Ascribed Meanings to Self- Service Technologies:
Exploring Grocery Shopper's Use of SSTs and Subsequent Meanings held in a Digitalised World

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Elizabeth Martina St. Marcus

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Lund University – Campus Helsingborg

Supervisor: Henrik Loodin

Examiner: Hervé Corvellec

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ABSTRACT

Recent years have seen digitalisation entangled in everyday life; with the broader context of a digitalised world, one can no longer see the digitalised retail space and its technological artefacts as a lone-standing phenomena. Instead, it is necessary to see digitalisation as way of understanding and being in the modern world. This paper explores the practices and subsequent meanings in the use of these technological artefacts in the grocery shopping space with the idea in mind that the shopper is digitally conscious and takes away more from the digital experience than just convenience and independence. Relating the concept of communities of practice to the learning components of meaning, practice and community, the study was carried out ethnographically. The findings were that certainly the overriding feeling about digitisation had far reaching implications to the use and subsequent meanings of self-service technologies. There were other external influences that played a part in shopper's perceptions of technological artefacts, such as other communities of practice where knowledge is inferred. Also, value emerged from practice and engaging with the self-service technology. Most surprisingly, the homogenous nature of the SST were made to be a branded experience by the customer, rather than the retailer. While the findings were theoretically based, they were relayed into managerial applications to propose alternate ways of utilisation of SST for managers.

Keywords: self-service technology; communities of practice, grocery shopping, digitalisation

TABLE OF CONTENT

LIST OF FIGURES AND TABLES

1. Introduction

Digitalisation is one of the most significant on-going transformations in contemporary society, affecting both business and everyday life (Hagberg, et al., 2016). As almost all aspects of life have become increasingly digitalised including dominant retailers with resources to implement changes, such as new forms of service e.g. self-service technologies (SSTs), constituted a retail landscape that is what we recognise and experience today; changes are continuously occurring and reshaping how retail shopping takes place now (Bäckström & Johansson, 2017; Grewal et al., 2017; Hultman et al., 2017; Kärrholm, 2012; Kärrholm & Nylund, 2011).

Existing literature has seen the implementation of technology in the retail space in a rather lone-standing way, exploring the general digitalisation of consumption (Hagberg, et al., 2016), the history of how technology has come into stores (Alexander, et al., 2008), as well as focusing on resources and artifacts that have been bought into the store such as digital devices in the retail place, i.e. smartphones (Fuentes, et al., 2017). Another avenue of research speaks to the service change that digitalisation has brought in terms of interaction between the service firms and their customers, resulting in improved service standards (Barrett, Davidson, Prabhu, & Vargo, 2015; Lovelock & Gummesson, 2004 in Iqbal, et al., 2018). The literature surrounding SSTs, more specifically, speaks to the practical roles that SSTs take in the retail space; SSTs have been replaced the direct contact between buyer and supplier of services (Meuter, et al., 2000) and the triangulation of the role of technology at the interface between salespeople and consumers (Ahlbom, 2019). A final avenue of research has focused on the customer behaviour, experience and reactions, such as the adoption of new technologies (du Gay, 2004) and the perceived value of SSTs in the shopper's experience (Scherer, et al., 2015). Most predominant, however, has been an abundance of literature speaking to the business benefits of SSTs from the retailers point of view, in terms of productivity, proficiency and reducing staff costs (Yang & Klassen, 2008; Curran & Meuter, 2005; Klier, et al., 2006).

In terms of industry literature, this central interest in the business benefits continues as there poses a real lack of real customer focus. Information Technology (IT) developers centre attention on the benefits of implementing such technology for the retailer from a cost point of view (Ahearne & Rapp, 2010), boasting many benefits such as speed, time and place convenience for the customer and reduced labour costs (Yang & Klassen, 2008; Bulmer, et al., 2018). As retailers increasingly employ the use of use technology to solve retail issues (Djelassi

& Demoulin, 2016) this topic has been addressed in a rather practical way, speaking to practical implications. Due to the nature of the source, industry literature is trend based (Ahlbom, 2019) with technology developing quickly and a need to develop and implement rapidly, the research reflects the speedy nature of technological development and distribute sales based literature, as such this sales-based approach lacks a scientific basis.

The industry literature does not speak to the everyday sense of meaning associated to the usage of SST on a deeper level, as well as neglecting an insightful customer focus altogether; they are deemed as lone standing technological artefacts for the retailer's benefit. Understanding the wider implications of digitalisation and the technological artefacts is important as it is a step towards further understanding the modern digitalised world in contemporary culture and the deeper meaning in the technology that surrounds us in the different contexts in which we are becoming saturated with technology. Much of the academic literature sees this topic as a top down approach, explaining benefits of SSTs in for retailers, mainly cost saving aspects and SSTs as staff aids (Yang & Klassen, 2008; Ko, 2017; Bulmer, et al., 2018) tending to overlook how SSTs come to have meaning. Now that we are in an age of digitalisation, how do customer's interoperate SSTs in the grocery shopping space? How do shoppers incorporate technology into their grocery shopping routine? What meaning does the use of SSTs in a grocery retailing context fulfil? It seems the 'real world' practicalities of implementing technologies in store happens at a fast pace and literature follows slowly behind (Feldman & Orlikowski, 2011) explaining the happenings in the retail space long after technologies are actually implemented, used and normalised.

This research takes learning and knowing as ongoing social activities that both create and are created by communities of practice (Gherardi & Strati, 2012). Communities of practice emerge when people develop a repertoire of practices that serve as resources for the enterprise in which they are engaged (Wenger, 1998). By action having an option to individual purposes, intentions and interests, social order is a product of the combination of single interests. Socio-material aspects of practice is developed; here, both the practice and material artefacts interlope to make practices meaningful and cultural.

The exploration of this topic can help bridge the gap that disconnects managers on a practical sense as retailers increasingly employ the use of use technology to solve retail issues (Djelassi

& Demoulin, 2016) invest heavily in technology that comes and goes in the retail space, Ahlbom (2019) states that "Progressive Grocers' 2018 report on the status of instore technology investments showed that 23% of retailers will upgrade their stores with new or better self-checkout terminals within 12 months and that 16% will upgrade their point-of-sales materials, adding new technologies. This amounts to billions of dollars" (RIS, 2018 in Ahlbom, 2019: p.3). This race to implement SSTs often results in managers finding that implementing and managing effective SSTs is more difficult than it looks (Bitner, et al., 2002). New technology drums up excitement but does not work as effectively as imagined (Ahlbom, 2019). Thus, it becomes important to keep research ongoing as technology evolves to explore the end user's practice in the use of these expensive implementations as the end user's usage may not always be as retailer's intend; so it becomes necessary to understand what value SST creates for the shopper, as these technologies do not have universal appeal to all customers consumers (Bulmer, et al., 2018). By managing the technological artifact rather than its use in practice, retailers fail to achieve the benefits of the technology they had implemented (Hagberg, et al., 2016).

1.1 Purpose and Research Questions

Dominant retailers with resources to implement changes, such as new forms of service e.g. self-service, constituted a retail landscape that is relatable to what we experience today; changes are continuously occurring and reshaping how retail takes place now (Bäckström & Johansson, 2017; Grewal et al., 2017; Hultman et al., 2017; Kärrholm, 2012; Kärrholm & Nylund, 2011). The consumers consume retail places and therefore also the changes carried out by retailers. How consumer interpret and experience technology-oriented changes therefore becomes important determinants of success. While increasing attention is given to consumer experience in retail practice, particularly in the use of SSTs, less is given to the meanings in arise in the routinised use of said SSTs.

As digitalization is likely to have a far-reaching effect on retailers, consumers, employees, and society, and there is a significant need for a broad understanding of the phenomenon (Hagberg, et al., 2016). SSTs are implemented via linear reasoning by retailers in order to reduce staff costs (Ko, 2017; Bulmer, et al., 2018) however customers have come to create routines in their grocery shopping around the use of SSTs, subsequently attributing meaning to use of the SST.

The research question posed: *What meanings do shoppers ascribe to their grocery shopping practices, particularly in the use of SSTs? How do these meanings and routines come about?*

The aim of this paper is to contribute a socio-cultural and critical understanding of SSTs by exploring and illustrating how the use of SSTs creates meaning for shoppers through routinised usage. Understanding this is important as it is a step towards further understanding the modern digitalised world in contemporary culture and the deeper meaning in the technology that surrounds us in the different contexts in which we are becoming saturated with technology. What is done to accomplish this task is outline a socio-material practice perspective. In order to understand how SSTs come to have meanings through their usage, a perspective that acknowledges the social, cultural and material character of marketing is adopted. To analyse how implemented technology in the retail space come to have meaning, a theoretical framework that takes material artefacts into account is vital.

The remainder of this paper is organized by a literature review of relevant literature of SSTs and the situational factors that bring about their usage. Followed by the theoretical framework that this study adopts, then a methodology chapter to describe the ethnographic approach taken. Then a presentation of the results and analysis, discussing how shoppers ascribe meanings to their grocery shopping practices, particularly in the use of SSTs, and how these, in turn, reconfigure the perception of the retailscapes and serviscape of stores.

2. Literature Review

In order to explore SSTs on a deeper level, this study begins with a literature review of SSTs. This write-up of what is known about SSTs is important as it highlights the problematisation posed; what is of concern in regards to SSTs is a practical understanding of shopper's adoption and use of SSTs. This literature review reviews what is known, and then will clarify what is unknown.

2.1 Self Service Technologies

Existing research poses contradicting findings with some claims that SSTs benefit both business and consumers and others arguing the contrary; this literature review of SSTs illustrates what is known, debated and what relatively unknown.

As defined by Meuter, et al. (2000), "SST's are technological interfaces that enable customers to produce a service independent of direct service employee involvement" (p.50). Under this definition exist a wide range of SSTs, including services offered online by retailers such as e-commerce, electronic self-ordering and self-scanning at retail stores. The latter being of importance in this context, as it is becoming a replacement to the otherwise close and personal contact between front-line employees and customers (Bitner, Ostrom, & Meuter, 2002; Meuter et al., 2005; Meuter et al., 2000).

Technology and innovation have grown hand-in-hand within retailing due to increased globalization and the emergence and accessibility of the internet (Djelassi & Demoulin, 2016); over the last decade, retailers have explored technological innovations that, to some degree, could substitute staff. As the self-service format has evolved over time, so did the degree of automation and the level of technology infused into customer relationships, thus allowing services to be delivered at low cost in large volumes (Salomann, et al., 2006). There has been some debate into the extent of necessary staff interaction and assistance when customers use SSTs, which begs the question, are staff necessary to the routines in which shoppers partake? Ko (2017) argues that a fully working SST will not need an employee's assistance; it could be said that a customer seeking no human interaction would agree with Ko, and that shopper's routine would be a successful one.

Companies provide SSTs for broadly three purposes: customer service, direct transaction and self-help (Wang, et al., 2012). According to Verhoef et al. (2009), it is acknowledged that what customers experience in one channel (e.g. a physical store), might be influenced by customers experience in other channels (e.g. online store). Retailers of today are opting for alternative solutions for their customers through their offering of new retail formats including 'click-and-collect'. Various technological solutions have furthermore been incorporated into retail settings as a competitive advantage towards competition from other channels, and a tool to deliver positive customer experiences (Bäckström & Johansson, 2017; Demoulin & Djelassi, 2016).

Certainly, increased use of information and communication technologies (ICT) in service sectors has revolutionized the interactions between the service provider and customer, and increased the standardization of services (Barrett, Davidson, Prabhu, & Vargo, 2015; Lovelock & Gummesson, 2004 in Iqbal, et al., 2018). As machines run on systematically programmed

routine, the same experience is carried out repeatedly, building a reliable routine and repeated practice is created. However, if the customer experiences service-failure, research by Matthew et al. (2000) found that customers might still recommend the service to friends and family, but would be more unforgiving if failure were to occur through an interpersonal service setting as customers are more understanding of failure in the context of technology but not by service staff. This may speak to the forming of routine or the defiance in trying other technology as service failure and recovery are other critical experiences that can change a customer's predisposition toward an SST (Holloway and Beatty, 2003; Yen et al., 2004 in Wang et al., 2012).

