What’s in it for me? A qualitative study of consumers’ sensemaking and value creation using mobile location-based service retail applications

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Abstract

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The research on digitalisation has experienced a shift in the last decade, and an important facilitator of the effects of business world digitalisation is the increased use of mobile devices. Furthermore, research on value creation has also gone through changes recently. Although much value research has been conducted, there is a gap in retail digitalisation research and the consumers’ interaction and sensemaking of digital devices in a retailing environment. The aim of this study was to add to research on sensemaking and value creation in the context of digitalisation by investigating its impact on usage of mobile location-based services retail (LBS) applications as a facilitator for value co-creation. To fulfil the purpose, a hermeneutic analysis was performed on a qualitative case study of a mobile LBS retail application. The results show that primarily belief-driven sensemaking affects consumers’ willingness to change and co-create value. Consumer identity and beliefs in particular affect the value co-creation process. Furthermore, it shows that complex information hinders sensemaking processes, leading to negative emotions and preventing co-creation of value. Knowledge about this is important to those who work to adopt digitalisation in their own retail context, and for those who wish to expand the horizons of sensemaking.

Keywords: digitalisation, sensemaking, retail digitalisation, value co-creation, mobile lbs retail applications

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1. Introduction and research problem

This section describes the shift of digitalisation research and the new customer demands that make new research on customer behaviour necessary. The study has been executed within the framework of the field of strategic communication. It investigates the connections between sensemaking and co-creation of value in relation to mobile location-based services retail applications. The relevance and contribution of this study is also presented below, followed by purpose and research questions.

The research on digitalisation has experienced a shift during the last decade. Before the boom in widespread online communication channels, researchers were more focused on other communication channels, such as radio and computers, and their impact on our society – for example from a democratic perspective (Buckley, 2000), as well as the implementation of computers in education (Maxwell & McCain, 1997). The starting point of our research lies in the shift to the more extensive study of the interaction between people and mobile devices and the change of focus from the public sector to digitalisation in the context of large corporate organisations. An important facilitator of the many effects of digitalisation in the business world is the increased use of mobile devices, which are increasing in importance in the retail world (Hagberg et al., 2016). The emergence of Internet as an important element in physical stores has led to new retail formats, e.g. pop-up stores, click-and-drive purchasing and direct mobile payment and price comparisons (Ibid., 2016). Mobile commerce is growing more rapidly than the overall retail revenue (Wang et al., 2015), which makes it an important aspect of today’s retail.

Consumers are adapting to the increased possibilities of personalisation in services from companies, which leads to a higher and more personalised service (George, 2016). For retailers, developing location-based services (LBS) retail applications (i.e. mobile applications with a GPS function that are used in connec-
tion to purchases) is one of the ways that they can interact with consumers. From a strategic communications perspective, mobile LBS retail applications can add value for the customers and contribute to the co-creation of value, thus enhancing the customer experience and – in the long run – also the brand loyalty (Kang et al., 2015). That way, the use of branded mobile applications is an emerging way of connecting with target groups instead of traditional marketing communications. However, in order for customers to co-create value, they must first make sense of the application and how it relates to the customer.

1.1 Research problem

That companies wish to adapt to new technology is a step forward, but what is the right approach to reach success? In short, new digital conditions are changing the way companies are doing business, as the consumers often have many sources of information through smartphones and other devices. In a retailing context, this means that retailers provide consumers with a range of digital tools and solutions (Hagberg et al., 2016). Consumers’ in-store mobile usage is increasing and thus, it is important for retailers and service providers to know the underlying causes that affect customers’ drift to use mobile location-based services (LBS) retail applications to impact customers’ basket size and develop targeted marketing techniques. Additionally, there is limited research on mobile LBS retail applications in relation to their in-store mobile usage behaviours and attitudes (Kang et al., 2015). To improve marketing, communication and return on investment there is a need for better understanding of and more research on sensemaking, consumer willingness to change and value creation to mobile LBS retail applications in the co-creation and provider sphere. This research adds to the understanding of the interaction between customers and devices and is relevant because we live in a time where many companies have either already launched mobile applications or are on the verge of doing so in order to connect with their customers and consumers in general.

Although there are some studies investigating the influence of technologies on sensemaking, these are very few compared to other sensemaking studies (Sandberg & Tsoukas, 2015). From an academic point-of-view, there is a gap in research, and when it comes to digitalisation prior research has had a great focus on
an organisational perspective and the challenges of innovation and digital transformation (Fast-Berglund et al., 2016; Lenka, et al., 2016). There has been little focus on both sensemaking and digitalisation in a retailing context. Ellway & Dean (2016) claim that consumer narratives will assist service providers in their understanding of how service influences consumers’ frames and attitudes, and in the identification of what effects they may have on their value-generating practices. Therefore, in adding consumer narratives, this study can be seen as a complement to the little research that currently exists regarding customer interaction with mobile LBS retail applications.

1.2 Purpose and research question

The purpose of this study is to add to the research on the effect of sensemaking on consumers’ willingness to change and co-create value in the context of retail digitalisation by investigating its impact on usage of mobile location based services retail applications. To reach our purpose, we intend to answer the following two questions:

- How do different aspects of sensemaking processes affect the co-creation of value among customers when using mobile LBS retail applications?
- How do the different aspects of sensemaking processes affect customers’ willingness to adopt new behaviour and use mobile location-based services (LBS) retail applications?

To answer these questions, a qualitative study of customer interaction with a mobile LBS retail application will be performed through interviewing and observing customers through shadowing. This will be explained further in chapter 3.
2. Previous research and theory

In this section, previous research and the theoretical framework of this study is described. Topics reviewed are sensemaking, value creation, mobile LBS retail applications, digitalisation and its consequences and consumers’ willingness to change behaviour.

2.1 Sensemaking

Sensemaking looks at how a person understands various situations (Weick, 1995). Thus, the sensemaking perspective shifts focus from a transmitter to a receiver perspective of communication. Sensemaking involves gathering information, gaining an understanding of the information and then using the understanding to accomplish a task (Nchor, 2012). The process of sensemaking includes the assembly and correlation of interpreted cues, and the revision of the interpretations based on actions and their consequences. Weick (1995, p.17) defines sensemaking as the following:


That the process is grounded in identity construction means that sensemaking begins with a sensemaker and is affected by their identity. However, all identities are socially constructed and no person has one single identity. The more identities a person has access to, the more sense that person can make of a situation. Sensemaking is retrospective since an individual cannot understand what they are doing until they have done it. Through saying that sensemaking is also enactive of sensible environments, Weick means that people produce part of the environment they are in, and environment and entity influence and interdependently affect each other. Furthermore, sensemaking is a social process as human thinking and actions depend on others. The direct source of influence is difficult to identify and to
understand sensemaking, one needs to pay attention to social aspects such as roles and stereotypes. People are always experiencing interlaced situations and phenomena leading to the fact that sensemaking is on-going and that it has no beginning or end. Extracted cues are simple things that people recognise and use. The process of sensemaking is focused on and by individuals extracting these cues in order to make sense. There are too many cues for one individual to notice all of them and they therefore filter and subconsciously select different cues for their individual sensemaking. Sensemaking is driven by plausibility rather than accuracy: during their sensemaking process, people tend to be lazy and stop searching for other explanations when they find a plausible one.

Weick (Ibid.) points out that these characteristics of sensemaking are a rough guideline for understanding what sensemaking is, how it works and what aspects present risk of failure. Retrospective sensemaking in everyday life contains a shorter timespan between action and reflection upon the action. Thus, the recollection of the sensemaker is usually rich with indeterminacy. Sensemaking occasions are common in cases of ambiguity and uncertainty. When there is ambiguity, people engage in sensemaking because the many interpretations confuse them, and when there is uncertainty, people try to make sense because they are oblivious to any existing interpretations. However, sensemaking is not the same thing as interpretation: interpretation means attending to cues and interpreting, externalising and linking these cues. (Ibid.). Weick (Ibid.) refers to this as a phenomenon where people cope with already existing entities instead of making sense of the origin of entities. We do not consider interpretation to be a relevant perspective for this study, as the user needs to perform tasks and not only interpret them when interacting with mobile LBS retail applications. Uncertainty can be high when using a mobile LBS retail application for the first time, as the user faces a new situation and is completing tasks they have never accounted before, which requires a sensemaking process to take place.

Within the context of sensemaking, individual knowledge is collected through personal experience and involves an individual’s values, beliefs and experiences. These factors enable the individual’s interpretation and making sense of the environment, their own and others’ actions (Ellway & Dean, 2016). When technology changes, uncertainty increases because old scripts and generic subjectivity stop
working, and different views of what the change means emerge and create the need for synthesis. When people detain their processes, they might discover the liabilities of rapid thinking and slower sensemaking sometimes permits sensemakers to doubt, thus improving unbiased investigation. (Strike & Rerup, 2016.) Customer narratives are particularly important in this study as they put the application in a context and enable the users to give it individual meaning. Narratives are a form of framing, i.e. the process where symbolic actions are used to affect someone’s sense of reality. When framing, one does not mediate an objective truth, but rather makes sense of the information received. (Tracy et al., 1999.)

Weick (1995) claims that increased complexity can lead to an increased perception of uncertainty since numerous diverse elements interact in an interdependent manner. The level of complexity affects what people take notice of and choose to neglect. Furthermore, an increase in complexity leads to a more extensive search for and reliance on habitual cues. Additionally, what is believed is seen whilst that for which one has no beliefs is not seen. The greater the variation of beliefs in a repertoire, the more a situation should be noticed, solutions identified and the greater the likelihood of a greater knowledge of a situation. (Ibid.) This can be explained by the fact that to make sense, one needs to isolate a question. Isolation is a process where one aims attention on one specific question. Isolation occurs primarily in connection to questions affects the individual or when questions cause interruption, i.e. something that deviates from what is normal, something that is negative or something that is particularly salient. (Von Platen, 2006). When adding another component to an experience or a task, such as using a new device in a purchasing context, complexity increases, which is why we believe that complexity from a sensemaking perspective is an aspect that needs to be taken into account for this study.

2.1.1 Belief- and action-driven sensemaking

A fundamental part of sensemaking is taking that which is clearer, whether it is a belief or an action, and linking it with whatever is less clear with the help of beliefs. Sensemaking can derive from beliefs in the form of either arguing or expecting. When arguing is the principal form of sensemaking, amplification and strengthening of previously weak definitions of a situation occurs. When sense-
making occurs, it is also possible to discover systematic interaction around expectations. Meaning is formed as a cue connects to an expectation, which is in turn used to test various associations of the cue. If the expectations hold a satisfying level of accuracy, the sensemaker gains in confidence in their assessment of a situation. As expectations are usually more strongly held than arguments, they filter the input of information more heavily, which increases the risk of inaccuracy, mistakes and the limits of social construction. (Weick, 1995.) Therefore, sense-making is relevant to this study as it allows us to review the consumers’ expectations, how these expectations filter the information they receive and whether these expectations are met or not. People see what they expect by combining selective attention with direct influence of the sensemaker. When an event is compared to an explanation, what is noticed becomes focused in selection. Self-fulfilling prophecies are also commonly connected to expectations. When self-fulfilling prophecies are said to derive from a false definition, one must ask oneself, false for whom? Additionally, accuracy is unstable and, as new discrepancies appear, events destabilise and new stabilisation becomes necessary by means of behavioural confirmation. During action-driven sensemaking, actions make grounds cognitively to their own continuation in the form of manipulation and commitment. Out of the two, commitment is the more rare sensemaking process. Commitment requires a specific situation, whereas manipulation focuses on multiple simultaneous actions. Manipulation begins with actions to which beliefs are then adapted. Commitment answers the question “why did the action occur?” whereas manipulation answers the question “what did occur?” (Ibid.) Despite of commitment being more rare, it is still relevant to this study as the users are forced into specific situations, which leads us to the conclusion that it can be more common than in other situations.

