses. Customers'

personal online shopping skills can vary. Young adults are in general more accustomed to m-shopping than people above the age of 40 (Subaramaniam & Kolandaisamy 2019, 311–312). If online store's customer base consists of middle-aged people, customers' possible lack of skill in online shopping should be taken in account and attributes like familiarity should be kept in mind when designing the online store. If the customer base consists of young adults, company could try something deviant in the design, to increase the online store's attractiveness.

Based on the results of this research, *to increase sales and keep customers in the online store, companies should first take a look at changes to product factors, because product factors, and most of all product range, have the most effect on shopping outcome.* This doesn't necessarily mean that company's product range or price should be directly changed. If online store's product range doesn't appeal to customer, customer might leave the online store. In addition to attractiveness, clarity attribute applies to product factors. If there is no coherence in the product range, it might evoke confusion in the customer, because customer doesn't know what the online store's style is and if customer can find clothes from the online store that match customer's style. Products are perceived through product images, so company could try improving them. Giving better quality product images makes it easier for the consumers to judge products. Navigation category's zoom factor was also related to product images, and not being able to see the details in the products properly. Making fixes to this could also improve customers' ability to judge the product range. Company could also try to add product videos to increase interest towards the products, but if the videos are placed in such locations from which they are hard to find, this enhancing feature can't be utilized.

Disappointment was the most assessed emotion in general. Disappointment evoked often from product factors, for instance from not finding anything during shopping, or if a product participant wanted wasn't available. *Company should quickly try to reduce disappointment from evoking, to prevent the consumer from leaving the online store.* Such means could be for instance telling the future availability of the products or using product recommendations to recommend similar products to the customer.

In addition to the product factors, *disappointment seemed to evoke from unmet expectations towards the online store's performance.* Navigation factors evoked often disappointment, when online store's usability wasn't on the expected level. Participants formed expectations for instance based on a visually pleasant front page, but then became disappointed, when navigation in the rest of the online store left a lot to desire. *To avoid disappointment from evoking, experience throughout the whole shopping needs to be on a same level.*

Online store's front page and shopping experiences in previously visited online stores seemed to set these expectations. A good front page tells what the online store has to

offer, what style of clothes to expect and what the online store is about. If the rest of the shopping experience doesn't fulfill the promises set by the front page, it evokes disappointment. For instance, if the front page tells that the company is an ethical fashion store, it needs to show also elsewhere, like in the product descriptions.

Evoking interest in the very beginning of the shopping experience is critical. If consumer gets a bad first impression it can lead to him/her leaving the website without seeing what the rest of the online store has to offer. *The first impression and emotions caused by the front page can determine the tone for the rest of the shopping experience.* Managers should think if they want to start their customer's shopping experience with negative emotions like shame, irritation, suspicion or confusion. Would it be better for instance to make registration to the online store voluntary and not compulsory, or at least not force the consumer to do the registration without seeing the online store first?

The online stores browsed in the shopping tests were ethical fashion apparel online stores and ethicality was visible in the participants' mention resulting to its own factor. *Ethicality can be a reason for approach behavior towards an online store, but ethicality can also backfire, if not justified properly.* If there are no proofs that a product is ethical, it can evoke negative emotions like confusion or even contempt, because company could only be using ethicality to greenwash themselves. But if company succeeds to convince customers about company's ethicality, it can evoke strong positive emotions like admiration, love or pride.

If company succeeded in convincing the participants that they are ethical, it seemed to make participants look past shortcomings for instance in online store's navigation. This could make participant feel instead of anger for instance compassion towards the online store. If the online store didn't have a selling point like ethicality, it wouldn't have differed from other online stores. In such situations, bad navigation in the online store could lead to avoidance behavior: you can buy similar clothes from another online store without having to get angry about the navigation.

6.3 Limitations and future research

This study contributes to the current body of research by creating a taxonomy of factors and emotions, which have significance in consumer's online shopping on a smartphone. This study also proves, that using a shopping test to study emotions in online shopping context works and other researchers can use this study to help them build their own shopping tests. Before this, there hasn't been such an extensive taxonomy, and factors have been categorized on a much general level. Also, so far affective reactions have been mostly divided to positive and negative affection. The taxonomy this research provides makes it easier for researchers to start researching shopping experience in fashion online store context, now that there is preliminary knowledge, which factors contribute to a

shopping experience and how. Researchers can then choose the factors which to further investigate.