Scherer, et al. (2015) argue that much literature surrounding SSTs focus on cost-efficiency and has not fully examined whether a shift from personal to self-service affects customer-firm relationships. Service encounters have previously been deemed "high-touch and low-tech", however the intertwining of technology in recent years has dramatically changed this (Bitner, et al., 2000). Many traditional interpersonal encounters have been accompanied by or even replaced by technological interfaces such as SSTs via which customers can service themselves without direct involvement of employees (Wang, et al., 2012). Schultze & Orlikowski (2004) explain that by implementing SSTs makes for difficulties in building and maintain relationships between staff and customers; moreover, a lack of interpersonal contact might result in less customer loyalty through weakened social bonds between the customer and the firm (Selnes and Hansen, 2001 in Wang, et al., 2012)

Salomann, et al. (2006) explain that the solution lies in finding a balance between high-tech and high-touch in customer relationships. Whereas Ahearne & Rapp (2010) explains trust must be placed until technology is able to establish trust in the product or service well, as the technology, and commitment, the salesperson is still an invaluable asset to the relationship building process. Collier & Kimes (2013) add that the customer must place trust in the technology but this is dependent on the perceived accuracy, speed and being able to explore the technology.

In terms of the role SST plays alongside staff, the use of SST dictates that the service is carried out solely by the customer, rather than the service provider (Djelassi & Demoulin, 2016). Collier & Kimes (2013) explain that from the customers perspective the use of an SST, as

opposed to being served by staff, often requires more effort as the customer has to serve themselves. Although convenience is subjective and up to the customer to perceive, situational factors of using SST is dependent on the amount of resources that is quired by the customer in the situation before during and after the use of SST (Ostrom, et al., 2015). This topic has arisen in literature, as such, the next section will explore this topic in more detail.

2.1.1 Situational Factors and Self-Service Technologies

Extensive research to understand customer experience and adoption of SST has taken place. Much of the literature sees the service encounters in a range of contexts, however SSTs have been written about as if it was the only service delivery option available to customers (Wang, et al., 2012). SST is often just one of the multiple ways from which a customer may choose for delivery of a service. With the introduction of SSTs came the vast change in the way that companies interact with their customers; the traditional "high-touch and low-tech" personal encounters are becoming replaced by vice-versa technological interfaces (Bitner, et al., 2000), however as retailers currently offer both cashiers and SSTs, customers now have a choice of the way in which they want to receive services (Wang, et al., 2012). As such, a customer's choice to use a SST is more probable to be based on a comparative situational assessment of all offered service delivery options rather than on an absolute evaluation of an SST (Wang, et al., 2012).

Research on SSTs have investigated the impact of various individual differences, most elementary being demographics and psychographics; primary demographics that affect SST attitude and intention are age (Ding et al., 2007; Simon and Usunier, 2007 in Wang, et al., 2012), gender (Elliott and Hall, 2005; Meuter et al., 2005), education (Meuter et al., 2003; Greco and Fields, 1991), and income (Lee et al., 2003; Nilsson, 2007 in Wang, et al., 2012). Primary psychographics explored technology anxiety (Oyedele & Simpson, 2007; Meuter, et al., 2003) technology readiness (Matthing et al., 2006; Parasuraman, 2000 in Wang, et al., 2003), behavioural inertia (Meuter, et al., 2005) and need for human interaction (Dabholkar and Bagozzi, 2002; Dabholkar, 1996 in Wang, et al., 2003).

Moreover, literature has explored attitudes and intentions of customers in relation to SSTs; a person's intentions to use an SST are primarily determined by their attitude toward use, which are then determined by two categories of antecedents: SST characteristic and individual difference variables (Meuter, et al., 2000; Wang, et al., 2012). Literature on SST have explored

characteristics such as perceived usefulness (Lin et al., 2007; Walker and Johnson, 2006 in Wang, et al., 2012), fun/enjoyment (Curran and Meuter, 2007; Weijters et al., 2007), ease of use (Curran & Meuter, 2005), risk (Curran and Meuter, 2005; Bobbitt and Dabholkar, 2001 in Wang, et al., 2012), and control (Dabholkar, 1996; Lee and Allaway, 2002 in Wang, et al., 2012). In summary, someone that holds a favourable attitude towards technology in general, SSTs are likely to be perceived as useful, easy to use, enjoyable, not risky, and controllable.

According Djelassi & Demoulin (2016) customers experience different kinds of emotions such as excitement, joy and pleasure while shopping. While these emotions can be triggered through social contact with a smiling and helpful service employee, new technologies can, under specific circumstances, deliver the same effect. New technologies can therefore also be an enjoyable use and customers who perceive SSTs as being fun to use, can become willing to sacrifice the otherwise traditional social contact with a service employee.

According to Verhoef et al. (2009) recent research notes that an experience a customer has through one channel (e.g. a physical store), might be influenced by customers experience in other channels (e.g. online store). Increasing pressure from other channels on the physical stores have led researchers to assume an urgent need for changing the concept of the physical store to cope with the changing retail environment (Sheth, 1992). Retailers of today are opting for alternative solutions for their customers through their offering of new retail formats including ‘click-and-collect’.

Retailers can use new technologies, processes, and organizational structures to proactively lead rather than follow customers on their journeys. By making the journey a compelling, customized, and open-ended experience, firms can entice buyers, earn their loyalty, and gain a competitive advantage (Edelman & Singer, 2015). As such, more ‘forcible’ strategies used a decade ago tended to lock in customers via contracts (such as mobile contracts), whereas now, retailers succeed due to journeys being well thought out, creating new value for customers.

It seems that the vast expansion of the technologies in the retail space has made for a more complex routine that have been present in past years. With many different options available for customers, it makes for many choices and routines that are now dynamic in accordance to change in relation to new SST usage. Various technological solutions have furthermore been

incorporated into retail settings as a competitive advantage towards competition from other channels, and a tool to deliver positive customer experiences (Bäckström & Johansson, 2017; Djelassi & Demoulin, 2016), aiding in continuous repetition of practice. But how do these initial practices come about? In what way do customers 'learn' to use them? Keller and Ruus (2014) found that informal consumer training occurs during parent–child interaction in the grocery store. Their research on how consumers are socialized in the complex mesh of everyday life pressures, and what the implications are for consumer education is, found that co-shopping interactions mostly revolve around particular material objects. Although their research does not mention SSTs or technology, one could argue that SSTs could be considered a material object by which co-shoppers interact, educate and encompass in a routine. Keller and Ruus (2014) see activities in a particular situation as coordinated by *understandings* and *procedures*, and guided by the *engagement* in a particular shopping trip. In order to build lasting and meaningful effects in the everyday lives of families, Keller and Ruus (2014) suggest a wider range of actors (supermarkets, producers, governmental bodies and schools) to be involved in formal and informal consumer education.

2.2 Summary of Section

While insightful in a practical sense, literature does not speak to the creation of meaning upon continued routinized use of technological artefacts. Rather, it highlights the way in which SSTs come about, how it is adopted, how it is used and, most predominantly, the benefits that SSTs pose to the retailer from a cost point of view. These viewpoints neglect the fact that digitalisation surrounds the average shopper in a wider every day sense, and SSTs are not a unique phenomenon that exists externally from the rest of the digitalised world.

Understanding this is important as it is a step towards further understanding the modern digitalised world in contemporary culture and the deeper meaning in the technology that surrounds us in the different contexts in which we are becoming saturated with technology. While it is important to understand technological artefacts in a practical sense, this digital world has proven that technology has immersed human life; so how do we routinise our usage of technological artefacts, and what meanings arise from their use?

It has been argued that that the existence of non-human objects in practice do much more than simply mediate practices (Schatzki, 2001); handling objects is a way of understanding the

world. This begs the question, if one learns how to handle the technological artefacts, does the individual ascribe meaning to the artefact themselves through their own usage? Or does the meaning come from top-down? *How do these meanings come about?*

3. Theoretical Framework

In order to explore how the meanings and routines come about for grocery shoppers in the digitalised retail space, this paper starts with an exploration into the routinised practice of grocery shopping as it is necessary to study the actions by which practices consist. It should be noted, that meanings referred in this text are in accordance to Shove et al., (2012) as being understood as emotion, mental activities and motivational knowledge originally embedded in practice.

3.1 Practices, Learning and Community

To understand how routines come about, one can start by unfolding collections of activity or practices and explore their emergence through time; this interlinks with doings and sayings, as well as how they link with other practices (Feldman & Worline, 2016). Practices have been described as: "[…] a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz, 2002: p.249).

Reckwitz (2002) explains practices as being carried out by individuals, and as involving routinized ways of doing, describing and understanding actions; have been considered as derived from practice. As these routines are not always so exclusive, particularly not in the context of the grocery store, the journeys that customers perform are seldom unique; they are carried out as collectives that are bound by a shared identity and communal goals (Feldman & Worline, 2016). Feldman & Orlikowski (2011) further claim the ideas or ideals held in relation to actions to complete communal goals, thus making routines engrained in ideals as well as action, composing an collective power.

Lave's (1988) pathbreaking work on cognition in practice challenged the predominant view that cognition or knowledge is an individual, transferrable thing that resides in people's heads, provided the basis for understanding cognition in communities of practice. Here, learning and

knowing are ongoing social activities that both create and are created by communities of practice (Gherardi & Strati, 2012). Communities of practice emerge when people develop a repertoire of practices that serve as resources for the enterprise in which they are engaged (Wenger, 1998). By action having an option to individual purposes, intentions and interests, social order is a product of the combination of single interests. Social order then does not appear as a product of compliance of mutual normative expectations, but embedded in collective cognitive and symbolic structures, in a 'shared knowledge' which enables a socially shared way of ascribing meaning to the world (Reckwitz, 2002). This begs the question; does shared knowledge include the meanings of a practice or routine? Does the collective decide on the meaning, or does the individual carry out the practice and interpret a meaning for themselves?

Feldman & Worline (2016) argue that routines have an internal dynamic that sets among the actions that people take based on the ideas or ideals they hold in relation to these actions. Thus, plans are made to enact these ideas/ideals, resulting in the outcomes of the practice. Figure 1 illustrates this point more visually.

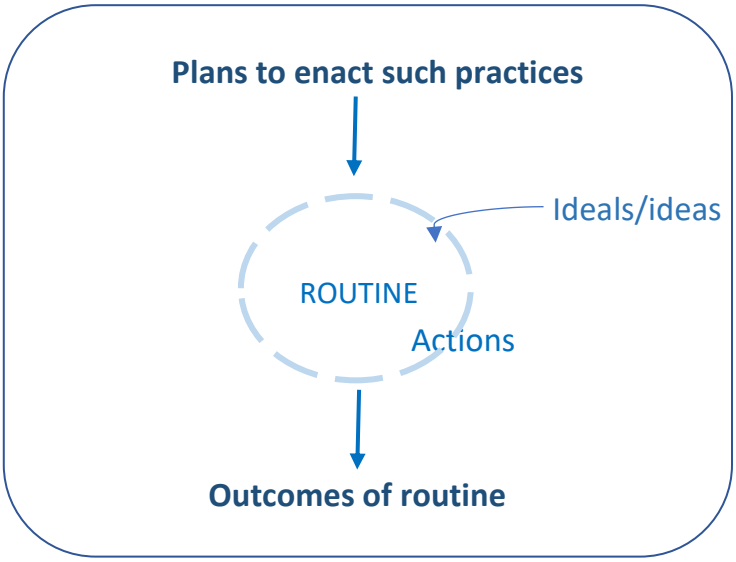

Figure 1: Adapted Feldman 2000 in Feldman and Orlikowski 2011

A collective entity that shares ideas, ideals and practices within a space can create communities of practice where learning, knowledge and work creates identity formation
(Brown & Duguid, 2001 in Feldman & Worline, 2016). This sharing of information makes for a social space also. Practice approaches dictate a particular social ontology; the social is a field of embodied, materially intwined practices centrally organise around shared practical

understandings (Schatzki, 2001). Thus, it could be said that practices create an understanding in society; practice advocates argue that the social entails of tie of practices, it is within these practices that social life is organized, reproduced, and transformed (Schatzki et al. 2001; Feldman & Orlikowski, 2011).

This aids in understanding the part of the research question *'how routines come about?'* in terms of grocery shopping routines. Whether it is communities of practice or individuals that comprehend and reciprocate practices around them to form routines, it is a social affair to some degree (Schatzki, 2001). However, these routines are not carried out empty minded; there are meanings ascribed to the practice. Earlier work from Feldman (in Feldman & Worline, 2016) understand routines as a source of continuous change that have an internal dynamic which holds ideas/ideals which people enact. Thus carrying out the routine is a meaning within itself as the continuation provides the possibility for effortful accomplishments as people take different actions and create and recreate connections (Feldman & Worline, 2016). Similarly, Pentland and Rueter (1994) explain the idea of routines as effortful accomplishments and note the work that goes into reproducing a relatively stable routine, an engrained routine that becomes habit.