2.1.2 Sensemaking and technology

Goodman et al. (1990) bring up an issue that is still applicable today, which is that new technology creates unusual problems in sensemaking when, for example, people face the problem of how to recover from incomprehensible failures in computer systems. Weick (1995) develops this thought by bringing up the phrase *technology as equivocal*. An equivocal is something that permits many possible
or reasonable interpretations and can consequently be mystical, a source of misunderstandings, complex and fickle. Reasoning about technologies can affect the way the technology functions, as it affects the material interactions and therefore the outcome of usage. (Ibid.) In the context of this study, this means that the sensemaking processes of the users and the users’ maturity level in connection technology may affect whether or not they view technology as equivocal and thus, how they interact with it. Previous research on sensemaking discloses two important approaches that tell us much about the sources of sensemaking. The first approach is about how features of technology can impact technology sensemaking (Huo, cited in Nchor, 2012). To exemplify this, Nchor (Ibid.) says a technology can have concrete or abstract features but at the same time may consist of core and tangential features and in turn, these features can affect how users make sense of the technology. It is easier to predict users’ sensemaking of technology features that are concrete or core, as users often notice these features. At the same time, it can be difficult for users to notice abstract or tangential features and, in these circumstances the technology sensemaking of the users can be negotiable. Based on different triggering conditions created by these technology features, users make sense of the technology, create local interpretations and decide if they want to accept or reject the technology. (Ibid.)

2.1.3 Sensemaking and value

Ellway & Dean (2016) suggest that companies should, from a design perspective, be thinking of how they can ingrain sensemaking experiences into value propositions and how these experiences can impact consumers’ attitudes, interests and perceived value of the service. Value can relate to techniques or skills that are enabled by a service, but it can also relate to thought patterns, beliefs and attitudes, which is why it is important to introduce features that can foster sensemaking and meaning for users in a way that enables a relationship between brand and consumer, hence making this perspective relevant for studies like this one. By focusing on relationships in both the design of offerings and reinforcement of practices, one can facilitate created value that preserves the connection, which is why the research questions of this study are highly relevant to digitalisation.
2.2 Value creation

Then how is value created? Recently, researchers have debated about where in an organisation value creation takes place and by whom (Shamim et al., 2016). Value creation has always been a central term in service management and marketing, and has during the last two decades been a subject for change (Eksell, 2013). With the evolution of new technology and with the possibilities that these bring, value creation is now a joint activity between companies and the consumers as it is based on interaction between the customer and the service provider (Grönroos & Voima, 2013). Other researchers have previously claimed that value creation is isolated to the internal processes (Porter, referred to in Eksell, 2013) whereas some marketing scholars emphasise the importance of the customer benefit (Woodruff & Gardial, referred to in Eksell, 2013). These perspectives have in common that they consider the different parts of the business, but they are not necessarily in line with today’s technical possibilities and therefore they also lack the connectivity between organisations and its stakeholders. As an extension to this and to bring these different perspectives together, Vargo and Lusch (2004) present a co-creation approach to value creation. In the context of this phenomenon and due to an increased focus on services and new technologies, they claim that value can be created with the stakeholders of an organisation, which. Previous perspectives and definition of value derive from the production perspective where a provider produced a product with value, which was later delivered to the customer (Akaka et al., 2014). Later, this developed into a service dominant perspective when talking about value creation, which is based on exchange rather than simply providing the customer with a product. This logic has a more dialogical view on value creation as well as a bigger focus on interaction between the different parties. In a retailing context, this means that companies provide consumers with a service and the actual value of this service is generated through interaction between the retailing company and the user of the service. (Grönroos & Voima, 2013.) In this specific case, this means that the sole access to e.g. a digital application does not generate any value, but both the organisation and its customers generate value when the application is used to enhance the shopping experience. Due to the before mentioned changes of the view on value creation, we consider the customer being a much more influential stakeholder than before, making the cus-
customer perspective of value creation much more relevant for us to study. We also see a clear connection between sensemaking and studying value creation from a customer perspective, as they both focus on the receiver.
Grönroos & Voima (Ibid.) argue that value is controlled by the customer and repeats that it is a dialogical process where the customer has the power. Referring to the figure presented in figure 1, the model gives an overview of value the different spheres of the value creation process. It guides the reader from the provider sphere, which explains the role of the firm when developing a service, and emphasises that the firm as a facilitator only can create a potential value. At the other end of the process is the customer sphere where the customer independently creates value without interacting with the service. Deriving from historical perspectives on value creation, the model also explains the different roles of actors in the process, both from a production and value creation perspective. Value creation is individual and means different things to different people. The fact that customer and provider merge into one and create a value creation process where both interact with each other in order to create value can mean different things depending
on the context (Grönroos & Voima, 2013). In this study, it means that retail customers will value some services more than others and hence bring complexity to the study. Value can be both intangible, e.g. thinking of what to buy before going to the store (individual value creation in the customer sphere) and more tangible in the shape of a firm developing and planning for better customer service in a store (individual creation of potential value in the provider sphere) or even in the shape of a customer getting helped by a co-worker in the store (co-creation of value in the joint sphere). When the user of a service interacts with it, they affect the production process and if the service provider can fill the needs of the user, value creation is likely to take place (Ibid.). If a client searches for a function in a digital application, finds it and eventually also uses it, the service has created value. Thus, studying value creation from a sensemaking perspective, viewing the impact sensemaking processes have on value creation, makes it possible to investigate how the user makes sense of the application and how the user interprets the information provided by the service provider to perform the task of using the service. Value creation focuses on customers getting well-off but the involvement of companies might as well make them worse off, so a value creation experience can have a negative turnout (Kim & Yu, 2016). This paper will focus on and analyse the interaction between the customer and the provider from a co-creator and facilitator perspective and mostly investigate the joint co-creation and provider sphere.

In contrast to previous perspectives of value as value-in-exchange, where the customer receives the service or product, value is now considered a product where several parties are involved in creating value before, during and after using the service (Grönroos & Voima, 2013). Looking at this from a relationship marketing perspective, co-creating value is a way of being truly customer-centric (Christopher et al., 2004). From this perspective, customer value is generated through the customer’s interaction with the service. This means that the value is created through the perception of the expected benefits and the price (which may be a price in the form of time, effort etc.) they have to pay in order to access these benefits (Ibid.), taking into consideration both the initial and ongoing price. Value-in-use can also be considered a part of today’s relationship-building marketing (Christopher et al., 2004). In this situation the value derives from people (external stakeholders), as it is only through this interaction that value is created, creating
enduring relationships between the retailer and the customers through a positive value creating experience. As the value-in-use is created through interaction, it depends on the individual sensemaking process, making it highly relevant for the connections this study aims to make.

2.2.1 Value creation and brand experience

Building on the logic that value creation is connected to communications, Shamim et al. (2016) argue that the brand experience is also connected to the customers’ willingness to participate in co-creation. The starting point being Ramaswamy’s (2011) statement that value is something that is created through interaction and hence a function customer experience, they argue that (as is also stated in Figure 1) the firm acts as a facilitator. The difference is that instead of value being the main output of this co-creation process, brand experience is added, which is enabled through the interaction in the different touch points. This implies that the customer experience is not only isolated to the actual product and buying experience, but also connected to other brand stimuli such as colour, shape and form (Brakus et al., 2009). To conclude, Lee & Jeong (2014) write that people that who have a congruent or positive perception of the brand are also more willing to participate in co-creation value along with the firm that is providing the service. However, the retail spaces are not isolated to communicating and selling products, but also an arena for retailers to communicate powerful messages (Akaka et al., 2014). This logic establishes the fact that retail spaces apart from the obvious usage areas, are also a potential arena for corporate communication with the purpose of strengthening the brand. According to Kozinets et al. (2002) the firm is not the party that has the power to decide what these signs communicate to their customer, but this is decided through a negotiation between the customers and the firm through the touch points where these two parties meet, meaning that the meeting with the customer is a part of building the brand. Thus, Akaka et al. (2014) claim that brand building derives both from the interaction with the customer in the retail store as well as through continual communication. Studying the continual communication by using an application is relevant to understand from a strategic communications perspective since these interactions impact brand building.
2.3 Mobile location-based service retail application

Providing customers with a tool that facilitates their shopping experience also enables firms to communicate with their customers on a daily basis. It also provides the firms with an extra touch point where value can be created. Mobile location-based services (LBS) retail applications allow this daily connection between the firm and the consumers as well as being the link between their devices and in-store experience. Different functions provided include tending to consumer planning tools, assisting purchase decisions and permitting retailers the opportunity to provide their consumers with e.g. discount opportunities in physical stores. (Wang, et al., 2015.) Building on the fact that mobile LBS retail applications provide firms with an extra touch point where value can be co-created and considering the process of reasoning that is a prerequisite in order for retailers to keep up to speed with the digitalisation, it is relevant to study how the different processes work in mobile LBS retail applications in particular. Previous research has shown that effort expectancy significantly influences the performance expectancy of information technology (Venkatesh et al., 2003). When consumers have a perception of specific technology usage as something effortless, the adoption and use of that technology moves much quicker (Kang et al., 2015). Therefore, affective and cognitive involvement with mobile LBS retail applications can increase when the applications are perceived to be easy to use. And as perceptions are linked to expectations they are a product of sensemaking (Weick, 1995), one can argue that performance expectancy is closely linked to sensemaking.

2.3.1 Involvement

Involvement is a motivational composition that in part depends on the precedent factor of an individual’s values and needs. Involvement can be divided into affective involvement and cognitive involvement (Zaichkowsky, 1994). Affective involvement with mobile LBS retail applications is a person’s experienced emotional feelings or the relevance they associate with a mobile LBS retail application. Affective involvement also consists of value-expressive or affective motives, e.g. the feeling that using a mobile LBS retail application is exciting, engaging and interesting. The affective involvement in the usage of consumers’ mobile LBS retail applications can be heightened when consumers are exposed to affective cues and
motives, which can lead to an inducement of high affective involvement and stimulate consumers’ inclination to use mobile LBS retail applications, thus breaking established habits. At the same time, if consumers perceive using mobile LBS retail applications as an unattractive and mundane activity, the affective involvement may be low, which is likely to dispirit consumers’ inclination to download and use mobile LBS retail applications, thus creating a resistance to change. Cognitive involvement with mobile LBS retail applications is an individual's perception of the rational relevance that they connect with a mobile LBS retail application. When a consumer experiences feelings that a mobile LBS retail application is needed and meaningful to them, they are cognitively involved with the application. (Kang et al., 2015.) According to Jiang et al. (2010), cognitive involvement with a website has positive influence on the purchase intention. Similarly, high cognitive involvement generally generates greater intention to download a mobile LBS retail application, whereas the opposite may be caused by low cognitive involvement (Kang et al., 2015).

