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An Investigation of Customers' Experiences from Using Smartphone Apps

APRAMEY DUBE



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Key words: Service Experience, Use Experience, Smartphone Apps

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To Marianne,

My strongest pillar of support……

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1 INTRODUCTION: SETTING THE SCENE

Smartphone apps have developed to become the new universal language through which customers interact with service providers. We are in an app economy in which most everyday customer experiences are mediated through apps. Therefore, service providers increasingly are providing service through the channel of smartphone apps. The devices that began this revolution, smartphones, are the new best friends of people worldwide. A study conducted by Perlow (2012) found that customers are never more than three feet away from their smartphones any time of the day. Smartphones have become deeply embedded in the lives of customers with little restrictions on time and place regarding their use.

In 1992, IBM developed the Simon Personal Communicator, which can be viewed as the first smartphone. Simon's capabilities allowed for use as a cell phone, pager, fax machine and a simple computer, and it was envisaged as a device that can perform multiple tasks associated with different devices (Sager, 2012). However, after its commercial launch in 1994 (BBC, 2014), the public did not embrace it, owing to its short battery life and high price.

If a reader today pauses to check his or her mobile phone, it is likely to be a smartphone filled with various apps, some of which are used many times daily, whereas others are never used. In 2018, customers downloaded 194 billion mobile apps to their devices – a number that has been increasing with the introduction of new smart-devices such as smart-watches, smart-rings, fitness trackers and other wearables (Statista, 2019a).

Among US app users, in September 2019 (Statista, 2019b), the top five categories of apps used included: (1) Communication and social media apps, e.g., WhatsApp; (2) web browsers, e.g., Chrome; (3) utilities/tool apps, e.g. weather apps; (4) entertainment apps, e.g., Netflix; and (5) search and reference apps, e.g., Google. Smartphones provide service primarily through apps, which are software applications specifically designed to run on specific operating system platforms.

Never before has technology facilitated such a close and widely varied availability of *service* to customers, regardless of time and place. Such technological advancements are uncovering new aspects of customers' service experiences, in which customers can get service at their fingertips. On the other hand, extant service marketing and management literature remains highly influenced by traditional restraints of time and place in service provision. Furthermore, service research predominantly has focussed on service providers' perspective (Heinonen & Strandvik, 2015; Heinonen et al., 2010) and sphere (Grönroos & Voima, 2013).

In this thesis, I present an evolved conceptualisation of service experience derived from customer use of smartphone apps. In addition to direct and intended components, this thesis also highlights indirect and unintended components of customers' phenomenological service experience. It should be noted here that service experience can be understood as the experience of any actor involved in service (Jaakkola et al., 2015; Helkkula et al., 2012a). However, in this thesis, service experience is limited to the service experience of a specific actor, i.e., the customer.

The context of smartphone app use illustrates the ways in which customers experience service (from apps as service platforms) regardless of time and space constraints. Moreover, apps' ubiquitous presence in customers' everyday lives brings the focus to the customer lifeworld instead of the service provider's sphere. However, in this thesis, although apps theoretically are reviewed as descendants of mobile services, they are not empirically investigated from service providers' mental model perspective. They are not conceptualised as marketing channels, nor mobile services as market offerings. Instead, apps are conceptualised as service platforms that are embedded deeply into customers' everyday lives.

It should be noted that although this thesis focuses on smartphone app use's empirical context, it can be extended to all future advancements in technology (such as wearables, virtual reality et al., Such devices have recently been called Self-Service Devices (SSDs) (Gummerus et al., 2019) and they make service more dynamic and more embedded in customers' everyday lives.

1.1 Research gap

Early service marketing research analysed service experience as the outcome of customers' experience of services. The difference between service experience outcomes and service quality expectations was defined as perceived service quality (Grönroos, 2007, 1984). The next development in service experience characterisation occurred in the early '1990s, when service experience began to be analysed as a process. In this characterisation, service marketing research examined individual service elements and argued that customers experience different types of service elements, including service tangibles and surrounding servicescape (Pareigis et al., 2012; Bitner, 1992). Extensive attention was given to the service encounter as moments of truth (Normann, 2001), in which customers experience the service process. This early conceptualisation of service experience forms the bedrock of service design research. Service design focuses on the manageable service elements that can be improved to ensure that customers have an optimum service experience (Teixeira et al., 2012). In summation, the

process characterisation of service experience was understood to be the experience of the service process, largely centring around service encounters.

In recent years, a third characterisation of service experience has emerged that terms service experience as a phenomenon. In this phenomenological characterisation (Jaakkola et al., 2015), service experience is not dictated by service providers, but rather shaped by individual and subjective everyday customer lifeworld contexts (Helkkula, 2011). In addition, phenomenological service experience is not bounded by time and space, can be lived or imaginary (Helkkula et al., 2012a) and can occur in the past, present or future (Dube, 2014). Despite this broadening of service experience's characterisation, few attempts have been made to examine phenomenological service experience within a service context that is optimised to exhibit this freedom in time and space dimensions.