Ward (2016) distinguishes that habits can be either strong or weak, depending on the level of reflection; with a higher cognitive choices and verbal communication comes a stronger habit. This begs the question; does an associated meaning ascribed to the routine or habit make for a strong habit? Also, what role does digitalisation play in the creation of strong or weak habits? It could be argued that shoppers can simply ignore SSTs and have a 'traditional' shopping experience. On the other hand, it could be said that as the serviscape has expanded, shopper's are bombarded with messaging and communication from the retailer. Warde (2016) explains that the external environment has influence of practices; thus digitalisation could be argued to have a hand in the influence of practices in this context.

Aside from the body, practices are also ways of moving, handling objects and understanding the world, Schatzki (2001) explains that ideals are made possible by social schemas that entail material elements. These human and the non-human elements, coined as 'social relations' that either fit or misfit in a practice. Later, Schatzki (2002) distinguished between four types of social relations between humans and non-human elements; those of *causation, intentionality,*

prefiguration and constitution. The idea of non-human elements in practice, specifically technological artefacts, are explored next.

3.1.1 Technology and Practices

It has been widely acknowledged within practice theory that nonhuman entities aid in establishing human sociality (Schatzki, 2001). A key scholar on this subject is Orlikowski. Based on Giddens's Theory of Structuration, Orlikowski's work centres around a structurational view of technology in practice, coined "the duality of technology," as it created and changed in ongoing human action, and, on the other hand, as objectified and institutionalized by recurrent action (Orlikowski, 2000). This practice based understanding of the recursive interaction between people and technology over time may aid this research's understanding of the phenomena being explored, how lifeless *SSTs come to have meanings in grocery stores, and what those are those meanings which customer's ascribe the to the technologies?* In guidance of the research question, it is useful to note that the usage of the resources is what makes the practice meaningful; not to be confused with simply implementing the resource itself (Orlikowski, 2000). Guided and reiterated by the previously mentioned ontology, this idea of the technological artefact being of use to the site ontology upon use is key.

Following this, Feldman & Orlikowski (2011) explain that it is the usage of technology that makes for the shaping of organizational outcomes; specific technologies in practice, enacted technology structures, that are recurrently produced in everyday action that make for the structure as we know it. Whereas Collier and Kimes (2013) state that social orders (structures, institutions, routines, etc.) can only be conceived with an understanding of the role of agency in producing them, and similarly, agency cannot be understood "simply" as human action, but rather must be understood as an existing configured by structural conditions. Thus, the larger, overarching social structure is of relevance, as opposed to the mere practices themselves.

Aside from the body, practices are also ways of moving, handling objects and understanding the world; Schatzki (2001) explains "posthumanists", where this approach links to the field of Science and Technology Studies (STS) which sees the existence of non-human objects in practices, arguing that these objects do much more that simply mediate practices (Schatzki, 2001). These objects (the non-humans) are considered key to the making of social practices. A

stream of research articles refer to these non-human entities in different ways; resources (Feldman & Worline, 2016), artefacts (Feldman & Orlikowski, 2011), materials (Reckwitz, 2002). Regardless of the phraseology, they are argued to be a vital and active part of the reproduction of social order and a crucial role in the reproduction of social practice. This paper will deem these non-human entities as the technology in stores and will follow Feldman's (2016 in Feldman & Worline, 2016) interpretation of routines as practice, as this paper explores customer's practices and the ascribed meanings associated in the routine. Feldman & Worline (2016) claim the fundamental concept to practice theory is that meanings are produced as they are endorsed through practice, rather than having meaning as inborn features of their being. They argue that 'things', including identities, ideas, institutions, and power as well as material goods, take on meaning but only once they are endorsed through practice.

It is of importance to know what resources are being used but it is of greater importance to know how knowing is achieved or action is resourced, a resource is defined not by what it *is*, but by the practices *through* which it is enacted as a resource, and that such enactment as a resource is an ongoing practiced material through which meaning is made. As this paper is concerned with what meanings shoppers ascribe to their grocery shopping practices, particularly in the use of SSTs, social practice theories provide an integrated approach to understanding consumer behaviour (Holtz, 2014) they are ways of knowing and what meanings arise through the use of the technology.

In a broader social context, Feldman & Orlikowski (2011) touch upon technological determinism, the idea that technology shapes society in some way including social practices; in the context of discussing practices and technology in the workplace, the two scholars criticise this logic as it leaves little scope for human agency. This theory assumes that the planning and design of technology would be built and then used, thus producing specific expected and intended outcomes, however such technology holds no control over whether and how others would use it, and there was no way of knowing or anticipating the range of possible unintended consequences that may appear in the technology's use in practice and over time. As such, the claim is made that technology is not valuable, meaningful, or consequential by itself; it only becomes so when people engage with it in practice.

The next section will explore the practical insertions of technology in the store, looking into the digitalisation of the retail space.

3.2 The Digitalisation of the Serviscape

This paper's reference to 'digitalization' refers to the extensive integration and implementation of digital technologies into the retail place, and is particularly interested in the interface between retailers and consumers in order to explore the way customers use the technology in store, and subsequently ascribe meaning to the technology in its usage.

The retail environment has been known for impacting customer behaviour and experience (Belk, 1975; Kotler, 1973); more recently, in-store technologies have dramatically changed the ways in which retailers are able to offer their services to consumers (Bitner, et al., 2002). The service-scape, coined by Bitner & Booms (1981), is a standpoint of how consumers interact with their physical environment where the service takes place. This concept outlines key merged dimensions as being rather relevant; the ambient conditions, spacial layout and functionality, signs, symbols and artefacts. These stimuli are believed to affect customer behaviour and influence customers' perceptions leading to certain customer responses w (Bitner, 1992). The in-store environment can be characterized as a space that is prearranged to emote certain kinds of experiences and behaviours, making the consumer an active participant in the activities taking place within the servicescape (Konzinets, 2002). This paper draws on the idea that shoppers engage and use the provided serviscape (i.e., cashiers, SSTs etc) and explore the meanings in the usage of these resources in practice.

Digitalization has seen an increased intermixing of human and digital technologies where the boundaries and blurred between the retailers role and the customers role are changing with the intermediary of technology (Hagberg, et al., 2016). Haberg explains further that agency cannot solely be attributed to the individual human customer but a network that involves humans and different objects and devices (e.g., shopping carts, computer stations, smart phones) that act collectively.

Digitalization provides new opportunities to connect the retailer, employees and consumers which can blur the roles and boundaries (Hagberg, et al., 2016). In addition, there has been a growing trend among firms to involve consumers in various aspects of the creation of value, a phenomenon called 'cocreation' (e.g., Prahalad and Ramaswamy, 2004; Zwick et al., 2008),

‘coproduction’ (e.g., Vargo and Lusch, 2004; Arvidsson, 2008), ‘prosumption’ (e.g., Toffler, 1980; Arvidsson and Colleoni, 2012; Collins, 2010; Cova and Cova, 2012), or ‘working consumers’ (Cova and Dalli, 2009; Dujarier, 2014; Cochoy, 2015). Although this phenomenon is not entirely new, it has been further strengthened by digitalization, which enables new ways to include the consumer in the value-creation process. It could be argued that customers are engaged in a proactive relationship with a company, thus making the customer an important part of a value-creating network – more like co-workers, or even co-designers of services and products (Prahalad and Ramaswamy, 2000 in Salomann, et al., 2007).

Dominant retailers with resources to implement changes, such as new forms of service e.g. self-service, constituted a retail landscape that is relatable to what we experience today; changes are continuously occurring and reshaping how retail takes place now (Bäckström & Johansson, 2017; Grewal et al., 2017; Hultman et al., 2017; Kärrholm, 2012; Kärrholm & Nylund, 2011). The consumers consume retail places and therefore also the changes carried out by retailers. How consumer interpret and experience technology-oriented changes therefore becomes important determinants of success. While increasing attention is given to consumer experience in retail practice, particularly in the use of SSTs, less is given to the meanings in arise in the routinised use of said SSTs.

The phraseology of ‘digitalization’ reflects the idea that transformation is on-going and has no clear beginning or end (Hagberg, et al., 2016), indicating that digitalization is ongoing and emerging, rather than already achieved. Even so, while the servicescape is generally considered a controlled space due to the thought and expense that goes into creating a space in which shoppers behave in an intended way (Barker, 1975) customers are cannot control nor shape the servicescape, they can only react to its design (Fuentes, et al., 2017). Further, retailer’s digitalized retailscape has extended to the home; where the customer clearly enters the store used to be clear and distinct, however with the introduction of apps and home delivery, that line between home and retail store is blurring. As the emergence of the internet came and e-commerce sites were established, which was enabled by the increased use of PCs in consumers’ homes, many retail chains established e-commerce sites in addition to their physical stores (Hagberg, et al., 2016). As the number of digital technologies used at home has increased intensely, such as various innovations in mobile devices, including smartphones and tablets

and multiple computers in one household, the retailer is now appearing in homes too; digitalization is not restricted to online stores.

As well as the retailers entering into the home space, customer's personal devises are being used in store so that customers can patronise on their smartphones; Fuentes, et al. (2017) acknowledge that the integration of smartphones in the physical store remade the relationship between consumers and retailers by unfolding new informationscapes, socialscapes, and experiencescapes. However, one could argue that there are extensions to the store, digital in nature, in which the customer experiences at home and then brings into the store i.e. email communications, retailer apps for recipe inspiration or grocery shopping from home. Belk (2014: p.1107) takes this idea further, claiming that the digital world 'potentially changes the nature of humans, non-human things and the relations between them'. The 'mediated technological portion of our self (e.g., as mediated by our wristwatch, smart phone, eyeglasses or digital appointment calendar) is becoming increasingly invisible and taken as a "natural" part of self' (p. 1110) and that consideration should be given to 'the full entanglement of humans and things' (p. 1113).

Space is made up of different elements that tend to be labelled as technical, social, natural, political etc. these material processes are then intertwined within complex sets of association Murdoch, 1998. As such, the retailscapes is not a technical/material construct nor purely cultural constructs: they are socio-material. As these socio-material assemblages are constructs, they do not simply come to existence but must be made (Fuentes, et al., 2017).

Moisander and Eriksson (2006: p.258 in Hagberg, et al., 2016) state the information society is equally applicable to digitalization: it is 'not merely something that is imposed on people and organizations but something that people and organizations "do" and produce themselves through everyday practice and social interaction'. Digitalization is not something that takes place 'outside' of retailing and is then transferred to retailing (which the notions of 'impact' and 'effects' would wrongly suggest) but is an on-going transformation of retailing to be studied from 'within'.

Doherty & Ellis-Chadwick (2010) claim that with digitalization, there is a change of power in favour of consumers due to 'decreasing information asymmetries', increased transparency, and

increased possibilities that consumers might group together. This begs the question of who has the upper-hand in power and control; in terms of customer and retailer dynamics, it could be said that a shift in power-relation in the customer's favour was inevitable within this new digital age as Edelman & Singer (2015) point out that consumers have more information within their reach in today's digitalised world, putting them in the driver's seat. Customers are seldom considered as passive actors in the retail environment, but rather co-creators of the retail experience (Grewal, et al., 2009; Verhoef, et al., 2009). This begs the question of the serviscape extending to the shopper's home; the retailer's app that works as a recipe cookbook as well as an online shopping platform count as a servicescape or leisure app? There seems to be a blurring of service offerings that lends itself to purchases also, thus the meaning of the SST could be more complex than a simple transactional aid in-store. In terms of the relevance to the research question, it could be argued that there is a dialectic relation involved in the use of the SST and the retail environment in creation of meanings.

The bigger picture of the far-reaching effects that digitalization might have on the retail industry is scarce (Hagberg, et al., 2016). While a lot of changes have occurred reshaping the retail environment as we once knew it, knowledge on the meanings attached to the use of SSTs is not well established. The next section will summaries the section and instill the implications of the gathered information in regard to the studied phenomena.