2.4 Digitalisation

New technique, such as the implementation of mobile LBS retail application, is not isolated to the digitalisation of the retailing business, but also something that is noticed on a grander scale (Gassman et al., 2014). Digitalisation has many definitions (Parviainen, et al., 2017): Gassman et al. (2014, p. 64) describe it as “the changes associated with the application of digital technology in all aspects of human society,” whereas Oxford English Dictionary (cited by Brennen & Kreiss, 2016, p. 556) refers to digitalisation as “the adoption or increase in use of digital or computer technology by an organisation, industry, country, etc.” Both of these definitions of digitisation are valid for this paper, as this study is connected to digitalisation of both customers, i.e. people in society, as well as organisations. The magnitude of digitalisation implicates that the participants of this study have already been affected by this in their daily lives and that the digitalisation of the retail experience is merely the next phenomenon to make sense of in their everyday lives.

Digitalisation research has thus far been first and foremost addressed through the concept of e-commerce. Even so, digitalisation influences many more aspects than
e-commerce, including the switch from physical products to digital services, social media interaction and the use of digital services in the purchasing process where for example online information searches can lead to offline purchases. As the effect on retailers, consumers, employees and society thus becomes evident, it is important to gain an understanding of the concept of digitalisation; knowledge is moving from only being written into an individual subject to being mediated through different computerised interfaces and stored as electromagnetic tracks in nameless server and data centres. Information design has moved towards a focus on individual consumers and personalised information design. (Hagberg et al., 2016.) For example, iPhone has – almost since its launch – been based on the fact that the client should download applications on and personalise the content (Snickars, 2014).

2.5 Consumers’ willingness and resistance to change

A majority of literature on resistance to change takes a modernistic perspective and thus assumes that all people share one objective reality. Taking a postmodernist, constructivist perspective, there is no homogenous reality and resistance can be found in the constructed reality rather than in the individual. (Ford et al., 2002). Seen from this perspective, “different people in different positions at different moments live in different realities” (Shotter, 1993, p.17). Consequently, people will take various actions in response to a change depending on the reality they are experiencing.

There are many challenges connected to the introduction of a new product into the consumer marketplace. Consumers face many concerns regarding the adoption of a new product or habit that cause disturbance or ambiguity in a consumer’s life. Functional or performance risk, entailing concerns regarding the reliability of the performance of a new product or whether a new product will have a seamless interface with complementary services, can be the reason for consumers to postpone adoption. (Labrecque et al., 2017). When weighing the benefits of a new product against the costs, it is possible for consumers to decide that the price is too high and the advantages too little to motivate adoption. As consumers are confronted with ambiguity during the decision-making process of a new product, there is a risk of frustration regarding the product, which may conclusively lead to a post-
ponement or even rejection of the new product. (Strebel et al., 2004.) One significant driver to resistance to change in consumers is habits, the context-response associations learnt by individuals by repeated performance of responses in stable contexts. Consumers’ mindless repetition of behaviour patterns that are already activated may lead them to overlook the possibility of applying a new product or service. Consumers are not automatically locked into performing certain habits, and consumers in search of change may act in a way that contradicts existing habits. Even in these circumstances, however, consumers might lack the willpower to avert from a habitual response. (Neal et al., 2013.) This paper takes on a sense-making perspective on willingness and resistance to change investigating willingness to change of behaviour among consumers shopping habits in the sense of how they buy rather than what they buy. Additionally, research on digitalisation as the adoption of mobile location-based services retail applications and resistance to change among consumers to adopt specifically mobile applications into their ingrained shopping behaviour has been very limited (Kang et al., 2015), and this study contributes to that perspective.
3. Method

In this section, the starting points of the study and how the study has been conducted are presented. Further, we describe the analysis methods used to draw conclusions from the results and finish with a reflective paragraph, which brings to surface the potential consequences of our choice of methods and how we have ensured scientific quality in this study.

3.1 Starting point

This thesis was executed within the framework of the field of strategic communication. Furthermore, this study is permeated by the thoughts of social constructivism. According to Giddens (2007), social constructivism is based on the idea that individuals and society perceive reality subjectively. In accordance to this, there is no objective reality, but reality is created through social interaction, which means that reality is a relative term that differs in the eye of the beholder. In this study, we aimed to understand the social reality of consumers in the context of using mobile LBS retail applications by interviewing, observing and interpreting the behaviour of the participants, thus using qualitative research methods. One of the foundations of qualitative research is using the perspective of the object of study. Schutz (cited in Bryman, 2016) claims that qualitative research focuses on people and the meaning they bring to this reality. When conducting qualitative research, it is common to choose an inductive approach – in other words, interrelating collected data with the theory used conducting the research (Bryman, 2016). However, the research process of this study was circular rather than linear. Since we studied a social phenomenon, the outcome of the study was not clear from the beginning. Thus, we had to form a theory prior to conducting the study and test it multiple times by comparing it to the theory framework on which the study was based, using an abductive research method. Abductive research method (ARM) focuses on constructing theories based on everyday activities such as language and meetings (Ong, 2012), which made it relevant for our study.
3.2 Selection and delimitations

To answer the research questions of this study, ICA’s mobile LBS retail application *ICA Handla* was chosen as our object to study. ICA describe the application in the following way: “With ICA Handla in your pocket, it is easier for you to plan your everyday food life, write and share purchasing lists, see your offers, your balance and find all of our stores” (ICA, 2017). The reason for choosing the ICA application was that ICA Gruppen is one of the leading fast moving consumer goods retailers in the Nordic market (ICA, 2017), which means that its communications and activities affect many people and that its size and business simplified the collection of empirical material as fast moving consumers goods are frequently purchased. The study focused mainly on three aspects of the application: purchasing lists, store sorting and orientation and offers. The reason for choosing these aspects was that they were the most relevant for studying in-store behaviour, and thus, made it possible for us to combine interviews and shadowing. This study was conducted from a strategic communications perspective. Consequently, we distanced this study from other relevant subjects such as psychology. Furthermore, the results are isolated to what was possible to extract from an analysis using the hermeneutic circle. Using another research method might have driven the results in a different direction.

3.3 Case study

Being a case study, this study was based on real situations and therefore gave a rich and holistic exposition to the phenomenon. Flyvbjerg (2010) develops this reasoning by stating that a case study allows the researcher to unveil the reasons for a problem rather than only the signs and symptoms of it, hence case studies can study complex social units consisting of multiple variables that can contribute to the understanding of phenomena. It is important to have in mind that case studies can simplify or overstate factors in a situation and therefore contribute to inaccurate conclusions. They can also present limitations with application and are limited by the researchers’ integrity and sensibility (Heide & Simonsson, 2014). Flyvbjerg (2010) argues against this criticism of the case study by stating that it is rather a question of how human beings acquire knowledge and therefore not only
an issue isolated to case study research. Case studies can be used when the truthfulness of the information received from participants cannot be determined but the credibility can (Merriam & Nilsson, 1994). For example, case studies can be useful when opinions and views are studied since it is impossible to get a “true” or exact report of subjective views and more important to capture and understand the opinions of an individual (Ibid.). This shows that examining people’s sensemaking process as done in this study is coherent with the main advantages of using a case study, as the users’ perception of truth is more important than the actual truth.

### 3.4 Interviews

This study is conducted from a consumer perspective, and in order to extract relevant information and get their point-of-view, we interviewed nine consumers who possessed no knowledge or beginner’s knowledge of the application in question. This allowed us and the interviewees to jointly explore previously unknown subjects to both parties. Interviews also enables the interviewer to see the world from another person’s perspective, obtain a glimpse of their reality, make room for reflection and allow to take part of the thoughts of the interviewee, which is an impossibility with quantitative methods (Eksell & Thelander, 2014). In this study, we followed the entire sensemaking process from acquiring the application, to using it and evaluating it, which allowed us to unveil the thoughts and feelings of the participant and draw conclusions on what the sensemaking process looks like for the individual and the experienced value creation of the consumer. Silverman (2007) claims that interview as a method is excessively used in research in strategic communication. For this study, however, interviewing was the only method that, in combination with observations, could provide enough depth to answer the research questions.

### 3.5 Observation and shadowing

Combining interviews and observations is a useful way to complement qualitative research, as there is often a gap between what someone claims they do and their actual behaviour (Eksell & Thelander, 2014). In order to complement the inter-
views and find any disturbance between the participants claimed actions (i.e. expressing their subjective reality) and their real actions we conducted observations in the form of shadowing. This was done to discover how the mobile LBS retail application was used in practice to contrast the information gained from the interviews. The shadowing was isolated to the participants’ in-store shopping and simultaneous usage of the application in connection to purchasing. According to McDonald (2005) one of the benefits of shadowing is that the researcher can gain access to the participant’s views and experiences. Shadowing provides a vaster degree of depth than a regular observation does. During observations, we took the role of “observant as participant,” which according to Eksell & Thelander (2014) means engaging in interaction between the researchers and the participants of the study. Choosing to interact with the participants adds value to the data collection as it allows the researcher to explore deeper thoughts of the participant (Ibid.).

3.6 Collection of material

For this study, we chose nine people who had not previously used the application but were regular shoppers in different convenience stores to conduct extensive interviews and observations, lasting for a total average of two hours, of which 60 minutes were interviews. The interviewees had varied experience of the stores where the study was conducted and an age range between 20 and 52 years. The wide range in age contributed with many different perspectives to the study and allowed us to see certain differences between generations. The gender distribution was 4 men and 5 women, i.e. 44 and 56 per cent.

During the interview and shadowing process, the interviewees were given five tasks relevant to sensemaking: downloading the application; writing a purchasing list; adding a favourite store; viewing offers; and using the application during their purchasing. When completing these tasks, as the aim was to observe their sense-making processes without interference, the interviewees did not receive any guidance on how to find relevant information and use the application. The interview was divided into three parts: the first part was conducted prior to downloading the application, the second prior to purchase and the third post-purchase. The purpose of dividing the interviews was to explore beliefs, attitudes and expectations that
might affect how the interviewees made sense of the application and used it to perform the tasks and co-create value, as well as exploring the retrospective sensemaking processes and value creation post-purchase.

### 3.7 Analysis method

In accordance with the social constructionist approach, the analysis was conducted with an ontological stance. This means that it derived from the idea of a socially constructed reality among the participants, which is important in social research (Eksell & Thelander, 2014). As Eksell and Thelander (Ibid.) express it, we let the empirical data “speak for itself”. As mentioned in Chapter 3, this allowed us to take part of the thoughts of the interviewees. Due to the research method of this study where the researchers interacted with the participants, the interviewees were co-creators of both the empirical data and according to that logic also the analysis (Ibid.). To gather and obtain a sufficient overview of the data, we closely viewed the transcriptions and field notes in order to find relevant and recurrent themes that could be explained by our theory and research questions. In reference to Alvesson & Sköldberg’s (2008) thoughts on abductive research, the fact that we continued to return to the theoretical framework during the analysis, adding and deducting theory, proves that we used an abductive research approach during the analysis process.