The sample used in this research is small, ten participants and thirty tests, which means that the results aren't generalizable. To make the taxonomy more reliable, more research about the factors and their emotion connections is needed. This research was conducted as a qualitative research, because there wasn't any pre-made taxonomy from which to comprise a list of factors to examine. Qualitative study ensured that participants were able to tell about their experiences as purely as possible, without predetermined hypotheses affecting the results. However, the participants were given a list of emotions to help them express their feelings. To not restrain the participants too much, they were also encouraged to tell about their emotions in their own words, if they felt like it. The GEW has been proven a useful tool for assessing emotions, but the tool has never been used in an online shopping context before. In fact, to the researcher's knowledge, there isn't any scientifically proven list of online shopping emotions, which could be utilized for studying online shopping experience. *In its present form GEW 3.0 isn't adequate for studying online shopping emotions, because participants in this research used many other emotions outside of GEW to express their feelings.* For instance, confusion and frustration were used many times and such emotions could be useful to be found from an emotion assessment tool in similar studies.

Video-recall was another method used in this research to help participants tell about their emotions and locate their sources. In the end, video-recall wasn't used as first intended, participants recalling emotions from their own expressions. Instead *recalling emotions from a video of the smartphone screen and hearing own commentary were found adequate.* All participants could find some new characteristics and emotions during the video-recall they didn't mention during the interview. For some participants the assessed emotions were stronger in intensity during the video-recall than during the interview. It seemed that when participants had to relive the shopping experience again by watching the video, the previously experienced emotions evoked again. This however requires more accurate research.

The shopping task to choose products with a given budget worked in making the participants involved with the shopping. Shopping factor got many positive emotion assessments, which means that participants were involved with the activity and could experience the joys and disappointments of finding/not finding a product even though they weren't actually going to buy anything.

Emotion assessments to the test situation factor means that the laboratory setting's effects couldn't be completely erased. Also, participants had no monetary investment in the test situation, which could explain why trust was rarely mentioned in the interviews. Based on previous research (e.g. Zhou 2013, 192) trust and risk are important factors

affecting the purchase intention. If the risk to lose your own money was involved, trust might have had been mentioned more often. Usability on the other hand was mentioned many times, but there the risk is more focused on losing time and patience. In a test situation creating this type of risk is easier. You can tell about usability without buying, but experiencing trust and risk related emotions is harder, if you're not actually purchasing anything. To get more accurate results, researchers should study situations where participants really buy something.

This research's tests were done on three different ethical online stores. Some of the previous researches (e.g. Björk 2010, 293; Machleit & Eroglu 2000, 105, 110), which have also studied store features and emotional reactions emphasize that website quality is always evaluated in a context. The context in this research is ethical fashion and ethicality factor itself did got emotion assessments. Other factors, like product descriptions, company information or product range were often evaluated from ethicality's perspective. If the context had been for instance an electronics store, the shopping experience would had probably been evaluated differently. Electronics, like washing machines, are informational products and have a different decision situation. This means that factors are perceived differently and this research's results from ethical fashion stores can't be utilized in this context.

The tests were always done in the same order. During the interviews after the tests participants often compared the visited websites to each other. They formed expectations based on the previously visited online stores. After a bad experience on the previous online store, the expectations were lower towards the next online store and vice versa. *If some factor was exceptionally bad or good in the previous online store, this factor was brought up during the next test.* If a factor was executed badly in a previous online store and worked well on the next, it evoked positive emotions. Past experiences outside of the tested online stores were mentioned much less. After the visit to the first online store, Everlane, the assessed emotions were in general lower in intensity. After visits to the second and third online stores the assessed emotions' intensities were higher. This could indicate that fresh memories from the previously visited online stores during the current shopping session make participant emotionally more sensitive. Assessed emotions might had been different, if the online stores had been tested in different order. When researching online stores' shopping experiences in the future, online stores could be tested in different orders to rule out confounding effects of order. Freshness of a previous shopping experience and its effect on the current experience could be an interesting subject for future research.

This research simulated real online shopping behaviours by using actual websites with design elements that could not be strictly controlled. To better study the relationship between design elements and emotions, a test website could be built from the ground up.

This would make controlling design elements and comparing them easier. Also, the Noldus technology, which was presented in chapter 4.3.6, didn't work properly in this study, which is why Noldus analyses were decided to be left out. However, in the future it would be interesting to see, how self-made emotion assessments would differ from assessments made by a computer.

7 SUMMARY

Even though smartphones are used in significant amounts daily, the online stores' conversion rates on smartphones are still, with respect to their usage, lower than on computers or desktops. Even though smartphones have their device limitations and are used more for entertainment purposes, there is still a monetary gap which could be diminished by knowing how to properly design an online store for a smartphone device.

Shopping can happen consciously or unconsciously. Our conscious behaviour is rational and affected by cognition, while our unconscious behaviour is affected by our emotions. Smartphone usage is often described as a hedonic activity, as is shopping for recreational products like fashion apparels. In such contexts, emotions have an even bigger significance in our behaviour.