3.3 The Merging of Practices and Digitalisation

To summarise the above section; existing literature has somewhat overlooked this phenomenon of the meanings being ascribed to SSTs in a digitalised world. While practice theory scholars such as Orlikowski, Reckwitz and Feldman touch upon the idea of a meanings associated with practices performed (Feldman & Orlikowski, 2011; Orlikowski, 2000), this idea along with digitalisation in the modern world is not discussed explicitly, thus literature is incomplete.

To explore my phenomenon, it is important to acknowledge the surrounding impact of digitalisation as well as the importance of practices, particularly practices carried out by communities. Digitalisation is deemed as an everyday reality of the modern world, not external to SSTs, but as another digital terminal available to the customer. The site in which the practice happens has been expanded to personal terminals, such as smartphones via retailer apps; thus, the service can take place outside of the retail space. This intermingling of digitalisation and

newer practices makes for a complex and layered relationship between the shopper and the service which they receive; one layer being the control element of the relationship. While the retailer has control of *how* the shopper can receive service, arguably, this increased implementation of technology has a socio-cultural effect on shoppers, where these technological artefacts come to have meaning upon routine use (Orlikowski, 2000). But how do these seemingly lifeless technological artefacts come to have meanings? In order to dig deeper into this theme, an ethnographic, practice-based approach was adopted to explore the meanings which arise from the use of technological artefacts in their usage.

The next section explores these ideas, as the study starts to come to life with research philosophy and an explanation of how the ethnographic approach was undertaken.

4 Methodology: An Ethnographic Study

This chapter explains how the research study was carried out in detail. Developing on from the knowledge gained in the above gathered information, the following describes and presents justifications of the research approach and the design.

4.1 Research Philosophy and Design

This study employed an ethnographic approach which falls under a qualitative method, deemed most suitable to understand the research questions: *What meanings do shoppers ascribe to their grocery shopping practices - particularly in the use of SSTs? How do these meanings and routines come about?* By drawing on a practice-informed ethnographic research, it aided and developed an understanding of the layered interrelationships between the digitalised world and the digital artefacts which aid routines. This allowed examination of the way people use SSTs in store, as well as in-store shopping activities but also attitudes and reality of shoppers of their usage and impact in a digitalised world. As such, it was vital to observe what and how people actually use SSTs for when grocery shopping. Retail studies tend to adopt a the ethnographic method, particularly when attempting to understand in-store behaviour (Fuentes and Hagberg, 2013 in Fuentes, et al., 2017), thus, in order to start answering the research questions, the study started with observations to see how shoppers manoeuvred and used SSTs; focus groups were then chosen in order to explore how meanings arose and what meanings arose. This is vital as it shed light on the wider phenomena of digitalisation and subsequent reasoning meaning making of shoppers. By combining observations and focus groups in an open-ended way in

order to explore the meanings that arise through use of SST and how these meanings and routines come about.

This paper draws its ontology from Schatzki; the *site* ontology contains elements of both nominalism and contextualism. For Schatzki, the site is where the social happens the site is practice. The nominalist feature is the site, or practice, is the fundamental reality through which the more extensive, overarching phenomena are founded and what is contextualist is that through to practices, individuals are intelligible. As a social ontology, a view of the social world is implied through sites where the social happens, but where meanings are developed, created either by the individual or the collective, remains an open question.

Although data collection alternated between observations and focus groups due to time constraints, this worked to the benefit of the research, as back and forth allowed questioning for some activities noticed in the observations, as well as more insightful observations. This structure helped to pick up on aspects and themes brought up in both domains.

Through the structured marking system (*see* 4.2.2. Focus Group Analysis), an overview of the data was created in order to make alignments of the meanings and usages of SSTs, deriving from the interviews and finally analyze our findings in relation to theoretical concepts that could give a more comprehensive understanding of the gathered data.

4.2 Focus Groups

The focus groups aided in the understanding of how grocery shoppers use SSTs and what meanings are attached to the way of usage of SSTs. This helped gain contextualized accounts of how SSTs are used (or not used) during in-store grocery shopping. Although one-to-one interviews were considered, the opportunity to pose questions to a group and create a discussion would not have been possible. Additionally, the reflexive innate to ethnography creates a more conversational atmosphere (Konzinets, 2002), allowing respondents to answer more naturally (Hammersley & Atkinson, 2007).

There was a total of 6 focus groups lasting 45mins-1hour, exploring their usage of SSTs, how their used and meanings that are ascribed to their use in the technology. The respondents were of varied male and female, a wide array of age (21-67) and differed in terms of educational

background and occupations; this was to ensure the respondents were reflective of the patrons in grocery stores; the grocery store is a space that vast majority of the population frequents (see appendix I for demographic details of focus group participants).

In terms of how the respondents were gathered for this research, snowball sampling was undertaken. As my own network consists of many age ranges and backgrounds, certain individuals from my own network were asked to be part of the focus groups, and they were asked to suggest others for future focus groups. The result was a wide demographic of individuals (see appendix I for demographic details of focus group participants) which is reflective to the include nature of grocery shopping – it is a space which everyone attends.

Focus Group	Participant's Alias Names
Focus Group 1	Matthew, Uriel, Mia, Tom
Focus Group 2	Maddie, Michael, Molly, Ben
Focus Group 3	Tilly, Henry, Addie, Dan
Focus Group 4	Maria, Ingrid, Miles, Katy
Focus Group 5	Stella, Amy, Claire, Jenny
Focus Group 6	Oscar, Wendy, Salma, Margot

Table 1: List of focus group participants for this study

The first question posed for the focus group was to describe in detail their routine in the grocery store, in order to gauge their conscious usage of technology in store. Then, their grocery shopping habits were explored more thoroughly in the context of technology usage. By focusing on their specific shopping activities, other themes were explored such as differences between shopping locations, store loyalty (the comparison of technology usage) how their use of SSTs had evolved over time, occasions when the use of SSTs was not acceptable or desirable, and the benefits they saw with using SSTs in their grocery shopping.

4.2.1 Focus Group: Pilot Run

In order to iron out any issues that may arise in the focus group questioning, a pilot test was carried out. The testing from the pre-test helped to avoid any potential problems before introducing the real research on a larger scale (Bryman and Bell, 2011). By running a pilot test

on focus groups, it allowed for additional questions to be added to the interview guide as well as some alterations to phrase questions more succinctly. For example, an initial question was phrased “do you use the SSTs in any other way than just scanning your goods?” The answer in the test was a resounding “no”. However, realising that this question makes more sense to myself than others, it was rephrased to use an example that was seen in the observations to illustrate the question more concisely, like “some people use the SSTs in more ways than just scanning, do you use it any other ways than just scanning your goods?” To which the answers were mostly yes, in ways that the focus group respondents used SST in different ways such a helping learn the Swedish language. The foreign girls liked to learn the Swedish language with the help of SST, which went towards the analysis and subsequent findings.

Another reason for the pilot run was to ensure the questions were not leading to identify the participants in any way; in order to abide by ethical rules, the anonymity was promised to the participants, and as a recording and transcripts were to be completed, protection of identifying information was in of upmost importance.

4.2.2 Focus Group Analysis

Once the focus groups were finished, the recordings were listened back to and transcribed by hand in order to be brought closer to the data. During the transcriptions, themes started to emerge, so the themes and categorisation of answers started right away. Some overlapping themes from each focus group started to emerge (such as privacy concerns of the digitalised world, attending the grocery store every day, emotional responses of being in the grocery store) from then, colour coding some overlapping themes started.

Although the interview guide was thematised into three themes in order to help guide the conversation along for the layman, this was simply to help the conversation flow from broader digitalisation realities, and then to more specific usages and thoughts of SSTs.
Once transcribed, those focus groups were then read through to be categorized into preliminary groupings of similar views or vastly differing opinions while also looking after remarkable comments like negative identifications and definitive statements that could give more insight about the meanings that the participants associate with the use of technology in a retail context.

During this process, main concepts from the theoretical framework were kept in mind, such as ways of learning within communities of practice, how knowledge becomes 'shared knowledge' in order to produce routines that are either conscious or mindless habits. As the theoretical concepts were constantly referred back to, the emerging themes were aligned, as well as some unaccounted results, proving interesting.

4.2.3 Ethical Considerations of Focus Groups

The research kept ethical considerations in mind in each step of development. Before the focus group had begun, the potential participants were relayed as much information as possible in order to make an informed decision if they wished to participate or not. This allowed some time (between 3 days and a week) for the participants to withdraw from the focus group should they wish to do so. As it is difficult to provide all the information needed for the participants to make a decision regarding their participation (Bryman and Bell, 2011) focus group respondents followed an introductory statement of what was being studied, to refresh their memories. This introduction was also an opportunity of acknowledgement of a recording being taken in order to produce transcripts; therefore, the focus groups were recorded and transcribed verbatim with the consent of all participants to confirm their voluntary part in the data collection.

As much research is based and dependent on investigations involving participants from the general public (Bryman and Bell, 2011), it is of importance to protect the participants ethically in the research process, and integral for researchers to conduct their research in an ethically correct manner. As such, the identities of focus groups participants are to be protected; they were promised anonymity, and so their answers in the analysis chapter will be via false names, as their answers are of importance and not their true names. The results of this research will not be affected by the fact that the respondents are anonymous.

It is also important that the answers which they disclosed will not release any information that might expose the respondent's identity. This was a reason for a pilot focus group conducted, as it helped to reveal if there was any question in which the respondents could have felt the need to reveal any sensitive or private information which would reveal their identity or information. Although ultimately no information of a sensitive nature arose, this was kept in mind when conducting the focus groups.

4.3 Observations

In total, 15 in-store observations with a length 0.5–3 hours in the ICA and Coop grocery stores in Lund and Helsingborg, totalling about 25 hours of observations over a 1-month period.

Observations	Location	Date/Time
Observation 1	Helsingborg, ICA kvantum	28/03/2020, 3 hours
Observation 2	Helsingborg, Stora Coop	29/03/2020, 2 hours
Observation 3	Lund, ICA kvantum	12/04/20, 2 hours
Observation 4	Helsingborg, Stora Coop	14/04/20, 2.5 hours
Observation 5	Helsingborg, Stora Coop	15/04/20, 2 hours
Observation 6	Helsingborg, Stora Coop	16/04/20, 2.5 hours
Observation 7	Helsingborg, Ica MAXI	19/04/20, 1.5 hours
Observation 8	Helsingborg, Stora Coop	21/04/20, 1.5 hours
Observation 9	Helsingborg, Stora Coop	24/04/20, 2 hours
Observation 10	Helsingborg, Stora Coop	25/04/20, 1 hour
Observation 11	Helsingborg, Ica MAXI	28/04/20, 1.5 hours
Observation 12	Helsingborg, Ica MAXI	29/04/20, 1.5 hours
Observation 13	Helsingborg, Ica MAXI	31/04/20, 2 hours
Observation 14	Lund, Ica Kvantum	01/05/20, 1.5 hours
Observation 15	Helsingborg, Stora Coop	03/05/20, 2.5 hours

Table 2: Summary of observations completed during the data collection for this thesis

The observation sites were chosen due to the familiarity of the seating locations, which allow for viewing entrance, exits; which are the locations of the SSTs. The entrance showcases hand-held-scanners, and pick up of basket or shopping carts, whereas the exit route of checkout and exit door shows customers using self-service checkouts and cashiers' checkouts. Appendix II illustrates the location of the sites as well as depiction of where I was seated during the observation sessions within each site.

4.3.1 Observation Analysis

As this study attempts to explore the way SSTs are used, the first step was to look at the practices in the retail space, as such, these observations did not follow a category or themed constraints. Instead, the observations were open-ended in the sense that both 'unique' and 'standard' ways of using SSTs were noteworthy. These were then questioned in the focus groups in order to explore some issues further. For example, a mother who came into the store and gave her young child a handheld scanner, the child jumped in excitement. This was then questioned in the focus group that held mothers; it was found that the parents of the focus groups could relate to that specific usage of the SST. Moreover, the focus group did not bring up this kind of usage, only through mentioning that I had witnessed this practice in the grocery store was their memory jogged and discussion around this began. Thus, the observations acted as a facilitator of seeing the way SSTs were used in store.

4.3.2 Ethical Considerations of Observation

In terms of the observations that were carried out in the grocery stores, customers were observed in order to comprehend the usage of SSTs in the three different grocery store locations. Customers were observed during the beginning and end of their shopping trip, to establish what SSTs were used, how they were used and what payment method was used at the end of the shopping trip.