The analysis and gathering of empirical data were conducted simultaneously with the purpose to confirm and revise the paper and make it relevant for our research, both from a methodological and analysis perspective. Eksell and Thelander (2014) express that this method has both advantages and disadvantages as it allows the researcher to choose relevant and interesting themes, but in our case it also implied that the quality of the data used in the analysis is based on the researcher’s ability to detect these themes. To make sense of the empirical data after detecting the themes to use in the paper, we coded them according to the themes and then assorted the empirical material chronologically as it allowed us to follow the sensemaking process and connect it to the process of value creation. Coding means breaking out segments of the text and connecting it to certain keywords based on the theory of the research, or developed during the process (Kvale &
Brinkmann, 2014). We chose to anchor this process and the words in our theoretical framework.

### 3.7.1 Hermeneutic interpretation of meaning

Hermeneutics is the study of interpretation of text within humanities, which tries to reach a valid interpretation of the meaning of a text. The interpreter goes beyond the obviously stated to develop structures and relationships that are not immediately apparent within a text. It is a form of re-contextualisation in a broader framework. Three different contexts of interpretation are used: self-understanding, the critical understanding of common sense and the theoretical understanding. In the first context, the interpretation is limited to the self-understanding of the interviewees as the interviewer interprets it. In the second context, the interpretation can assume a wider framework than the one of the interviewee and be critical towards that which is expressed. Furthermore, in the third context, a theoretical framework is applied for the meaning of a statement. (Ibid.) As our purpose was to study connections of sensemaking and co-creation of value, it was important to assume a wider framework than the ones of the interviewees and to critically examine what was said to what we observed. Thus, the hermeneutic interpretation of meaning would allow us to move beyond what is obviously stated and interpret the underlying meanings and processes of what is stated and why it is stated. The fact that the hermeneutic interpretation of meaning limited us to the self-understanding of the interviewees was not considered a major disadvantage, as what was examined were the sensemaking process and perceived value, and therefore the self-understanding, of the individual.

### 3.8 Reflection on the chosen method

One of the most common criticisms of qualitative research is that it is too subjective and unstructured, as well as too dependent on the interpretations of the researchers. One can argue that the research can be biased since the researcher is the one who decides what is valuable and what is not valuable data. (Ibid.) During the study, we therefore strived to structure the process in choosing what to include in the analysis in order to maintain an as high as possible degree of transparency.
There are also researchers that argue that qualitative research is very difficult to replicate and therefore also causes problems when trying to raise the level of analysis and applying it to other researches and the generalisation. As a reply to this criticism, a combination of methods (in this case interviews and observations) and prior research will provide the study with justification for the conclusions and the needed credibility for the chosen method.

Reliability and validity have been criticised in qualitative research as they are considered a heritage from the quantitative school (Lincoln & Guba, cited in Eksell & Thelander, 2014). Instead four alternative criteria are presented: credibility, transferability, dependability and confirmability. In this study we worked to achieve credibility through obtaining empirical material that was rich in information by combining interviews and observations. To give the study transferability, we have attached the interview questions and relevant screenshots of the mobile LBS retail application. Dependability and confirmability refers to the fact that the participants of the study can take part of the material, analysis and conclusions of the study to secure the researchers have correctly understood the empirical material (Ibid.). However, as Eksell and Thelander (Ibid.) argue, these criteria derive from a positivistic way thinking of the reality as objective, which can be problematic due to the social constructivist perspective of this study.

It is important to mention that interviewing as a method provides a possibility that the answers from the interviewee are affected in a specific direction either by the interviewer or other reasons such as age, gender, ethnicity et cetera (Ibid.). Furthermore, as sensemaking is a highly social process (Weick, 1995), it is possible that the questions asked, the questions not asked, the manner in which questions were asked and our reactions to the answers may have lead the interviewees on a specific path or affected their sensemaking processes.

During this study, we have considered different ethical issues regarding our method. In order not to let the reader be affected by gender or ethnicity, we chose to anonymise the interviews. The interviewees were all asked to agree to being recorded and were informed regarding the confidentiality of the material and approved their participation in the study. The anonymity of the participants might provide an ethical dilemma, but we have strived for transparency throughout this paper and described the process as much as possible. We also considered the fact
that participating in a day-to-day activity may be considered a breach of the participants’ privacy and that this may have affected what they bought and behaved during the study.
4. Analysis

The analysis below is divided into seven parts in the chronological order of the empirical material, analysing the empirical evidence to reach the purpose of the study and answer the research questions.

4.1 First perception of the application

When entering the application for the first time, users are offered the opportunity to view an interactive tutorial slideshow that introduces the user to various functions of the application. The interviewees who used the application for the first time chose to skip the tutorial in a habitual manner. Had they not skipped the tutorial, however, they would find that the information presented in the tutorial is very limited. One of the slides informs the user that it is possible to create “purchasing lists that you can share with the rest of the family” (see appendix 1). The user is not informed further regarding the activation of the function, what the name of the function is or where it is possible to find the function. Thus, users can only be made aware of the existence of the function through the tutorial but cannot create a deeper understanding of how to use it. When entering the purchasing list function, however, there is a “share” symbol in the top right corner of the user’s screen (see appendix 2). This function was not discovered by any of the interviewees. Interviewee 1, who saw a great personal need for such a function, explained their need for the share button and how this function would work in their life:

Can you share purchasing lists? I haven’t seen that, but it could have, then I could well imagine to have, you know, now we’re going to shop, I’ll send you a text [imitating one person], no, I have already done a purchasing list, I’ll send it to you in your app, or your ICA app [imitating another person], and then you can share it with the rest of the family [...]. There would have been some benefits with [the application], or more benefits with it, user friendly, that’s what I think.
Interviewee 1 had a pre-existing realisation of the benefits of sharing purchasing lists with others and possessed the motivation to use the function. However, since they were not made aware of the existence of the function, they could not use it and instead, saw the perceived lack of such a function as a shortcoming of the application. Weick (1995) claims that what is believed is seen whilst that for which one has no beliefs is not seen, in particular in monologues that reflect self-interest. If Weick’s claims are correct, this could mean that interviewee 1 did not believe that the application’s complexity was at a level that made sharing of purchasing lists possible. The greater the variation of beliefs in a repertoire, the more a situation should be noticed, solutions identified and the more likely is a greater knowledge of a situation (Ibid.). Interviewee 1, however, seemed to have a limited variation of beliefs regarding the abilities and complexity of the application, rendering the situation unsolvable and knowledge of the situation limited. The inability of interviewee 1 to discover the sharing function despite actively searching for it is a sign that the application fails in its communication with the user. Thus, the belief-driven sensemaking in the form of expectations hindered them from noticing the cue and thus, made them less inclined to change their behaviour by continuously using the application. The sharing button on the application is approximately 3 millimetres wide and tall (see appendix 2), and as interviewee 1 described the purple colour as difficult to see due to a perception of low contrast as well as small text, it is possible that interviewee 1 did not see the button due to its size and colour. Had the button been larger in size and more visible in colour, interviewee 1 might have discovered it regardless of their beliefs, thus collecting new cues about the application and expanding their sense of the situation and expectations of the application.

From a value co-creation perspective, there seems to be a disturbance in the joint sphere where the real value is potentially created. In this case, during the filtering and processing of cues, the interviewee is unable to find those features that are perceived as important to them. The firm, which according to the co-creation value model plays the role as a facilitator, fails to play its role, as well as the consumer, who is supposed to play the role of value-creator. The consumer was unable to convert potential value from the provider sphere into real value in the co-creation sphere. In other words, there was a disturbance in the dialogical process.
between the firm and the consumer, and this hindered the consumer to deepen the interaction and also reach a higher level of understanding of the service, hence failing value co-creation. As interviewee 1 additionally saw the inability to share the purchasing as a shortcoming of the application and that this feature should be added to fulfil their experienced need it affected the user experience negatively. Seen from a brand experience perspective, as it is very plausible that this generates disappointment among the users, it may also affect the brand experience and hence the brand perception of the users.

Unlike interviewee 1, interviewee 7 expected the functions of the application to be more limited than the cues later given to them revealed that the functions actually were. In their first perception of the application, interviewee 7 expressed satisfaction with their first impression of the application as they discovered unexpected features of the application and described them to us.

Well, the whole menu is here on the left side but it’s very clear. It’s divided into recipes and offers here at the top, purchasing lists, in the store, here I’m guessing you can pay, apparently. Mobile payment, I didn’t know that. Shop online, grocery bags, well all the functions you need when you’re going to shop seem to be here. It seems pretty clear.

Interviewee 7 discovered a few features they had not expected or seen before while observing the application. Prior to opening and examining the application, the interviewee believed that the application functioned mainly as an inspirational source for cooking and provider of recipes. As expecting represents consistencies in sensemaking that derive from beliefs (Weick, 1995), it seems that interviewee 7 lacked predisposed beliefs regarding the application, or perhaps obtained expectations about the application as a simple service that provided recipes rather than these functions, which led to the application exceeding previous expectations. Since interviewee 7 had expectations that differed from the expectations of interviewee 1, they noticed other cues and thus, reacted differently to the functions of the application. At a first glance, interviewee 7 was therefore impressed by the functionalities of the application. The beliefs of the interviewee enabled them to notice specific cues that led them to the conclusion that the application provided a service that was beneficial to them. This is an example of when the co-creation sphere is expanded as the user explores the application and where potential value
provided by the firm is converted into real value, as the user finds something that adds value to the shopping experience, and the interaction additionally provides a positive emotion. Looking at the first perception of the application, we found that customers are steered by their beliefs, and negative beliefs can hinder the user from finding new information and deepening interaction. For beliefs to be altered, the application’s communication must be very clear. However, when beliefs are challenged in a way that generates a positive response, the user can perceive this new sense of reality as added value. When there are no or very few beliefs, the user is receptive of affective involvement and co-creates intangible value, making them more likely to adopt new behaviour.

4.2 Understanding the purpose of the application

During the interview, the interviewees were asked to describe their perception of the purpose of the application. The application’s landing page is a page with recipes, divided into tips, healthy dinners, family recipes, the latest issue of ICA’s own magazine and other various categories of recipes (see appendix 3). The name of the application, on the other hand, is ICA Handla, which translates into ICA Shop. As interviewee 1 reflected on their lack of understanding of the purpose of the application, they expressed confusion and exemplified the incongruity between their perceived intent of the application, the name of the application and the application’s landing page.

This purchasing list thing should really be the landing page. Maybe it is. Or? I don’t know what is really the landing page, or is there a landing page if I close the app. But really, why should I use the app? Is it for me to be? I don’t really enter it to look for recipes, I don’t, but if I want to enter the app I want to get to what I’m going to use firstly and mostly, really. If I’m going shopping then it’s the purchasing list. And it’s not even there, right? It’s not even there as a choice.

Interviewee 1 expected the application’s purpose to be an assisting device during purchases, partly because of the name of the application and partly because they were given the task of writing a purchasing list; viewing offers; and using the application during a purchase. As a landing page of recipes met them, they were therefore confused by the contradictory information. The beliefs and expectations combined with the cues given led to a sensemaking process where the purpose of
the application was decided. As new cues were added, through arriving at the application’s landing page, the situation became uncertain for the interviewee. To make sense of their actions, interviewee 1 committed to the initial actions taken, i.e. using the application to assist their purchasing, and explained the situation by claiming that the landing page is wrong. Similarly, interviewee 8 brought to surface the issue of the name of the application, raising the question of why the name of the application is incomprehensible to the user as the user first opens the application. As the landing page does not match the intended use of the individual, the individual is confused about the purpose and must decide whether their initial actions were correct, thus committing to them, or make new sense of the situation by changing perception with the help of the new cues.