User experience could be described as a positive/negative evaluation of the used system, which is among others also affected by the user itself and the user's surroundings. In this study the term user experience was replaced with shopping experience, because the term better fits this study.

This study adopted the idea behind Stimulus-Organism-Response model. Based on this model, an online store contains stimuli, which affect person's organism for instance by evoking an emotion, which then leads to a behavioural response. This study's purpose was to find out which of these stimuli, or factors, are the most significant in m-shopping context and what emotions these factors evoke. Different emotions cause different behavioural responses and by knowing which emotions are the most significant in customers' online shopping experience, the customers' actions can be predicted. Response was also looked from shopping outcome's perspective and the answers are related to the customers' conscious evaluations of the online shopping.

To find out what these significant factors and emotions are, an experiment including three shopping tests was conducted. The experiment was done by ten participants and from these results was formed a list of 43 factors, which hold significance in a customer's online shopping experience. These 43 factors could be divided in six main categories, which were named as the content, navigation, visual, product, smartphone, and environment and internal state categories.

After presenting these categories and factors, the research moved on to take a closer look at the emotions these factors and categories evoke. During the experiments, participants had assessed emotions with their intensity levels for these factors. To determine the most significant emotions inside each category, the intensity levels were used to calculate significance coefficients for each emotion on a category level.

After determining the most significant emotions inside each category, the categories were analysed to find common attributes, which might explain why the categories evoke

such emotions and what significance these emotions bear for a customer's online shopping experience. A factor's significance for the shopping experience does not necessarily tell if the factor is significant for a shopping outcome and these were analysed at the end of the results chapter.

This study's results followed the previous studies in that design dimensions were not the only categories, which had significance for the shopping experience, but also the environment and internal state and the smartphone categories had an effect. This study also separated the online store's product factors as their own category affecting the shopping experience. Based on this study's results, the navigation category is the most significant category for shopping experience. From a shopping outcome's perspective, the product category is the most significant. The smartphone category's significance for both the shopping experience and shopping outcome was small.

There were similarities between the categories. The most significant positive emotions inside navigation and content categories are pleasure, joy, contentment and relief, while the most significant negative emotions in both categories were disappointment, anger and confusion. The visual and product categories' most significant positive emotions are interest, pleasure and contentment and the most significant negative emotion is disappointment.

When divided coarsely, the navigation and content factors can be said to be relevant for completing the online shopping process, while the visual and product categories are important for attracting the customer.

The taxonomy of significant factors and emotions provided in this study can be used by both researchers and managers alike to further study the online shopping experience.

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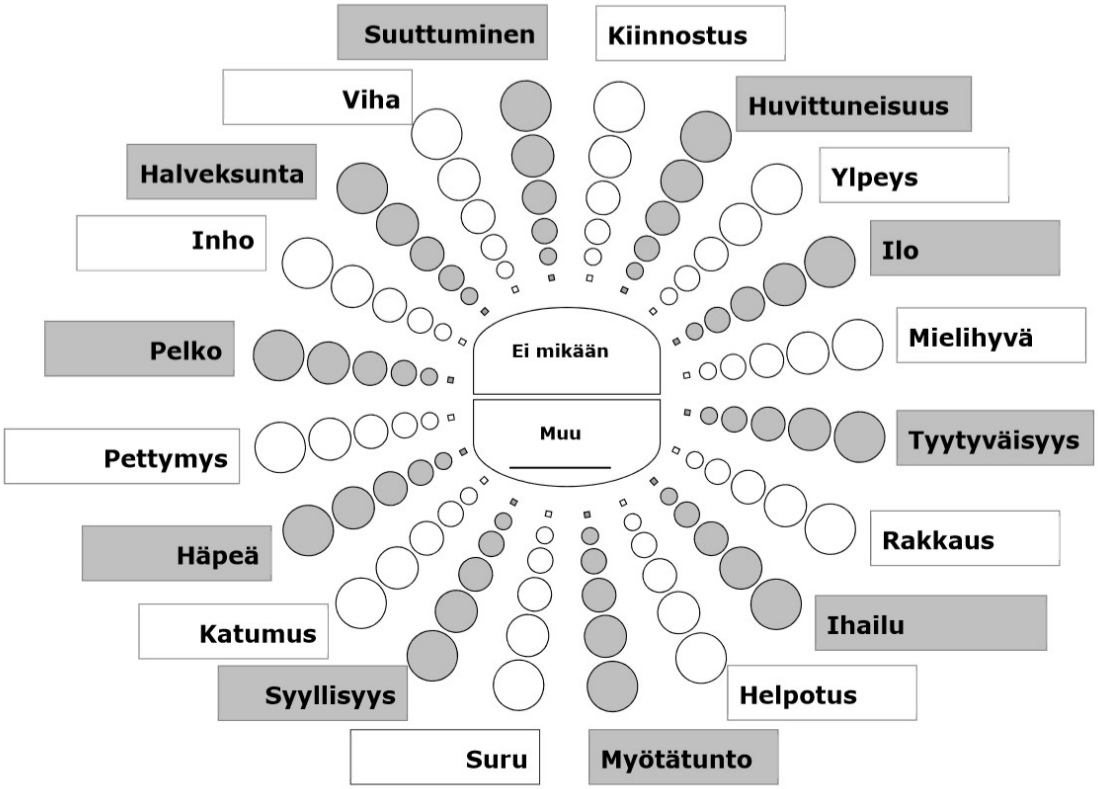
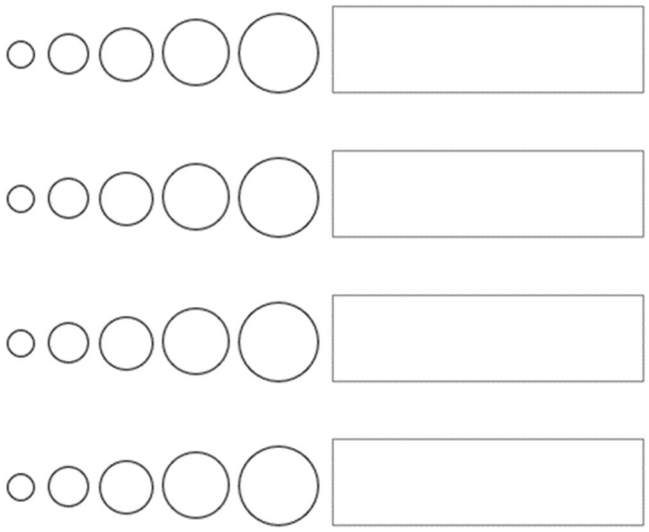
APPENDICES