It could be argued that there is an ethical risk related to observation in that consent and confidentiality are not explicitly confirmed by those being observed. However, as the grocery stores are a semi-public space, one can conduct their affairs – be it observing others, or going about your routine shopping trip. Also, as there are cameras and grocery personnel, it is assumed as a customer that you are already being watched in this public area. As such, it is not out-of-line thinking that a shopping trip is under some surveillance already.

4.4 Quality, Generalisation and Limitations

This project has been presented with difficulties due to the corona virus as retailers have had issues with supply chain due to panic buying, and shoppers' visit frequency and purchase amounts have changed. The initial direction of this thesis was around alignment of retailer's

intentions in implementing SSTs and the outcome of customer's experience within the same store, to see how the two realities align. Although when getting in touch with managers from 4 major locations, they all came back saying the same thing – that the corona virus panic buying was keeping them too busy to interview.

It could be argued that shopper's practices my change amongst uncertain times; while few studies have explored consumers' behaviour under supply disruption risk (Zheng, et al., 2020) and fewer still on shopper's practices under panic-buying circumstances, not much is known this unique situation effects shopper's choice in use of SSTs. However, the findings of the focus group indicate that the use and familiarity of shoppers utilising technology in stores is unchanged. Moreover, stores placed hand-sanitizer and wet-wipes next to hand scanners, not deterring customers usage of SSTs.

A final point is observations; the location from which the observations were carried out was clear from where shoppers enter and exit (and the SSTs were clearly seen) however what was not tracked was the route of the shopper throughout the rest of the store. As the purpose of the observations was to see the routines and the ways in which SSTs are used, it was useful to see how shoppers picked up the SSTs and see to what extent they were familiar (or not). The focus groups proved useful to further explain

As mentioned before, data collection alternated between observations and focus groups due to time restraints; in terms of the markings and categorizations, this worked to the benefit of the research. Being able to look for similarities and differences mentioned in the focus groups and when observing and vice versa, helped to pick up on aspects and themes brought up in both domains.

5 Presentation and Analysis of Findings

When looking at the retail environment and the digitalisation hereof, Warde (2016) writes about the dynamic properties of the external environment and its influence on subsequent changes in practices. Individuals are believed to sometimes embark upon behaviours which are unfamiliar, with a conscious intention to change aspects of their own and other's practices. This is especially interesting to the findings of this research, as it refers to the importance of

considering the digital aspects embedded in retail-spaces, and how these are interpreted by consumers. After analysing data from the focus groups and observations, there were a few themes that came to fruition; they have been grouped further into four significant themes in order to help the understanding in the way SSTs come to form meanings for shoppers, and how routines are formed in the use of SSTs.

One standout theme was how perceptions about digitalised retail environments impacts the shopping routine, and within that, how individual meanings are influenced by co-shoppers. Another theme that stood out, was how routines becomes engrained and static, for instance when individuals would feel comfortable using an SST service to the extent, that another service wouldn't appear as an option for them. The same goes for individuals who are not comfortable with the use of SST at all, as they would not consider changing their routines and engage with such practices. A final, more surprising theme that arose was that the respondents emphasized their habitual use of SSTs in a retail setting as a branding factor, which in turn can have a positive influence on an otherwise homogenous technology.

Perceptions and Meanings

The first, overriding, theme to arise was how one's perceptions of the world tends to affect the meaning of the use of the SST, but not the recurrent usage (or lack of usage) of it. It was rather clear in the focus groups who was comfortable with digitalisation and who was not. This subsequently inferred their usage (or lack of usage) of SSTs in general. While this idea was touched upon by Djelassi & Demoulin (2016) that new technology triggers different kinds of emotions such as excitement, joy and pleasure while shopping, it can pose the opposite effect. An example of how perceptions of SSTs can be either positive or negative among individuals, as per Tom's reaction:

"It's not going to just be ads. They sell this information. They have every right to sell this information to anyone. Their giving your personality away. I don't really like it"

"Privacy over what I'm buying is important. I think we're going to go even further with this; it's going to be everywhere, selling ads, selling information about you so you can buy more stuff"

(Tom)

When probing deeper, it was found that Tom was suspicious of retailers and marketeers in general and so his meaning associated to the use of SST centred around a concern of retailers using and selling customer's information, justifying why he would not use SSTs. This speaks to Collier & Kimes (2013) point that the customer must place trust in the technology or order to adopt it. However, this poses more of a challenge than simply trusting the technology, but rather, trusting the retailer in a broader context. Here, the meaning of SST was paranoia, suspicion and lack of trust due to the broader context of digitalisation in today's world.

"When I log on to ICA's website and look at the recipes, you can save recipes, so when you're in the store using the hand-scanners the saved recipe comes up to do your shopping. I do feel at one with the technology."

(Katy)

Here, Katy welcomes technology into her home life, going so far as to say that she "feels at one with the technology". Thus, the idea of perception and meanings can be seen from a few different ways; one of which is that if one is opposed to the idea of technology and digitalisation in general, their opposition will extend to the lack of usage of SSTs in all contexts. This speaks to Warde's (2016) theory on the external environment having influence over practices, as these two respondents were on the opposite end of the scales in the acceptance of digitalisation. This then affected their usage and ascribed meanings to the SSTs. Thus, digitalisation could be argued to have a hand in the influence of practices in this context.

Another interpreted avenue in this subsection is how individual meanings are influenced by co-shoppers. Through observations, it was seen that a mother took a handheld scanner and gave it to her child who used it as a 'toy' to keep entertained. This was explored in the focus groups to the parents; remarkably, the participant with children all explained that they also use SSTs or occupy or entertain their children during the shopping trip. This begged the question of the meaning arisen from entertaining the child with the store's digital artefacts.

"Yes, I've done that. My girl asks if she can blip. It makes shopping easier. She has a good time."

(Katy)

"When they come with me, I think it's boring for them, so one of them can scan and one of them can hold the item and put it in the cart. I wouldn't call it a game. It just to keep them occupied. Otherwise they're just on their phones."

(Uriel)

Here, Uriel explained that he simply wants to keep the children 'occupied' whereas Katy wanted her child to have fun; although the practice is the same in each case, the meanings of the usage of the SST changes slightly in each case. Moreover, Uriel says "otherwise they're just on their phones"; this implied that Uriel preferred his children to engage with the shopping activity proactively with the use of the SST, as opposed to being on their phones and disengaged with the activity. As the world becomes more digitalised, parents are choosing the technology which their child engages in, creating different meanings and utilisations for a homogenous SST. This begs the question, what does one piece of technology hold over the other? It could speak to the fact that SSTs are collaborative in this case, as opposed to a child using smartphone sombrely. This illustrates that the usage of SST with another person, say, a child, makes for a more meaningful experience than just being a time saving exercise.

This idea of using the SSTs for other purposes was explored further in the focus groups; respondents that were expats (American, French, Spanish and Polish peoples living in Sweden) used SSTs to practice their Swedish, and claim they found it more comfortable to have no human interaction in the grocery store and practice their language skills.

"It's good to practice my Swedish in solitude."

(Amy)

"Yeah, I like to practice by myself too! I pick up words."

(Claire)

"I do that too! When I lived in Korea that was the same thing I did.."

(Jenny)

"Yeah it's nice when you first come here (to Sweden) and you can shop by yourself and not have to talk. Sometimes I don't want to talk, it's embarrassing when you don't understand anything."

(Stella)

Some scholars, such as Djelassi & Demoulin (2016) state that successful SST delivery is carried out solely by the customer. For these expats, this was certainly the case, as they claim they did not want to engage with staff to save embarrassment or other reasons of not speaking the language. Their idea of a successful SST is no staff assistance, which is in line with Ko (2017).

Routine Becomes Engrained

When questioned, respondents struggled to pin-point when they started using SSTs. It seems that routines were so engrained, that the start is blurred. Focus group number one had particular problems with recollecting how they started using SSTs, so much so that it bothered Mia, who had claimed "*we are a slave to our habits*". Between environment and habit there exists a multitude of structural conditions that makes for social orders (structures, institutions, routines, etc.) which can only be conceived with an understanding of the role of agency in producing them. Wilhite (2012 in Warde, 2016) relays this stance in reference to consumption habits being distributed among body, material context and social context. Wilhite continues that machines can be seen as scripting how certain procedures are carried out and tend to revisit the paths previously trodden, even when other options are available.

Ward (2016) distinguishes that habits can be either strong or weak, depending on the level of reflection; with a higher cognitive choices and verbal communication comes a stronger habit. Thus, the larger social structure and the lack of cognitive engagement over times makes for a habit that is engrained to the degree that it can become mundane.

Once respondents' routines were explored and then challenged, a discussion into why these individuals did not use certain SSTs arose. When discussing what SSTs focus group number five uses, Jenny claimed she liked the idea of being self-sufficient in her grocery trip, and wanted to start using SSTs like the other participants; when asked why did she not just try, she said she would feel silly asking staff how the technology works.

"I mean, if I wanted to start using it then I would have to ask someone, 'oh, how do I get started', they would think I'm stupid."

(Jenny)

Keller and Ruus (2014) suggest a wider range of actors (supermarkets, producers, governmental bodies and schools) must be involved in formal and informal consumer education. However, as stores do not seem to offer explanation how the SSTs are used, this could be a barrier to entry, as the participants who do not use SSTs tended to not be curious about them either. Observations revealed that customers who used cashiers checkout tend to look straight past the hand scanners and self-checkouts, as if they were invisible. When probed further, participants said they would not know how to get started:

"I wouldn't know where to begin, do you need a card, like a membership card or something?"
(Jenny)

"I have no idea, I know in ICA you do, but that's for the hand scanners"
(Clara)

"I wouldn't know, I use the ones I know, I guess that's straight forward, but otherwise I leave it if I don't know'
(Salma)

In terms of practices, Warde (2016) proposes that an opportunity for learning benefits aids a nexus for understanding, procedure and engagement to be competent in practices. In keeping with Shatski's ontology of the social taking place on site, Warde (2016) further proposes that the environment and setting is vital for explanation. It could be said that the retailer must adapt and display explanations of usage in order to guide the shopper that needs to learn. When exploring this idea of how one comes to learn the cues of the practice, the question was posed to the respondents as to why they did not ask the staff how to use the SSTs. This led to a discussion about how the respondents felt about interacting with personnel, leading to some varied responses.

Most respondents did not particularly like interacting with staff, and chose to use SSTs instead, resulting in vastly differing views of staff interaction. Technology in the retailscape has boasted economic benefits for retailers (Ko, 2017) and a great cost saver has been to utilise the use of SSTs instead of the service carried out by personnel (du Gay, 2004). Serving as a great

explanation to why we are increasingly seeing technology in retail places, this does not necessarily mean that consumers enjoy and adopt to changes, as retailers intend. While retailers and other service providers are increasingly introducing self-service checkouts into stores, these technologies do not have universal appeal for consumers (Bulmer, et al., 2018). As illustrated by some respondents:

"I like the personal touch of another human being when I'm shopping. And its personal for me. Human beings can intact, computers can't interact"

(Matthew)

"No, I like my personal service"

(Michael)

"I think it's nice when they say hello, how are you, it's like, human decency because we're in the same place. We see each other."

(Wendy)

Here, there are different justifications for wanting interaction with staff, from 'human decency' as simple acknowledgement of staff and customer in the same space, to feeling there is 'personal service' when staff help with locating items or checking out shopping for you. In any case, it is clear that some still want interpersonal connection with staff. While it could be argued that this could be a cultural expectation, these three respondents were of different demographics and ethnicities and nationalities, but were assimilated to the Swedish/Western shopping norms. Contrastingly, Ingrid claimed the opposite:

"I hate standing in queues and I don't like talking to people"

(Ingrid)

On a practical level, it is clear having the option to use cashier's check-out as well as SSTs remains useful for the vastly different customer wishes. The solution may lie with Salomann, et al. (2006) explanation that finding a balance between high-tech and high-touch in customer relationships.

The avoidance of mingling with others in the queue conforms to a different 'social' practice; it is not social in the way of engaging with other, but rather, as an individual's
Individual routines may be seen as non-conforming, but the meaning ascribed to the SSTs as the way out of talking to people, is her interpreted solution to relieve herself. So it may seem that Ingrid wishes to not conform in the way of engaging in the social space, but in essence she had conformed in the way of recognising her own cues and engage with an SST, thus, being part of a larger community of practice.