According to Figure 1, when the customer invites the provider into the direct interaction with the service, value is co-created with the provider. This includes discovering the different functionalities of the application. As interviewee 1 did not understand the purpose of the application, the individual sensemaking process of the user affected value creation. Even though interviewee 1 identified as a digital person they seemed to experience difficulties interacting with the application and expressed this in a critical way. Seen from a value-creation perspective, the perception of the landing page not matching the purpose of the application connected frustration and negative emotions to the application, preventing the user from reaching a deeper interaction. Weick (1995) claims that in arguments, or when different attitudes are met, people argue their way into a new sense of what they confront. As interviewee 1 had already established beliefs that the application was meant to be used for purchasing reasons, they could not agree with the information provided by the application, which seemed to them to state that the application was meant to be used to find recipes. This reduced the co-creation sphere and the value creation connected to the interaction with the application as the lack of understanding of the service provider’s intentions provoked negative emotions and worked against the interviewee 1’s willingness to participate in co-creation.

Interviewee 1 also expressed that the application brought difficulties to the time in-store rather than being a service that enhanced the shopping experience. For example, they claimed a loss of “faith [in the application] in the beginning, as I said I’m hung up on the cucumbers, but they were ten metres further back than
they should have been.” Faulty information additionally contributed to a negative shopping experience and the application became a source of disappointment. Combining Vargo and Lusch’s (2004) value-in-use perspective and Weick’s (1995) theory about sensemaking, we interpreted that co-creation of value is very difficult to achieve when there is a disruption in the user’s sensemaking process due to faulty information. Interviewee 1 could not make any other sense of the information they received, as it did not match expectations, beliefs or actions, than that there was an error in the application. Thus, they could not commit to their actions and their needs were not met. Consequently, interviewee 1 did not participate in co-creation of value.

Interviewee 9 connected browsing the application, discovering functionalities, using the functionalities and expressing positive emotions. In reply to the question “if you look through the application, how would you explain it in as much detail as possible?” interviewee 9 gave a description of the different aspects of the application they discovered.

[...] You arrive directly at recipes, which is nice. Then you have the alternative to press “recipes” and search for them. Then there’s a little thing, I don’t know what it’s called, but there’s a small scroll-down menu where all the important things are, such as stores, offers, find stores. And you can order food I guess. Finding recipes, check your account, account balance [...] You can also search for stuff, that’s cool!

The quote from interviewee 9 exemplifies the interaction between the sensemaking process and value creation process. In this case, interviewee 9 browsed through the application and received, processed and used the information to make sense of the application. In the sensemaking process, interviewee 9 seemed to be receptive to new information, as they did not state any specific beliefs regarding the application and lacked experiences of mobile LBS retail applications or store applications prior to the study. When asked what they thought the application could be used to do, interviewee 9 replied, “I don’t know.” During the sensemaking process, the participant explored the application, read the various topics that are found in the menu and eventually reached a functionality that triggered a positive response and feelings of excitement, connected a positive emotion to the usage of the application, and hence generated affective involvement. When the neutral user perception of the application was converted into a positive feeling
through interaction with the provided service, creating affective involvement, an intangible value was created for interviewee 9.

Despite interviewee 1 expressing a few positive features of the application, they did not seem to consider the application as a useful tool to facilitate the shopping experience. Interviewee 1 explained that in their opinion, an application can be a positive addition to the shopping experience, however only if it adds value to the customer personally:

[...] an app is surely good to have but it has to give me something. In my opinion it must give me something in order for me to use it. And at the moment, for me personally, I don’t see any added value in the application.

Interviewee 1 expressed expectations of the application as a value-adding service prior to using it and, after interacting with the application, they drew conclusions of it as an interesting although useless tool for them personally. After stating this, interviewee 1 transitioned to a focus on opportunities of the application that might enhance the shopping experience and add personal value, saying “I think apps and an activity such as shopping [...] give added value if you do it together with someone else.” The field notes from the shadowing of interviewee 1 further attested that they value personal interaction, engaging in conversations with people around them during the time in the store.

Asks personnel for potato gratin, which “was not where it was supposed to be.” [...] Takes a queue ticket to the cured meat. Line too long, goes to the counter instead. Does not find anything [they] like. Asks personnel. Discusses meat with personnel. [...] Makes jokes with another customer. (observation, 2017-04-22)

Interviewee 1 expected the purchasing experience to be a social interaction, and therefore isolated this issue in the context of using the application. As the application could not live up to these expectations, interviewee 1 instead interacted with personnel and other customers. Interviewee 1 expressed a preference to interact with an additional external stakeholder, thus wanting to create additional value with the application. In that case, instead of value being co-created between two peers, the value would be co-created with a third party which decentralises the value creation from the firm. Deriving from what is stated in Figure 1, the ability to co-create value with a third party would further affirm the firm’s role as a facilitator, as the interaction would mainly occur between the two persons sharing
the purchasing list. As sharing a purchasing list is an already existing function in the application, this can be interpreted as if there is a breach between the user’s sensemaking and the information provided by the application. Interviewee 1 was not correctly guided through the different parts of the application, and thus the application failed to provide sufficient cues to the user in order to facilitate expected interaction. The application did not provide interviewee 1 with the sufficient information required for interviewee 1 to make sense and create value in connection to the application. Thus, we interpret this as in order to foster value creation and make consumers more willing to change their behaviour, the service provider must not only offer solutions that match needs and foster value creation, but also guide the user through the sensemaking process of the service so that these solutions can be found and used in the intended way.

4.3 The menu bar and purchasing list

Interviewee 5, who did not have the habit of writing lists prior to purchases, expressed a need for a purchasing list in the application prior to using the application and being aware of the application’s functions. Interviewee 2, who possessed the habit of writing purchasing lists on post-it notes rather than on their phone, saw the list as a value-creating factor of the application. Giving the function to save purchasing lists extra attention, interviewee 2 commented that despite the extra time writing a purchasing list in the application required, the outcomes were worth the efforts.

But I saw that the lists are saved so you can also use old lists to see what you have shopped. It’s saved in it, sort of. It might take a bit longer to write down the list before you go shopping, but it feels like it’s weighed up because it remains in the phone and the list afterwards. I don’t save post-its the same way.

Interviewee 2 referred to their experiences of post-its to make sense of the purchasing list and its functions and processed the new information to mobilise their beliefs and justify their acts. As interviewee 2 explained why the action of writing a purchasing list was important to them, using the outcomes as the main argument for this conclusion, they were committing to their actions. This increased the credibility of repeating the explicit action, and created cognitive affection to the appli-
Grönroos & Voima (2013) claim that intangible value creation occurs in isolation from the provider, i.e. in the customer sphere. If interviewee 2 uses their saved purchasing list for the next purchase, the application works as an extension of the co-creation sphere of value creation. Instead of intangible value being created upon arriving in the store, the application works as an enabler for tangible value creation even when the consumer has not yet left their house. This also means that intangible value would be created for interviewee 2 if they were to think about using the shopping list.

After adding a purchasing list to their application, the interviewees were asked to add a store and sort the articles in their purchasing list according to that store. As the subjects received the information regarding how to take action, they all faced difficulties processing the information provided by the application and using it to perform the task of sorting. While performing this task, interviewee 7 expressed their thoughts out loud to us – first looking through the menu bar, then finding the function, facing issues with automatic adding of store, realising they needed to manually import a store and then adding the store as their favourite.

Store sorting, no store sorting chosen. Do I need to choose store first? Stores, offers, find store, right? No. Do you mean if I choose store..? We can’t decide where you are. What’s the one at Råå called? Okay, I understand. I’ll put one of those [a heart] for my favourites, okay.

Interviewee 7 experienced a fairly rapid sensemaking process of the new situation, as they could relate the functions of symbols in the application to functions of symbols they had experienced in other contexts in the choice of favourite store, and as it correlated to their expectations of the functions of applications. At first, interviewee 7 understood that they could not sort their list according to a store until they had chosen a store. They then filtered the information they received in the menu bar and particularly mentioned the information deemed possibly relevant to find the alternative that fit best into their expectations and experiences regarding where such information can be found. Lastly, interviewee 7 recognised the heart as a symbol for adding an object as a favourite or liking an object from experiences with other applications, and connected previous knowledge to the information they received from the application. Because of their beliefs and thus expectations of functions of applications, they could perform the task without larger issues. In-
terviewee 2, who had differing experiences and references to the heart symbol, saw the symbol as false inducement rather than a clue, explaining that the application did not have a text that explicitly told the interviewee to add a store, but rather a heart symbol resembling the one of social media applications that carries the meaning of liking an object:

It didn’t say “add store” but they had an icon in the shape of a heart in the right hand corner, and that indicates on other sites, like Twitter, that you like something but maybe you shouldn’t assume that [it is not meant for saving something] this time.

In this case, previous experiences with heart symbols confused interviewee 2 in their sensemaking process, since they could not comprehend the message of the heart symbol. This created annoyed emotions for interviewee 2, thus decreasing affective involvement in connection to the application. Similarly, interviewee 1 could not comprehend where in the menu bar it was possible for them to add their favourite store. They claimed it was a “fault indication” as they entered the alternative “find in store” rather than “find store” under the “stores and offers” alternative. Consequently, as they could not see the “stores and offers” they explained their actions saying, “there was nothing else with store” in the menu bar rather than understanding their own actions. The sorting function of the application is a differentiating factor to the notes function on smartphones or to using post-its to write purchasing lists. However, since this function was perceived as difficult and time consuming, interviewee 1 and 2 did not see it as a beneficial enough function to change any established habits. Interviewee 9 never understood that it was possible to sort the purchasing list according to the store’s layout, despite being explicitly asked to add a favourite store. They were the only one to print the purchasing list in the store, using the store’s machine, and showed us that in the printed purchasing list, the articles were sorted according to the store they found themselves in. Despite this, they never understood that it was possible to execute the same task with the application. Interviewee 5 could make sense of the store sorting function, but was annoyed due to the fact that some articles were not sorted into a specific category, causing negative emotions linked to the affective involvement. Ham and cotton swabs were deemed “unspecifed” by the application. This was a result of the interviewee not entering the names of the articles in a way
that the application understood, leading to the application being unable to suggest a suitable name for the products (see appendix 4). However, the interviewee saw this as an act of the application, where the application had misunderstood the interviewees, rather than a consequence of their own actions. Thus, interviewee 5 lacked incentives to alter their behaviour, as they did not see the consequences as a result of their own actions and therefore argued with the cues and beliefs to reinforce their behaviour. Due to the lack of incentives to change behaviour and the fact that interviewee 5 thought that the application was faulty when it did not recognise what interviewee 5 added to the purchasing list, a negative emotion was provoked and a connection was made between the usage of the application and negativity and unfulfilled needs. Not being able to make sense of the information that is received implies that interviewees 1, 2, 5 and 9 needed to pay a high cost whereas the expected benefit of using these functions was too low, hence preventing them from engaging in value co-creation.