Appendix 1: The Finnish version of the GEW



Appendix 2: The blank paper addition to GEW



Appendix 3: The formula for determining the significance coefficients

Example: How the *significance coefficient* of **32** for *disappointment* in the *product* main category was calculated. Participants were able to mark down intensities on a scale of 1-5. All the significance coefficients have been calculated by using the formula below.

Main category:

Product main category: Total disappointment (11,17+16,94+4 = 32,11 ≈ **32**)

Factor:

1. Product range: Total disappointment (2,67+2+3+3,5 = **11,17**)
    - **Participant:**
        1. *Participant 10: Total disappointment ((2+4+2)/3= **2,67**)*
            1. *Everlane: Product range: "There weren't many jeans to choose from, which was disappointing."*
                - *Assessed emotion: Disappointment (**2**)*
            2. *Kind of Green: Product range: "The funny t-shirts category was too small."*
                - *Assessed emotion: Disappointment (**4**)*
            3. *Kind of Green: Product range: "The trousers category didn't have as funny products as the t-shirts category."*
                - *Assessed emotion: Disappointment (**2**)*
        2. *Participant 3: Total disappointment (**2**)*
        3. *Participant 5: Total disappointment (**3**)*
        4. *Participant 6: Total disappointment (**3,5**)*
2. Product availability: Total disappointment (**16,94**)
3. Product price: Total disappointment (**4**)

If the disappointment of the product range in question was an average value of participants' total disappointment, it wouldn't take account the differences by the number of participants and would give biased results.

Appendix 4: The shopping experience and the intention to buy or browse

	Everlane			Karma			Kind of Green		
	Experience	Buy	Browse	Experience	Buy	Browse	Experience	Buy	Browse
Participant 1	Negative	x		Positive	x		Positive	x	x
Participant 2	Positive	x	x	Negative	x		Positive	x	x
Participant 3	Positive	x		Positive	x	x	Negative	x	
Participant 4	Positive	x	x	Negative			Positive	x	x
Participant 5	Positive	x	x	Positive	x	x	Positive	x	x
Participant 6	Positive	x	x	Positive			Negative		
Participant 7	Negative			Positive	x	x	Negative		
Participant 8	Positive		x	Positive	x	x	Positive	x	x
Participant 9	Positive	x	x	Negative	x		Positive	x	x
Participant 10	Positive	x		Negative	x		Positive	x	x
TOTAL		**8**	**6**		**8**	**4**		**8**	**7**

The above table was comprised from the answers to questions "*Did you think that the shopping experience was more positive or negative", "could you imagine yourself purchasing something from the online store? Why / Why not"* and *"Would you have left the online store earlier, if you hadn't been in this experiment? Why / Why not?"*