In terms of exploring more stricter regimes, the observations began to reveal familiar faces that came into the stores at similar times on the same days. This probed the question what kinds of routines the respondents follow; one couple stood out. This particular couple held the same routine in their grocery shopping (i.e. Miles and Maria patronising the same store every Friday, using the same payment method, exercising the same routine around the store) all other respondents were not loyal to one store, and do not routinise their shopping time. The majority of individuals frequent the stores 4 or 5 times a week tend to use SSTs predominantly.

"I take my partner. It's an outing for us. Always on a Friday. Always Coop."
(Miles)

"When I go with my partner, we use a list, every Friday at Coop."
(Maria)

Pentland and Rueter (1994) note that routines can be effortful accomplishments and note the work that goes into reproducing a relatively stable routine. This was illustrated by the couple as they compromised their work schedules in order to routinise their grocery shopping trip, which they were rather proud to share in the discussion. Their effort in creating this routine made for a rememberable start, unlike others who struggled to pin-point how their grocery shopping habit started.

Katy goes 3 or 4 times a week to different stores and frequently opens and uses the ICA app, explained that she does not have a routine. She drives to her local ICA Maxi when she needs an item, and picks up some more items while she is at the store.

Ingrid and Maddie frequent grocery stores even more so:

"It depends if I need something special or if I don't really know what I need so I go 4/5 times a week or some weeks I don't go at all because I have too much stuff at home. I'm the kind of person that opens up a full cupboard and says there's nothing to eat"

(Ingrid)

"*I don't remember how I started, but basically I go about 5 times a week to ICA Maxi, and nearly every day to my local smaller ICA."*

(Maddie)

It may be that as Maddie's home life is rather hectic with no routine in place, it reflects her grocery shopping routine also. She explains that she does not plan meals ahead and lives a fast pace lifestyle with no routine. When speaking informally after the focus group was finished and the recording was turned off Maddie and Ben (a couple) expressed they would like to be more organised in their grocery shopping schedule and started making plans to be more structured in grocery shopping. This illustrates Pentland and Rueter (1994) point that a routine can be seen as an accomplishment. This also illustrates Feldman and Orlikowski's (2011) point that people can strive to enact new outcomes that more fully realize their ideas/ideals, or people can expand, or contract, their notions of what actions and outcomes are possible.

Another point found in observations was that once a shopper started using some technology, e.g. the self-scanner, they end up using most technology in the store, such as the fruit and veg scales to print the labels, and payment via self-payment terminals. Consequently, the whole journey becomes digital. This was explored in the focus groups; revealing that respondents that use SST are oblivious to the fact they are using different forms of digitalised aspects in the retail space.

"Actually, when you self-scan you do have to use everything, it's all done yourself, isn't it?"

(Salma)

"But I like that. It's quicker. Like in Willy:s, I can do the shopping from my phone and I can pick up and collect the shopping. Done."

(Oscar)

Here, Oscar appreciated the lack of staff interaction in order to speed up the process. SSTs for this individual meant the independence to control his speed and subsequent independence in the grocery store. Here, the determinant of success or failure was an element of control; Shove (2003) explains the relationship between social challenge of co-ordination and the value of convenience, where convenience is depends on "scheduling and coordination of people and objects in time and space" (p.171).

A cultural theme crept in, as some of the participants were British, and as England has a more 'cash-in-hand' society where many people carry notes and coins, this led to an issue when using SSTs.

"It's annoying when I want to pay cash, I have a couple of things I want, and I go to the self-checkout, and I realize it's the card one, not the cash one."

*(*Danny*)*

"Me too, I don't know which ones are cash or card, I don't use card to do food shopping, so I go to the tills."

(Henry)

Amit & Zott (2001 in Hagberg, et al., 2016) phrase the shift from cash to electronic payments as 'analogue' to 'digital' in order to facilitate new forms of value creation (e.g., accessibility, availability, and transparency). However, this may pose problems in the UK where cash is a prominent payment method.

Also, Britain does not have as strict restrictions on selling alcohol (such as Systembolaget in Sweden); alcohol can be bought in supermarkets and grocery stores. This was a problem for two participants and was a major reason for them not to use SSTs, as the technology sets an alarm for assistants to check ID, thus being disruptive process with staff having to come and check ID.

"Sometimes when I nip into the shops before a party and get snack and a bottle of alcohol, it's so annoying when the self-checkout goes BLEEP BLEEP BLEEP and I'm standing around like an idiot waiting for the staff to swipe their card"

(Addie)

Interestingly, Addie told her SST experiences and they were all negative experience. However, she had kept trying to use them regardless of previous failures. Matthew et al. (2000) found that customers might still use or even recommend the SST, as customers are more understanding of failure in the context of technology but not by service staff. This was true of Addie, as no matter how many times SSTs had failed her, she still attempts to use them. This may have to do with the fact that Addie is the youngest of the respondents (23 years old) and as a millennial is very much in tune with technology. This may explain why she is more reflective in her practices and continues to use a technology that proved to be bothersome. The dynamic properties of the external environment, i.e. the digitalization of the modern world, had an impactful influence on how her grocery shopping practices may change and evolve. According to the sayings of Addie, habits related to grocery shopping can be characterised as weak as they remain open to reflection (Warde, 2016).

The Digitalised Serviscape has Expanded

While undertaking observation, one could say that the extent of the service is simply within the retail store, however, with the aid of focus groups it was revealed that the servicescape has expanded vastly. So much so that the retailer has made a presence in the home setting also. Some scholars claim that digitalized technology in store is certainly the way forward as it has the potential to create deeper customer engagement via big data (Grewal, et al., 2009), it cannot be assumed that the outreach to customers via technology effects all shoppers' experiences in the same way; not all technologies and communications have universal appeal for consumers (Bulmer, et al., 2018). Some participants had great trouble with the communications of the retailer making an appearance in their home setting via their smartphones, so again, the idea of privacy came into the conversation. Tom was vocal about his worry in regard to privacy again, but this time the issue was that the retailer made an appearance at home.

"It's an integrity thing. Someone already knows how much I am buying for; do they need to know exactly what I'm buying? The thing is you buy three lemons and the next

day an ad comes up on Facebook for lemons, and the week after there comes a special price bonus card for lemons. I think it's going too far."

(Tom)

Although this personalizing information for customers is believed to both enhance and diminish consumer experience due to some customer's concern about data and privacy, in some contexts technology could be unappealing to some customers (Bulmer, et al., 2018). Technology can deliver on personalization, but it remains up to the customer whether or not to engage with digital communication; a similar to the point made by Fuentes, et al., (2017) that customers are cannot control nor shape the servicescape, they can only react to its design.

Not all respondents felt the same way as Oscar and Wendy enjoyed the convenience and communication of the retailer's presence at home.

"I like it, I like keeping up to date with things around me, So I don't mind it. I think I feel connected."

(Oscar)

"Well, I come across nice things on social media or something, that's nice to get ideas, it's a surprise. It's an accessible surprise."

(Wendy)

"When I log on to ICA's website and look at the recipes, you can save recipes, so when you're in the store using the hand-scanners the saved recipe comes up to do your shopping. I do feel at one with the technology."

(Katy)

Oscar, Wendy and Katy explain they rather enjoy the retailer making an appearance at home for different reasons. This reflects Schatzki's (2001) reasonings of ideals being made possible by social schemas that entail material elements. These human and the non-human elements,

coined as ‘social relations’ that either fit or misfit in a practice. While this social relation was a misfit for Tom it was a fit for Oscar, Wendy and Katy.

Katy explained that she feels relaxed in the grocery store, when she is in the physical store she feels ‘relaxed’ and as if she’s on a ‘break’. She explained that she enjoys opening the ICA app to look at recipes and communications from the store; when she is at home, she explains that ‘break’ she experiences in store is extended at home when she looks at recipes when she is at home on the ICA app. Thus, actively seeking and opening the ICA app in order to receive communication from the retailer. This speaks to Feldman (2000 in Feldman and Orlikowski 2011) conceptualisation of routines as a source of continuous change that have an internal dynamic which holds ideas/ideals which people enact, thus carrying out the routine is a meaning within itself as the continuation provides the possibility for effortful accomplishments as people take different actions and create and recreate connections.

Belk (2014: p. 1107) argues that the digital world ‘potentially changes the nature of humans, non-human things and the relations between them’, meaning that the ‘mediated technological portion of our self (e.g., as mediated by our wristwatch, smartphone, eyeglasses or digital appointment calendar) is becoming increasingly invisible and taken as a “natural” part of self’ (p. 1110) and that consideration should be given to ‘the full entanglement of humans and things’ (p. 1113). Thereby making shopper’s own devices an extension of the self, and consequently the retailer’s presence too when in the home setting.

This point also raises the idea of a branded technological experience, where the technology is branded as an experience, not as ‘new, cool and trendy’ as technology is stores is new any longer, but as a relaxed experience, a time out unbothersome routine. The next section explores this in more detail.

Technology in Store as Branding

The final theme that arose was a more practically based than theoretical, but as it makes a solid case for meanings ascribed to SSTs in a large, it is prevalent as a finding. While the concept of homogenous technology being a branded experience was not prevalent in the literature review, it was predominant in focus groups discussions.

"The membership card is good for me, collecting points, because I notice it's not like I get 5 crowns every 3 months it actually makes a difference. 1000 crown that's a big weekly shop for us twice a year it's a lot."

"Well, I only use the hand-scanner at ICA. In coop I don't use the scanner because I don't have a membership there and I don't shop that often there. I use the cashier there"
(Mia)

Focus group respondents were able to explain the difference in the technologies used in the different grocery stores, i.e. to use the scan-and-go in ICA, one would need a member's card but not in another. Moreover, respondents were able to recall specific details about SSTs in the store, such as how many SST counters a particular store has.

"I like Willy:s idea that you can park close to the store and collect the shopping you made online. It's quick and easy, and I would use it in my very busy times. You can't do that near my ICA. I can't park close"
(Oscar)

"It's 6-8 month you can save it. I don't think you can keep it over a year, that's a pack of diapers for my kids."
(Katy)

"I like that local ICA, the self-checkout service it's always empty, there's always a free counter because they have six counters."
(Salma)

It was rather surprising that respondents were so well versed in the details of the in-store facilities such as SSTs and collection lockers as well as the retailer's apps. This ability to differentiate the specific details of the technologies in different retailers speaks to the brandable

nature of homogenous technology. Although the technology implemented in different retail stores are standardised e.g. hand-scanners, self-service checkouts, collection lockers etc. the respondents spoke about these technologies in each context of the retailer they favour, as opposed to the standardised technology that it is. This raises the idea of digitalization providing new opportunities to connect the retailer, employees and consumers which can blur the roles and boundaries (Hagberg, et al., 2016). Thus, associating the meaning of homogenous SSTs to the retailer brand and the values they behold.

There were some features of the technologies that were praised by the participants; when Katy explained this feature of the ICA hand scanners, the focus group wanted to know more details of how they can get started to do the same thing. This sparked a sense of excitement amongst the group, as if it was a toy of some sort. This speaks to Djelassi & Demoulin (2016) point that customers experience different kinds of emotions such as excitement, joy and pleasure while shopping; however, here, excitement was came with simply speaking about the technology. While these emotions can be triggered through social contact with a smiling and helpful service employee, new technologies can, under specific circumstances, deliver the same effect. New technologies can therefore also be an enjoyable use and customers who perceive SSTs as being fun to use, can become willing to sacrifice the otherwise traditional social contact with a service employee.

5.1 Summary of Section

To summarize this chapter, analysis came as four themes; starting with the idea that the meanings of the usage of SST changed with the perception that a shopper held toward digitalization in general. Even a lack of usage came with a meaning, thus the cognitive process of not using SSTs were sometimes due to perceptions of digitalization. While for others, the lack of usage of some SSTs were due to their routines being so engrained, they were cognitively unaware of their habits.

Another finding was that who the shopper brings to the store, as a co-shopper, altered the meaning in different contexts, but the usage of the SST does not. The fact that the SST is continued to be used stays the same but ensuing meaning changes. This unchanged behavior but changed meaning can be due to an internal dynamic which holds ideas/ideals which people enact (Feldman & Worline, 2016). Thus carrying out the routine is a meaning within itself as

the continuation provides the possibility for effortful accomplishments as people take different actions and create and recreate connections (Feldman & Worline, 2016).