The level of complexity in a situation affects what people take notice of and choose to neglect (Weick, 1995), which became apparent when the interviewees were given the task of adding their favourite store. The vast amount of information in the menu bar (see appendix 4), with 23 different choices of which nine were hidden, resulted in most of the interviewees filtering the information they noticed. When trying to perform the task of finding the function “Add store,” the interviewees had to enter a hidden alternative (“Find store”), and to view this alternative pressing the function “Stores and offers” was necessary. The interviewees realised that to add a favourite store, they had to find a store first. However, as the interviewees filtered the complex information projected by the application, they neglected “Stores and offers” and instead took notice of the alternative that at first appeared most similar to the one they were looking for in reality, i.e. “Find in store.” Adding to Weick’s (1995) theory of complexity and filtering, only one of the interviewees, interviewee 3, noticed the timer function of the application. All interviewees were asked to describe the application in as much detail as possible, and in doing this eight interviewees filtered out the information of the existence of the function “timer”. However, the function “timer” was a cause for confusion to interviewee 3, who did discover the function, as it added to the complexity of the application. Driven by belief in the pointlessness and uselessness of the application, interviewee 3 expected faults in the application and found arguments for it
by taking special notice to the “timer” function of the application, which was the least relevant of the functions due to its weak connection to the shopping experience. This relates back to understanding the purpose of the application: because interviewee 3 made sense of the application as a purchasing assistance service, interviewee 3 did not connect the timer to the value it might have in connection to cooking. Thus, they could not comprehend the purpose of the timer function. This is what Weick (1995) calls technology as equivoque – the complexity of the application causes many possible cues and sensemaking processes, which only makes sensemaking more difficult.

Because of the complexity of the information provided by the application, the interviewees could not draw benefits from all of the functions. When interviewee 3 started using the application, the intended purpose of the application as a shopping app (according to the name) was not understood. A possible effect of this was that nor the purpose of the timer function was understood by the user. This is a proof that even the smallest details affect the beliefs around and expectations on using the application, hence affecting the potential value converting into co-created value. In this case, potential value was lost in the sensemaking process and prevented the user to engage in value co-creation.

### 4.4 Offers

After adding a purchasing list and favourite store, the interviewees were asked to view the offers in search of anything relevant to them. Two of the interviewees, interviewee 3 and 5, identified themselves as climate conscious. This became apparent as they described themselves as vegetarian and tried to make climate conscious choices. For these two people, the lack of personalised offers quickly became apparent as an issue. Interviewee 5 brought up the fact that many of the offers in the application were offers on meat products and why they noticed these offers in particular:

Yes, everyone eats meat kind of but there’s a little tofu and stuff so they have vegetarian variants as well. But it’s probably because I see [it] and think that I don’t want it, and that’s when I notice it.
Because of the lack of personalised offers, the interviewee could not see that the application’s offers function matched their identity. Instead, they saw the application’s communication as directed at an audience with a differing identity. Consequently, as interviewee 3 and 5 seemed to have an identity that did not match the offers and due to the fact that the application was unable to show them relevant offers, the value creation process was hindered. The value remained to be a potential value and never reached the customer phase for interviewee 3 and 5, i.e. there was a disruption in the interface between the provider sphere and co-creation sphere as there was no incentive for interviewee 3 and 5 to engage in using the function. Furthermore, when asked to comment the offers informed about by the application, interviewee 5 explained that they did not consider them particularly relevant for their choice of purchase. Elaborating further, interviewee 5 suggested that offers could be more directly linked to the purchasing list:

But it would have been if it would have shown me that I want sundried tomatoes, or if there was something that was there. Right, fish! Because if I have imported it [into the list] and it would have showed me that cod is on offer, because now I had to look myself. That’s what I thought. Otherwise it felt good, but I don’t know if I would take the time to do it.

Interviewee 5 expressed a wish for the offers function to increase in relevance to the user. In the belief that they did not have a diet consistent with a majority of other people, they expressed an annoyance over the many irrelevant offers in the application. Claiming that the application’s many offers caused a loss in energy for the interviewee, who then had to filter the provided information to find any of relevance, interviewee 5 argued that the many offers were redundant. As interviewee 5 did not deem the offers as important or relevant to them, the cognitive involvement was low, and thus, according to Kang et al., (2015), this would in turn cause interviewee 5 to be less motivated implement a new habit of using the application. Interviewee 5, however, separated the offers function from the application as a whole, and said they could “imagine [using the application again], I don’t think I will remove it.” When asked how they would continue using the application, interviewee 5 stated they would use the application for looking at recipes, but not for looking at offers and writing purchasing lists. Due to the lack of differentiation of the purchasing list from the Notes function in interviewee 5’s smartphone and the perceived irrelevance of the offers function, interviewee 5 on-
ly saw the recipes function as important and relevant to them. The cognitive and affective involvement – as interviewee 5 also expressed feelings of excitement regarding viewing the recipes – of that particular function was the only area that was high enough for consideration of continuation.

Interviewee 3, who did not value price, expressed discontent about ICA’s offers before looking at the offers in the application claiming they thought there was “a bustle around extra prices rather than quality of articles or that the store should look nice or that you should be inspired.” This was later reflected in their perception of the offers in the application. Interviewee 3 expressed a suspicious attitude towards ICA in general, and offers in particular, claiming that ICA tried to make interviewee 3 consume more than they needed to, which does not mirror the wishes, expectations and beliefs of consumerism that interviewee 3 held.

... I often suspect that they [...] want me to consume more, which I find unnecessary because you should only buy as much food as you need. Then there’s also the fact that offers don’t appeal to me because I don’t care about the price when I shop...

Interviewee 3 displayed a correlation between their beliefs, values and experiences; the sensemaking process of the offers of the application; and the expected intentions of the application. Interviewee 3 valued sustainable consumerism, quality and organic supply, and believed that ICA is “evil” in the sense that ICA is not a cooperative and thus less preferable to cooperative grocery stores. Additionally, interviewee 3 believed that ICA wanted to surveil their consumers in order to make them buy more. They had also experienced ICA as crowded, messy, and ugly. With these pre-perceptions, interviewee 3 decided that the offers in the application were meant to increase consumption more than necessary. For interviewee 3, they make sense of the offers in a belief-driven manner by arguing with ICA and their actions. Rather than arguing themselves into a new sense of what they confronted, interviewee 3 viewed the new cues and information and used them as proof to strengthen the initial attitude and belief. Having the beliefs and negative attitude towards ICA and want them to consume more, affected interviewee 3’s willingness to engage in value co-creation, according to the ideas of (Lee & Jeong, 2014). Identity seemed to have a vast importance in the transformation from potential value to real value. Interviewee 3 and 5 had exceptionally strong
and specific identities in connection to purchasing groceries could not find any value in the offers given by the application. For users with a strong identity, personalisation is important. Lack of personalisation hinders potential value to turn into real value. Despite this, some functions can be so valuable and have a level of cognitive and affective involvement high enough for the users to ignore the lost value.

Interviewee 1, who did value price, had a deviant perception of the offers on the app. Rather than seeing them as an opportunity to shop for a cheaper price, which interviewees 2, 4, 6, 7 and 9 perceived the offers as, they saw the many offers as a sign of high ordinary prices. Interviewee 1 claimed that the many offers gave them an impression of ordinarily high prices, drawing comparisons to their own beliefs and perceived experiences of how prices and offers used to be decided.

It gives the impression that [ICA’s] ordinary prices are generally too high, so we can lower so many articles. This, okay, this is a big store but if I understand things correctly, in the old days they used to make deals with the suppliers that this week we will push this specific thing, but here you push so much that it’s… It feels a bit… And I know that from before, that ICA is not the cheapest.

By having the experience of more expensive shopping at ICA compared to other stores, interviewee 1 believed ICA to be a more expensive option than many other stores, and thus, when exposed to the many offers, they saw this as a symptom of the perceived generally high prices. When the interviewee claimed that they had previous knowledge of ICA’s higher prices, this was connected to their personal brand perception about the ICA brand. As Lee and Jeong (2014) conclude, this brand perception may also affect the user’s willingness to interact with the application, hence making it more difficult for the organisation to create a long-lasting relation with the customer. Interviewee 4, however, lacked experiences of ICA as a retailer that often provides a vast amount of offers and chose another brand store above ICA because it is more convenient rather than due to the price, explained the many offers simply by saying “it’s because it’s Easter.” This shows us that people who identify as highly digital are more likely to engage in a deeper interaction with applications, and are therefore more likely to solve problems themselves, as interviewee 1 and 7 did in particular. To further strengthen this, we also found
that people who identify as average or below average in digital competence do not actively search for information.

4.5 The map function

The gathering of empirical material of this paper was conducted in three different stores. One of the stores had a working map function, and the other two lacked this function. Despite the absence of a map, some of the interviewees who shopped at the latter stores recognised the need of a map to enhance their purchasing experience or assist them in saving time whilst purchasing. Interviewee 9 explicitly expressed that they would have liked a map function in the store, elaborating that it would have a positive impact on their experience in the sense that it would assist them in finding their way.

Then you might be able to plan where to go. It would have been really good if, as you came into the store and then it says ‘go this way, go this way’, that it makes like a path. That would have been so [profanity] good. It would have helped with just a map with an overview. ‘Here’s fruit and vegetables, here’s dairy.’

Interviewee 9 saw the potential benefits of having a map function and in their view, the function would deepen the interaction and enhance the customer experience. Thus, a map function could have enhanced interviewee 9’s cognitive involvement and established a belief that the application was important and useful to the individual. However, as interviewee 1, 4 and 7 used the map function in the store where there was a functional map function, all three commented on the many dysfunctionalities of the map. Interviewee 1 expressed emotions of annoyance regarding the map function, claiming it to provide misleading information and not meet the expectations of the customer. They expressed a belief of having a strong sense of direction, and commented that despite this, the map was providing confusing information, leading to interviewee 1 having to ask for directions, and gave suggestions of how the map function could be improved.

I think the app is really good, it shows you where to go, but if you don’t have any sense of direction then it doesn’t help you. Because even I, and I think that I have a pretty good sense of direction, had a bit of trouble orienting myself sometimes (...) It didn’t bother me that much at the beginning, but then, a bit further on, well, the
potato gratin wasn’t where it was (on the map). And readymade food and salads weren’t even there. So I had to ask anyway (...) And then I think it should show me where to go if it was to do something more, because now it only shows what shelf. But if I am by a shelf, you can tell me where to go in that case, or draw a line, this is the way you should take to get to the next place. I think I would have wanted that.

As interviewee 1 identified as a person with a good sense of direction, they saw the disorientation that the communication between customer and the application caused as a result of actions of the application. By receiving the offer of guidance through the facility, only to later realise the shortcomings of the guidance offered, the map function was experienced as a cause of disturbance and as a sign of an under-developed application rather than a function that created value in the interaction. Similarly, interviewee 7 expressed frustration regarding the map function, explaining that the outline of the map did not conform with the layout of the physical store, which caused the map to be useless for interviewee 7 as half of the purchasing experience had passed.

That was when I realized it wasn’t furnished the same way in the app as it was in the store. So all the pantry goods were at completely different places than what it said in the app, so then I didn’t use it to look anymore, but then I did it in the traditional way and looked up towards the ceiling after the signs of where everything was. So I could use the app half the way to both crossing off my list and look where to go, but during the other half I only used it to check what items I needed. Because then it wasn’t furnished the same way.

As interviewee 7 discovered that the map function had a higher cost than benefits, they resided to established habits during the shopping experience rather than using the service offered by the application. The map function itself presents potential value to the customer that could, in some circumstances, function as an incentive to change the habit of using post-it notes or the Notes function on their smartphone. Interviewee 7 believed that the cost of using the map function in the application was higher than the expected benefits, and thus became reluctant to using it, preventing the two parties to co-create value, hence also making it difficult for ICA to be truly customer-centric.
Interviewee 4 had similar difficulties using the map function. Despite looking at the application throughout a majority of the purchasing experience, they could not use the map function to find the items they were looking for.

Confusion when [they] are going to pick eggs, then returns to the dairy products. Cannot find quark. Moves back and forth in the aisle. Looks at the application, asking out loud where to go next. Puts the phone down. (Observation, 2017-04-17)

Interviewee 4 could not make sense of the information they received from the application. Due to the map function not meeting the expectations of interviewee 4, they decided not to use the map function throughout the entire purchasing experience, but instead resided to established purchasing habits. The dysfunctions of the map function were a cause for disturbance rather than an enhancement of the customer experience. Considering that several interviewees explicitly expressed the need of a map, it seems the service provider has understood the needs of the interviewees. ICA has identified a potential value increaser and provided interviewee 1, 4 and 7 with a service that possesses a potential value. However, due to faulty information, a well-aimed action and a potentially fulfilled need goes to waste due to insufficient updating.

Due to the faulty map function, the interviewees who used the maps were unable to make sense of the situation, and since the information provided went against the beliefs of the user, they argued with the application’s information, which caused a negative response to the application while further strengthening the user’s belief. When there are arguments between the user and service provider, the user cannot participate in co-creation of value. Interviewee 1 believed, prior to use, that the application would not work in the intended way. As they used the application, they filtered the information and used the information that confirmed their expectations as proof that they were right, which shows us that when negative beliefs are strong, sensemaking of an experience can create a self-fulfilling prophecy and a resistance towards co-creation of value. The information in the application was complex and vast, and the interviewees could not process all of it, which led them to miss clues and being unable to perform certain tasks. As high complexity leads to filtering of existing information and thus, as information is lost, there is also loss of potential value and this led to the conclusion that since
the information the application provided is high in complexity, potential value is lost. These complex sensemaking processes were sometimes perceived as too time- and energy consuming, whereas the interviewees gave up or decided they would not perform the task again. Thus, we make the conclusions that sensemaking processes affect consumers’ willingness to change and co-creation of value in the sense that functions where the sensemaking process has higher costs than expected benefits did not add enough value to change habits and established behaviour. Furthermore, it became obvious that providing a service that does not work in practice causes a loss in big potential value. When given the chance to reflect on an experience, however, the perception of affective involvement and value creation can change. Value creation can thus continue after the experience as the user makes sense of their experience.

4.6 Purchasing

All but two interviewees identified themselves as digital. In the sensemaking process during the interaction with the application, this affected the perception of their own and others’ actions. Interviewee 1, who considered themselves as highly digital, had a negative reaction every time the interaction between them and the application went in a direction different from what they expected or wished for. However, as this person had a high performance expectancy of the application and identified themselves as highly digital, they did not trust their initial reaction but continued to interact with the application until the interaction functioned in a manner that was partly or fully satisfying to then change perception of the miscommunication being the application’s fault to realising their own interaction mistakes in the situation. This process became notably apparent in the sensemaking process in connection to the map in the application, when the interviewee first displayed apparent frustration regarding the map symbol of articles, stating that “if you do something, you need to do it properly” in reference to the application’s inconsistency of symbols and functions connected to articles. However, when persistently continuing to interact, interviewee 1 continued to filter information and search for cues until it was possible for them to reach a higher degree of understanding of the application. Interviewee 1 found symbols that they had not seen before, commenting: “And here at the end, there were these symbols, I could
probably have pressed those, but I didn’t. Where does that go? Number three. There, yes, I missed that. No, I was the one who missed that.” As the interviewee deepens their interaction with the application, they could make a higher degree of sense of their own and the actions of the application. As interviewee 1 identified themselves as a digital person and a problem solver, they were persistent in their communication with the application. With the expectations of the application being developed enough to work as expected, interviewee 1 did not entirely trust the initial cues of faultiness and continued to search for new cues that could give them information that matched their expectations.

Interviewee 2, who identified as a “Technical average Joe”, did not search for new cues to match any expectations, as their expectations of the application were low, and thus, only used the functions they had been asked to use. As they did accidentally discover a new function, they were happy to have deepened their interaction even slightly. Describing the crossing-off of items on the purchasing list, which interviewee 2 had discovered by accidentally touching the screen, they expressed positive feelings about the discovery.

[...] I discovered that you could cross off the things you had purchased, so you knew what you had left and that would have been really nice if I had a longer purchasing list, then it’s easier than having to walk around and crossing off with a post-it note. So that was nice.

As interviewee 2 found this function, their feelings of excitement regarding using the application increased, thus creating an affective involvement. The strongest incentives for interviewee 2 to continue using the application, however, was the cognitive involvement they created by focusing on the functional advantages of the application, such as crossing of items, adding quantity of the items, saving lists and organising the items. Therefore, the perception of the application as an important service, i.e. cognitive involvement, was considered more than the positive feelings connected to using the application, i.e. affective involvement.

Interviewee 1, 4, 5 and 8 believed that using the application would result in fewer impulse purchases. Interviewee 1 clearly stated this belief after saying that the application was experienced as a disturbance during the shopping experience. Interviewee 1, who has the habit of buying many items spontaneously, believed that the application caused them to perform less spontaneous purchases.
I looked less in the store and might have taken even less catch pennies than I would have done if I hadn’t been looking at my phone. Because now, it was very clear where I was supposed to go and what I was going to buy. So it’s very possible, and I can imagine that you might even buy less if you use the app than if you don’t use the app.

Interviewee 1 described an experienced advantage of using the application by expressing that the application could render the consumer to buy fewer catch pennies, thus saving money in their purchases. For the interviewees that value price, this would add value in use during the purchasing experience. During the shadowing of the interviewees, however, interviewee 1, 4, 5, 6 and 8 all indulged in spontaneous purchases. The field notes from the shadowing of interviewee 1 show several spontaneous purchases.

Finds chips waffle cut on offer. Takes one. [They say they] need one of those. [...] Takes two cucumbers since they saw two for 30 SEK. Sees Pepsi Max. Takes six bottles instead of the one [they] planned. (Observations, 2017-04-22)

As the field notes attest, interviewee 1 bought eight items more than they had planned to. Whether or not they indulged in spontaneous purchases on a grander scale without the application is unknown to us, as we solely followed them through one purchasing event, but it is possible to establish that the planning function of the application did not eliminate spontaneous purchasing for these interviewees. Thus, this was a constructed sense of reality for interviewee 1, who regardless of the actual economic outcomes of using the application, created a perception of economic benefits. In the sensemaking processes connected to the application, the interviewees needed only to perceive or believe that there were benefits such as saving money whilst using the application to add value to the purchasing experience, and the actual economics savings were redundant.

4.7 Reflection on the application

Retrospective sensemaking often appears valid and imperative to the sensemaker because it is resulted by appreciation by a biased judge and lacks contradictions (Weick, 1995). As people say what they see, and thus, see what they think, it is an individual and subjective process. With this in mind, there is a logic explanation behind the differing retrospective sensemaking processes among the interviewees.
Interviewee 3, who had a negative pre-perception of ICA and the application, showed deviant feelings about using the application. Interviewee 3 firstly described anxious and negative emotions in connection to using the application, but then immediately contradicted themselves.

It felt like they were trying to force me to use [the application]. Like why should I have my purchasing list here? It felt like I had been placed in a small box here. I feel a bit cabined by it. No really strong emotional feelings regarding it, really.

In the retrospective reflection on the application, interviewee 3 goes through the process of sensemaking according to the recipe “how can I know what I think until I see what I say?” (Weick, 1995, p. 135). Before expressing their emotions regarding the usage of the application, interviewee 3 had initial thoughts of claustrophobia. However, once expressing these feelings, interviewee 3 first changed the narrative to “no really strong emotional feelings,” and even further on in the interview, they described using the application as “fun.” Thus, by reflecting on and expressing their perception of the experience, they could first make real sense of what their experienced entailed. Interviewee 3 additionally had low performance expectancy of the application. Before using the application, they described their initial impression saying, “spontaneously, it feels a bit difficult.” After using the application during grocery shopping, however, they said that it “was easy to use.” In presenting affective involvement, feelings of excitement or unattractiveness were to observe emotions in connection to usage of mobile LBS retail applications (Kang et al., 2015). When interviewee 3 first used the application, they expressed negative feelings towards it but after reflecting and thinking about the application they individually created intangible value in the customer sphere.

Interviewee 1 had more consistent affective emotions in connection to using the application. As they repeatedly criticised the application in the store and came up with suggestions of improvement, the comments regarding their experience of using the app was coherent with the actual behaviour, and they expressed an experience of the app as a “distraction during the enjoyment of the shopping.” For interviewee 1, the performance expectancy of the application became a self-fulfilling prophecy. When asked about their thoughts as the application did not communicate properly with the interviewee, they replied that it was “typical, or about what I had expected. A bit like that, this won’t work, this won’t be good, something
like that.” In this case, as the theory suggested, the effort and performance expectancy influenced the affective involvement of the application. During the shopping experience, this was a reoccurring theme for interviewee 1, who said the map “should be updated, otherwise you shouldn’t have a map. That’s the worst thing you can have, because then people stop using it.” As the information provided from the purchasing experience was consistent with interviewee 1’s expectations, they enforced their initial beliefs and this negatively affected the willingness of interviewee 1 to engage in in value co-creation. Instead, it generated a negative affective involvement with the application.

When asked whether they would continue using the application after their initial experience, interviewee 5 expressed doubt whether to continue using the application, and, suggested improvements that might have created more incentives for continuation of usage.

I don’t know if I’ll use this list thing because it looks the way it does in notes. I don’t think there’s any noticeable difference, I think you should get up a picture, something a bit more fun for me to use the list function in the application, so that it would have matched with shopping items, that the [shopping items] they have come up because otherwise it looks the same in my notes.

As the application was considered very similar to the notes function most of the interviewees already used on their smartphones, and functions such as offers and store map were not developed enough to provide satisfaction, there were few incentives for interviewee 5 to change their habits and start using the application during their purchases. As consumers often mindlessly repeat behaviour patterns already activated, changing a habit, which might already be an energy-consuming task, they need clear incentives to change their habits (Labrecque et al., 2017). Additionally, interviewee 5 referred to their experiences of writing a list, and in noticing the overwhelming similarities between the purchasing list in the application and the list function in their smartphones, they saw no value in performing the task of using a purchasing list in the application. ICA failed to convert potential value into real value as the lack of differentiation in comparison with an application that interviewee already has on their phone. The absence of added value combined with the lack of incentives to change habits lead to an unwillingness with interviewee 5 to change their behaviour. For interviewee 7, however, the ini-
tial process of using the application sparked an interest in further usage. Interviewee 7 described this to us when expressing how they would continue using the application and then added the possible functions they had not yet explored.