As this study aimed to explore the meanings behind the usage of SSTs in a digitalised world, it could be said that other external forces, such as other communities of practice that hold ideas/ideals can influence the perception and meaning of SSTs and consequently, their usage or lack of usage. This perception of digitalisation could be part of the theory of 'shared knowledge' which enables a socially shared way of ascribing meaning to the world (Reckwitz, 2002). Here, meaning as well as knowledge were instilled in the reasoning of lack of SST usage as digitalisation was perceived as infringing on privacy while others see it as convenient.

Contrastingly, the expansion of the digitalised serviscape was deemed by some to be convenient and helpful in busy modern life. Here, the determinant of success or failure was an element of control, explained by Shove (2003) that the relationship between social challenge of co-ordination and the value of convenience, where convenience is depends on "scheduling and coordination of people and objects in time and space" (p.171).

Another theme was that the digitalized serviscape had been extended to the point that it makes an appearance in the home. The blurring of boundaries between home/socializing on the phone and retailer's communication, making an appearance in the home angers some and pleases others. Some respondents sought after more communications from the retailer and downloaded the ICA app. In linkage to this comes the final point; a more surprising theme that arose was that the respondents emphasized their habitual use of SSTs in a retail setting becomes a branding factor, which in turn can have a positive influence on an otherwise homogenous technology. Thus, meanings made from homogenous technology by little branding, such as logos. But SSTs consumed in the retail space is not always left in the store if the customer wishes to interact at home.

6 Discussion of Results

With the outlined analysis and findings in mind, the following section aims to meet the two objectives set out for this study: *What meanings do shoppers ascribe to their grocery shopping practices, particularly in the use of SSTs? How do these meanings and routines come about?*

It was found that the overriding perception of digitalisation had much to do with the recurrent usage of SSTs and the meaning behind the usage or lack of it. This perception of digitalisation could be part of the theory of 'shared knowledge' which enables a socially shared way of ascribing meaning to the world (Reckwitz, 2002)**.** Here, meaning as well as knowledge were instilled in the reasoning of lack of SST usage as digitalisation was perceived as infringing on privacy while others see it as convenient. These technologies do not have universal appeal to all customers consumers (Bulmer, et al., 2018). By managing the technological artifact rather than its use in practice, retailers fail to achieve the benefits of the technology they had implemented (Hagberg, et al., 2016). In other words, understanding the artefact and its wider influence over the immediate usage in the store may have for a more customers using the SST.

As routines generally become engrained, to the point where it is difficult to recall how one starts their shopping routine, and how a practice is initially started, it was more common to recall the change of routine or adoption of SST when it was with a spouse or child. As routines become engrained, it is challenging to bring about change unless the shopper brings someone else into the equation as when effort is put into a routine, it enacts cognitive exertion and subsequent reflection to make for stronger habits (Warde, 2016). Thus, as ideas/ideals are enacted carrying out the routine is a meaning within itself as the continuation provides the possibility for effortful accomplishments as people take different actions and create and recreate connections (Feldman & Orlikowski, 2011).

Digitalisation of the serviscape has developed to the point where the retailer makes an appearance at home; this caused a divide for the focus groups, as some were certainly opposed to the retailer appearing at home, while others welcomed it – or even seek it out by enjoying the app frequently. In relation to this, the homogenous reality of SSTs was seen as branded experiences by the shoppers. This was most surprising and showed how different meanings could be with the aid of branding standardised technology in the retail space (and beyond). A stream of research within retail branding has broadened to include a managerial perspective on branding, based upon the transmission models of brand communication where it is assumed that the brand is a wholly managerially or sender produced concept (Burt & Davies, 2010). "Retailers may need to reassess the role of the service encounter as part of their on-going value proposition." (Resnick, et al., 2014: p. 839). No one seemed happy by the way things were - there was a need for either more technology and communication, or more privacy in the way

the SSTs delivered their function. The difficulty comes with what technology to put forward – it seems ICA has lead the way with introducing a seamless experience from store handheld-scanners, to home when choosing recipes, then back to the store where one can see those recipes in the handheld-scanner, creating a loop inciting customer relationships. Start of a brand community (Bertilsson & Tarnovskaya, 2017) with retailers extending the technological offering into the home space – thus extending the meaning held within the store to the home environment too.

As Fuentes, et al., (2017) explains, customers cannot control or shape the serviscape, they can only react to it. However, the way that customers interpret and utilise the SSTs is certainly not always up to the retailer ultimately; as was illustrated by the analysis. The interpretation assigned meaning and utilisation of the SST as a part of the shopping routine is something that has not been taken into account when developing technology into the grocery retailing space. Rather, the cost-efficient benefits have been of key reasoning for implementation. Thus, the future of SST development in the retail space would benefit from looking at existing SSTs and the way in which customers use, interpreted and ascribe meaning to them as an indication of where to take the development of technology next - as opposed to implementing tech from tech companies on a 'trend' bases (Ahlbom, 2019).

6.1 Theoretical Contributions

This study took the concept of digitalisation as an overriding theme of individuals' reality and understanding of the world. Placing a broader context in place before looking into the practices, meanings and materials that shape routines established a lens through which practices are shaped and understood. Existing literature sees SSTs in its own right, as a lone standing artefact, sometimes neglecting the broader understanding of digitalisation in the users life. What has noticeable was that the experience of digitalisation had far reaching effects of the use of SST. This intermingling of digitalisation and newer practices makes for a complex and layered relationship between the shopper and the service which they receive.

Through an extension of this, other communities of practice further influence and heavily shape an individual's perception of SST into negative categories. Thus, not one single influence holds convergence over practices and subsequent meanings. This perception of digitalisation could

be part of the theory of 'shared knowledge' which enables a socially shared way of ascribing meaning to the world (Reckwitz, 2002). Here, meaning as well as knowledge were instilled in the reasoning of lack of SST usage as digitalisation was perceived as infringing on privacy while others see it as convenient.

The practice ontology sees social life as coming into being through practices, is implicit in this theorizing; Feldman's (Feldman & Orlikowski, 2011) research on resources addresses the ontological status of practice in whether one can call an object a resource before it has been used in some way. She states that to identify resources as static, as things, as qualities, or as processes that are innately resources. Viewed through a practice lens, however, they are just potential resources until somebody uses them. The discussion of resources has not paid attention to the processes through which resources are enacted.

6.2 Practical Implications

While practice theory has its pitfalls when it comes to managerial and practical implications, the following section attempts to put words into actions in a practical sense. There has been some discussion around the practicality of practice theories for management purposes. Feldman and Worline (2016) explain that management scholars and managers have applied practice theory to organizational problems; to illustrate their point, they focus their examples on resourcing. In this context, for this research, the idea of resourcing is rather relevant as practices are social in the sense that they are ways of thinking and acting that appear in different time-space and are carried out by different individuals (Reckwitz 2002). Although self-services are often blamed for the weakening of social bonds (Gremler and Gwinner, 2000; Selnes and Hansen, 2001 in Salomann, et al., 2007), loss of client control as well as hindered customer retention (Mulligan and Gordon, 2002 in Salomann, et al., 2007) an understanding of practices as social and the use of resources (SSTs) in a different way can aid change in the meaning of SSTs, and consequently the routinised use also. Thus, the meanings that about first and then a conscious effort to instil the routine, which became an effortful accomplishment on the shopper.

Practice theory generally offers management educators a way of thinking and explaining that is based in practical rationality. The focus in practice theory is on the rationality or logic that is internal to specific recurrent activities, rather than viewing those activities from a detached

outsider view. Coming to see the practical rationality involved in ordering one's social world allows a new stance toward our own actions. Sandberg and Tsoukas (2011) claim that such "practical rationality theories enable practitioners to better understand, engage and, above all, improve their own practice" (p. 354).

Customers can be segmented into three parts; positive change agents excited to use new technologies, neutral to SSTs but unsure how to use them, and finally, negative outlook on change and technology. By retailers understanding that technology is not viewed in the same way by all customers, a more guided way toward the usage of SST would help facilitate the usage of SSTs.

7 Conclusion

This research aimed to explore the meanings of SSTs in a digitalised world held by the grocery shopper. Routines and emerging themes of influence and learning came to find that grocery shopping practices are socially and culturally coordinated with the larger context of digitalisation of the modern world, which makes for a rather complex and layered reality.
While routines and habits may be static at some points in time, diverse meanings to the use of SSTs makes for practice itself being of significance due to meaning, material and competence knowledge, interpretation and availability.

While the intention of SSTs is to aid independence of shopping, hold cost benefits to the retailer and gain some knowledge about shopping habits to aid retailer's understanding of their customers, the customer's perception of the SSTs proved to hold a different reality. It could be argued that as the developers of these SSTs are IT based, their target is to sell to retailers. This sale is made by projecting financial benefits, such as omnichannel to utilise one succinct channel across the retailer's communication, or the lower staff presence and costs. However these changes make for a vast change in service offering, that not all customers will find appealing.

An overriding question to retailers to consider is, what social effect does SSTs place onto customers, and does ongoing learning occur by the retailer via a deliberate top down approach or via communities of practice of SST users (including retail apps) with learning and subsequent meanings being taken on by peer-to-peer sharing of knowledge? By managing the

technological artifact rather than its use in practice, retailers fail to achieve the benefits of the technology they had implemented. Thus, management of communities of practice may pose more plausible for SSTs value in usage.

8 Future Research

Practice theory in different contexts, here, SSTs use and practice in a digitalised world however there are other avenues that future research can explore, such as segmenting different age groups; Boomers (born 1950-1980) Millennials (born 1980-2000), Gen Z (2000 and later) to understand different age groups experiences, expectations and general practices of SSTs in the grocery space. As technology becomes the norm for younger consumers, it would be interesting to explore their practices and subsequent routines in use of grocery retailing.

While this research mentioned the literature regarding technological determinism, future avenues of research could focus on an exploration into how SSTs are used as socialising tools for social practices such as learning and navigating the way around the store. This could investigate co-shopping, as the people one brings to the grocery store changes the routine, usage of technology and overall journey of the store.

A final suggestion of future research is that Barker's (1975) claim that the servicescape is commonly considered a controlled space that coerces people into behaving in accordance with its script; however, most of the respondents did act in accordance to the way in which the retailer intended. Most explained that they 'zigzagged' around the store, going back and forth, to and from different isles as opposed to moving through the store via the route provided. This begs the question, is it the retailer that is setting out the route or the shopper? Why does the customer refuse to utilise the set route throughout the store? It would be interesting to explore the routines of shopper's movement throughout the store to see why they manoeuvre the way they do and the reasons for moving around the shop the way they do.

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Appendices

Appendix I - Focus Group Participant (Demographic Details)

Participant's Alias Names	Demographic Details
Matthew	29 y/o., Single mother, lives in city apartment
Maria	26 y/o., Partner, no children, lives in house, rural village
Uriel	55 y/o., Married dad, lives in house, rural village
Mia	48 y/o., Single mother, lives in city apartment
Tom	41 y/o., Married dad, lives in house, rural village
Maddie	48 y/o., Married mother, lives in house, rural village
Michael	41 y/o., Married man, no children, lives in house, rural village
Ben	51 y/o., Single mother, lives in city apartment
Tilly	46 y/o., Married mother, lives in house, rural village
Henry	67 y/o., Married dad, lives in house, rural village
Addie	21 y/o., Single, no children, lives in house, rural village
Katy	31 y/o., Married mother, lives in house, rural village
Stella	29 y/o., Partner, no children, lives in city apartment
Dan	27 y/o., Single man, lives in house, rural village
Claire	26 y/o., Partner, no children, lives in city apartment
Jenny	28 y/o., Single, no children, lives in city apartment
Oscar	31 y/o., Married dad, lives in city apartment
Wendy	26 y/o., Married mother, lives in city apartment
Salma	29 y/o., Single mother, lives in city apartment
Ingrid	26 y/o., Single, no children, lives in city apartment
Miles	40 y/o., Married, no children, lives in house, rural village
Margot	25 y/o., partner, no children, lives in house, rural village
Amy	27 y/o., Single, no children, lives in city apartment
Molly	26 y/o., Married, no children, lives in house, rural village

Appendix II – Observed Retail Locations (Maps and Floor Plans)

To clarify and explain the locations in which observations were carried out. The contextual location and surroundings of the three retail stores are of importance, as it could determine the speed, quantity and frequency of the shopping trip.