[I would use it again] to write a list and shop after. That’s about it, really. And then I will also still use it for recipes. But then I saw that there were other functions too, that I haven’t tried yet. It was the one where you could get, that when I made a list recipes showed up that would be suitable for that list, or something like that at least, but I never went in and looked, so there seem to be even more functions that I haven’t seen or tried.

As interviewee 7 connected their previous experiences of the application within the context of searching for recipes with the performed sensemaking process of using the information received by the application to perform the task of conducting a purchasing list, they saw a correlation between established habits and previous experiences and new information that sparked interest in them. As they saw potential variations to usage of the application that interviewee 5 did not see, interviewee 7 expressed feelings of excitement and interest regarding reusing the application, thus creating affective involvement with the application. Because of the affective involvement caused by the interaction, interviewee 7 seemed to have a positive attitude towards deepening the interaction, hence participating in value co-creation.

Values and experiences affected the sensemaking process and the value creation process. We can now conclude that when the user can find functions that are deemed important to them, e.g. the purchasing list, the application enables tangible value creation prior to purchase when the user interacts with the application. The interviewees made sense of the various functions of the application by connecting them to previous experiences. Through the retrospective reflection on the application, the interviews made it clear that if the service is considered too similar to a service already used, it does not add value to the user. If the service provides additional functions and the user engages it creates an affective involvement, giving an incentive for the user to break established patterns.

4.8 Concluding analysis
In this section we will summarise and conclude the analysis using sensemaking as a starting point and the themes to build our analysis on. In the different sections we will also build the bridge between sensemaking and co-creation of value.

The results from the analysis above show that there are many connections to the sensemaking processes and value creation linked to interacting with and reflecting on the application. The results of the study show that as mobile LBS retail applications try to change habits and consumer behaviour, the user goes through a sensemaking process based on their identities, values, beliefs and expectations to test what they want to make of the new situation they are being faced with. In order to be willing to change consumer behaviour, the user must first have a high level of affective involvement, i.e. think that the new service is exciting to use, or cognitive involvement, i.e. think that the service is important or necessary for them to use. According to our study, affective and cognitive involvement derive from sensemaking processes particularly forming beliefs and expectations that, in the case of cognitive involvement, are also linked to values. When the user forms a belief that the service is important, i.e. in line with their values or needs, or exciting to use, they are more inclined to change established consumer habits and use the new service. If the user expects the affective and/or cognitive involvement to continue with further usage, they are even more inclined to continue their changed behaviour.

Depending on how well they can make sense of the new situation, the users are able or unable to engage in co-creation of value. In this study, we found that identity and complexity were the two biggest aspects affecting the sensemaking processes related to co-creation of value when using the application. The sensemaking processes were primarily belief-driven in the form of expectations, and since this was a study of a one-time usage, the action driven sensemaking processes came in the form of committing. To be able to participate in co-creation of value, the user must believe that the service can match their identity and values. The expectations of the service are of great importance for co-creation of value. When the service meets, or even exceeds, expectations, the user responds positively and is more inclined to participate in co-creation of value. When expectations are not met, however, the user is disappointed and focuses primarily on the function that cannot meet expectations, sometimes hindering value co-creation. Looking for
cues, the user compares information, and if the information matches the norm or the experiences of the user, they are able to understand it. In other cases, involving faulty information, negative beliefs or low performance expectancies, the users are unable to use the information to perform the required task or make sense of the purpose of the service, which hinders any co-creation of value. The cause of these sensemaking issues lies in the application’s complexity and the selective filtering of the sensemaker. When faced with complex information, the user cannot comprehend the whole complexity and needs to filter the information provided, which means that a lot of the potential value is lost in the filtering process. Weick (1995) says that a common mistake is that in failure of information processes, people need more information, when in fact, people who are overwhelmed by equivocality need values, priorities and clarity to help them understand what is of importance. Arguments are used particularly when the user is faced with complex situations and information that affects the sensemaking of their initial actions, and the users use these arguments to strengthen their beliefs that the initial action was correct. In some cases, the users can draw conclusions from their own experiences and make rapid sense of the application.
5. Discussion and conclusions

In this episode, the conclusions of this study are discussed and presented, as well as the contribution this study has to current research. Finally, suggestions for further research within sensemaking and value creation of mobile LBS retail applications are given.

The purpose of this study was to add to the research on sensemaking, consumers’ willingness to change and value creation in the context of retail digitalisation by investigating its impact on usage of mobile location based services retail applications. Since consumers of today adapt to the increased possibilities of personalisation in services from companies, which leads to a higher and more personalised service (George, 2016), companies must understand how they can interact better with their consumers by using a more personalised service. From this study, we can conclude that to be able to change consumer behaviour and make the customer engage in co-creation of value, retailers should guide sensemaking processes by personalisation of applications to match identity and expectations, and use simple and clear communication. When the application does not match the identity of the user, the user does not experience cognitive involvement, i.e. does not believe that the application is important to use. Cognitive involvement is particularly important to change consumers’ shopping behaviour and add the dimension of an application, as most consumers of our study connected the new application to experiences of similar established habits, thus lacking incentives to change their behaviours.

Furthermore, our research shows that to increase the co-creation of value with consumers in using mobile LBS retail applications, the service-provider must offer personalisation to match identities of consumers, since identity is one of the driving forces during the sensemaking process. When the user has an identity that corresponds with the service provided through the mobile LBS retail application, it works as a powerful driver in boosting the quality of the user’s interaction with the application. On the other hand, if the identity does not correspond with the
service provided, the value creation process is affected negatively as the user is unwilling to participate in co-creation of value. Additionally, the results of the study show that primarily belief-driven sensemaking affects consumer behaviour and co-creation of value. To be able to participate in co-creation of value, the consumers’ expectations must be met or exceeded. When beliefs are negative, the service provider must communicate through the application in a way that hinders negative self-fulfilling prophecies by providing clear and correct information and simplifying usage. To enable customers to use the right functionalities and maximise the potential value from the provider sphere of the application, the service provider needs to communicate effectively with the user and guide them into discovering potential value, thus being able to convert it into real value and being truly customer-centric. The contribution of this study can be seen as having illustrated the connection between sensemaking processes and value creation in relation to using a mobile LBS retail application and the importance of personalisation of applications to match user identity, simplifying information and providing the correct information.

We draw the conclusion that sensemaking is an important aspect to keep in mind when communicating through retail applications. Without understanding sensemaking processes, there is a risk that firms develop services that do not generate real value, as they do not attempt to understand the mind of the customer. Similarly, it seems problems may occur when service providers put too much information in one place, as the complexity can have the opposite effect of that which was intended. The reason for complex information may derive from a wish to deliver one solution for all problems and needs, but instead of pleasing everyone, the application seems irrelevant to many consumers.

This study had its starting point in the shift to the study of interactions between people and mobile devices in the context of large corporate organisations. As mobile devices are of increasing importance in the retail world (Hagberg et al., 2016), the contribution of this study can therefore be seen as linking the sensemaking processes of consumers to the co-creation of value and consumers’ willingness to change behaviour. The study has also added to the research on digitalisation and sensemaking in the sense that it has added to the current research connecting an important aspect of retail digitalisation (mobile applications) to sense-
making theory. Knowledge about this is important for those who work to adopt digitalisation in their own retail context, but also for those who wish to expand the horizons of sensemaking. Hopefully, this study has expanded the reader’s knowledge on how sensemaking is important in strategic communication, and therefore, the authors hope that this study can contribute to further realisation of the importance of clear, visually pleasing, exciting and clearly sensegiving communication in mobile LBS retail applications. The implication for the on-going retail business digitalisation is that it is relevant to take the sensemaking process into account when further developing digital tools as a way of being customer-centric.

5.1 Suggestions on future research

Interviews with other target groups, such as families with young children and elderly people, may have given other results. Furthermore, a study stretched over a longer time period could have revealed whether the interviewees who claimed they would use the application again actually did, and in that case whether or not deeper co-creation of value would have occurred, new habits established or if the users would have gone back to old, established routines after a period of time. Something else. This approach is something we recommend to future research on sensemaking and value creation in relation to mobile LBS retail applications. Additionally, this study was made in a Swedish context, by Swedish researchers using Swedish interviewees. Therefore, it would be interesting to read a study made in a different cultural context. Further, we suggest that the suggested connection between sensemaking and value creation is tested and further investigated. Are our conclusions truly valid, and if so, can they be developed further? One perspective that was considered, although not taken into account in this context due to the extension of this study, was consumer attitudes about the brand. How can these further affect willingness to make sense of and co-create value with the help of an application?
Books


Scientific articles


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Junghyun Kim, & Eun Ah Yu. (2016). The holistic brand experience of branded mobile applications affects brand loyalty. Social Behavior and Personality, 44(1), (pp. 77-88).


Zaichkowsky J. L. (1994). The personal involvement inventory: reduction, revision and application to advertising. J. Advert. 23 (pp. 59–70).

**Electronic sources**


Appendices

Appendix 1

Tutorial slide

Smarta inköpslistor

Skapa inköpslistor som du kan dela med resten av familjen.
Appendix 2

Sharing Button

(An image showing a screenshot of a mobile shopping list application with items such as Havre and Start musli listed.)
Appendix 3

The landing page
Appendix 4

The menu bar
Appendix 5

Interview guide

Introduction questions:

- How old are you?
- What do you mostly buy when you buy food?
- What do you think of ICA?
- What are your experiences with ICA?
- Do you usually shop at ICA?
- Why do you/do you not shop at ICA?
- How often do you have your phone with you?
- Do you ever forget your phone? If so, when?
- Do you usually use apps to shop?
- Why/Why not?
- What do you think of apps that you can use to shop?
- What is most important to you when you buy groceries?
- Would you say that you are a digital person?

About the application:

You are now going to download ICA Handla on your phone and then put the purchasing list on the app. When they have done this: you are now going to enter “offers” and see if any of the things on your purchasing list is on offer, and perhaps add things you would like to add. If you cannot find anything, you do not need to add anything.

- Have you used the application before?
- Do you still use it?
- If yes, how do you still use it?
- Why?
- What do you think of the app?
• What do you think about when you open the app?
• What do you look for in the app?
• Do you find what you are looking for? How?
• Without looking in the app, what do you imagine it can be used for?
• Looking at the app again, how would you describe the app in as much detail as possible?
• Do you see any advantages with using the app when you buy groceries?
• Do you see any disadvantages with using the app when you buy groceries?
• Why do you think ICA has this app?

After purchasing
• Can you render, step by step, what happened from you walking into the store until ending the payment?
• Can you tell us about how you experienced shopping with the app?
• How did it help you?
• Did you experience anything missing in the app that you would have wanted to use when you were in the store?
• How was it to use the app?
• Were there any disturbances that occurred because of the app when you were shopping?
• How did it feel to use the app?
• Was there anything missing for you to understand how to use the app?
• Did you experience any difficulties using the application?
• What were they?
• How did you solve them?
• How did you reason around offers?
• What part of the app will you remember the most?
• What picture pops up in your head when I ask that question?
• Will you use the app again?
• What way/for what purpose will you use the app again?
• If you could use the app in a way that would help you exactly the way you wanted, how would it look then?
• How would this help you?
• What would it help you do?