The first location, Helsingborg ICA MAXI is near a main road called 'Landskronavägen' with a large parking lot on-site, with not much local residency; thus most customers that patronised the store drove in and used a large shopping cart.

Figure 2: Aerial-view ICA Maxi, Helsingborg

The following illustration (figure 3) shows an aerial view of the store setting. The red location icon shows where I was seated when carrying out the observations in this location. While the SST counters, the hand-held scanners, café, tobacco service counters etc are shown, the overall layout of shelving is not, as it does not to pertain to this research. As this paper is concerned

with the routines of the use of SSTs and meanings that are created through the use of SSTs, thus the movement around the store and shelving placement is overlooked and not noted in the diagrams.

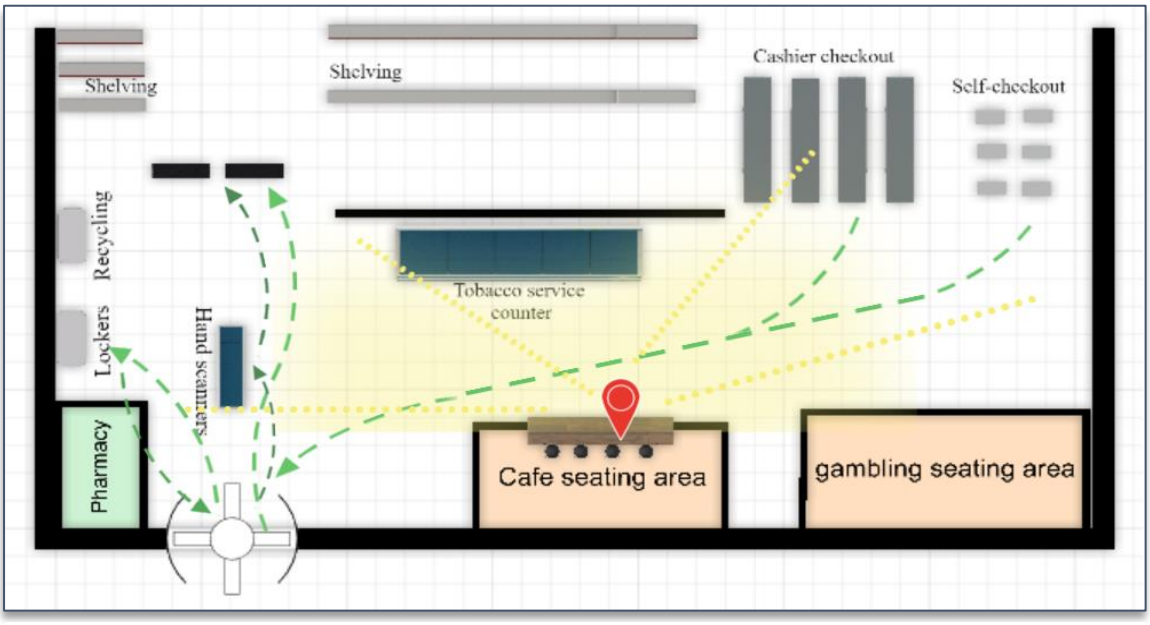

Figure 3: Floor plan ICA Maxi, Helsingborg

Another location in which observations were carried out was Stora Coop in Helsingborg. This location has a very large parking lot and is adjacent to a sports field. The aerial-view is shown below (figure 4). There is a large parking lot on-site, again, with not much local residency.

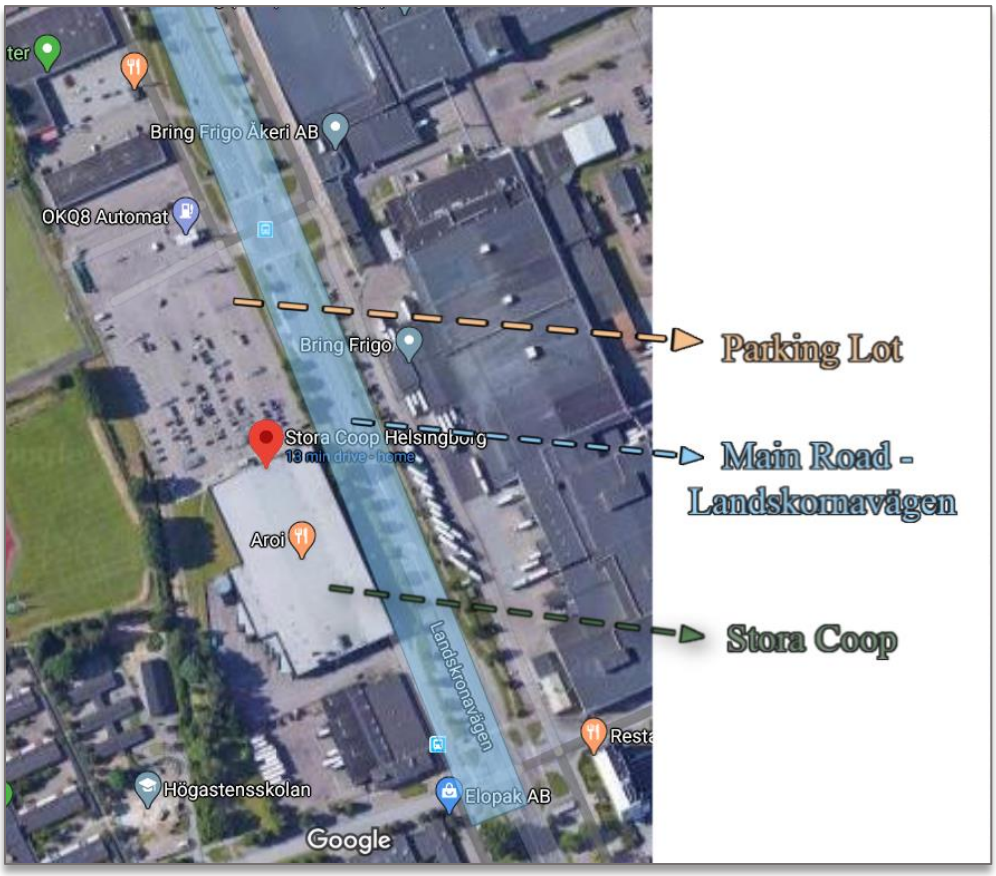

Figure 4: Aerial-view of Stora Coop, Helsingborg

thus most customers that patronised the store drove in and used a large shopping cart. But as there is a bus station, park, beach and fishing location, there are some attractions in which lone customers enter the store for a small amount of items to buy.

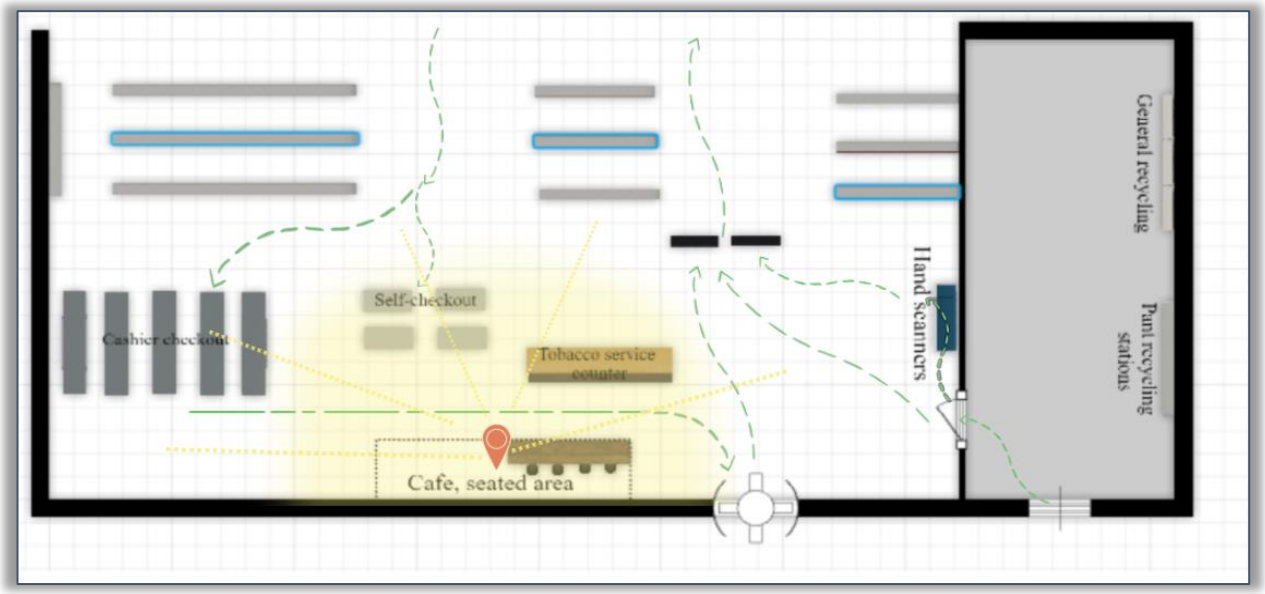

Figure 5: Floor plan of Stora Coop, Helsingborg

The floor plan of Stora Coop, Helsingborg, illustrates from where observations were carried out. Again, the shelving is not detailed in the diagram as it does not relate to the research. What is noted, however, are the two entries and exits; one was in front of the parking lot and the other was closer to the park and sports field.

The third and final location of observation was the Lund central ICA kvantum adjacent to the major train station.

The final location in which observations were carried out was ICA kvantum in Lund. This location does not have a parking lot, but it does have a cycling parking station outside of the entrance. It is also across from the street of a major train station, Lund Central.

Figure 6: Aerial-view of ICA kvantum, Lund Central

The location was much busier than the previous two observations sites; the entry was often difficult for shoppers to manoeuvre in and out of. This diagram can only illustrate the basic layout of the store and cannot show the clumsy pathway for customers set out in the store.

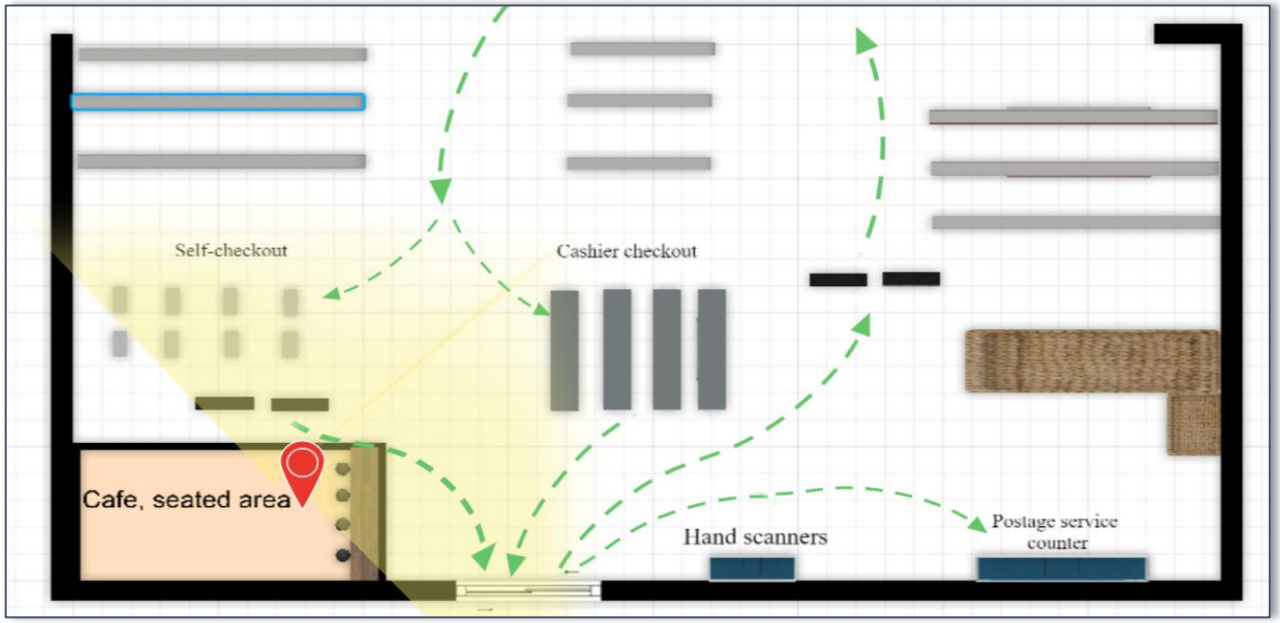

Figure 7: Floor plan of ICA kvantum, Lund