In this thesis, I adopt the phenomenological characterisation of service experience and focus on the everyday customer lifeworld in which several apps are embedded as service platforms. The everyday customer lifeworld is the primary context and platform for the emergence of phenomenological service experience. Keeping the customer lifeworld in mind, service researchers caution against neglecting customers' sense-making with their surrounding context in their own interpretation of service experience (Strandvik & Heinonen, 2013). Driving the customer-centricity argument in service experience, Heinonen et al. (2010) claim that 'we propose that the service experience is more than a process of perception…it is a process of long-term and context-bound relating' (Heinonen et al., 2010, p. 542).

There is a growing consensus among researchers that the phenomenological characterisation of service experience is based on the customer lifeworld and extends to a broader spectrum of time and space. However, few attempts have been made to investigate the ways in which service experience emerges from the customer lifeworld. Specifically, a gap exists in investigating phenomenological service experience with an empirical service context that matches the flexibility of time and space constraints, as suggested by the phenomenological characterisation. This thesis attempts to address this research gap by analysing customers' phenomenological service experience with smartphone apps that can be conceptualised as service platforms without any time and space constraints.

In this thesis, I attempt to investigate two specific research problems. First, the phenomenological service experience conceptualisation claims that service experience can occur in factual and observable use (direct use) or may be imaginary in nature, i.e., involving no direct use. However, traditional service experience research has not paid adequate attention to indirect service use experiences that occur outside of factual and observable

service use. This thesis identifies use experiences as an empirical setting for service experiences. This implies that service experiences with smartphone apps are investigated as different forms of customers' use experiences while using apps.

Second, the phenomenological service experience characterisation claims that service experience is subjective, idiosyncratic and internal. Thus, one customer's service experience differs from another customer's service experience, depending on their individual lifeworld contexts. As a corollary, the service provider's expectations about their customers' service experiences may not match up with customers' actual service experiences. The dominance of service providers' perspective in anticipating specific service experiences (intended experiences) has led to overlooking the different ways in which customers can have service experiences, several of which may be unanticipated or unintended by service providers. This study aims to examine such differences between service providers' expectations and customers' actual service experiences.

1.2 Research purpose

The purpose of this research is to explore service experiences from a service perspective, with a particular focus on smartphone apps.

To address the research purpose, this thesis attempts to answer three specific research questions that, in accordance with the research purpose, aim to explore service experience in a smartphone app context. Each research question focuses on a specific aspect of phenomenological service experience and intends to scrutinise three relevant facets of service experiences: service use; service providers; and customers' expectations and understanding of service experiences.

The first research question examines a specific type of service experience, namely use experience of smartphone apps. Empirically, this research question delves into phenomenological service experience through the use of smartphone apps. Therefore, this research question addresses the aspect of 'use experience' within the concept of phenomenological service experience:

> ***RQ1.*** *What types of use experiences do customers have when they use smartphone apps?*

The second research question shifts the focus towards the service provider, or alternatively, the app developer. This research question is interested in conceptually exploring the

differences between service providers' understanding of customers' service experiences compared with customers' actual service experience with smartphone apps. Consequently, the second research question addresses service providers' grasp of their customers' service experiences:

> ***RQ2.*** *What are the differences in the ways in which service providers intend for customers to have service experiences vs. the ways in which customers actually experience smartphone apps?*

The third research question *specifically looks at customer experiences using smartphone apps* and compares them with the app developer's expectations of such experiences. In other words, thee third research question emerges from the second question and approaches the topic from the specific empirical context of smartphone app use:

> ***RQ3.*** *In what ways do customers' experiences from using apps compare and match up with app developers' expectations?*

This composite thesis comprises three papers that address these research questions. The following table provides the overall purpose of the thesis, research questions and papers.

Table 1 **Research gap, purpose and research questions**

	Overall Thesis	**Paper 1 (Empirical, published)**	**Paper 2 (Conceptual, published)**	**Paper 3 (Empirical)**
Title	*Service Experience in Customers' Everyday Contexts An Investigation of Customers' Experiences from Using Smartphone Apps*	*Service experiences beyond the direct use: Indirect customer use experiences of smartphone apps*	*The Ripple Effect: Intended and unintended service experiences of smartphone apps*	*Mind the Gap: A Comparison between customer experiences from using apps and app developer expectations about these experiences*
Associated thesis research questions	***Research gap***: There is a gap in investigating phenomenological service experience with an empirical service context that matches the flexibility of time and space constraints, as suggested by the phenomenological characterisation.	***RQ1.*** *What types of use experiences do customers have when they use smartphone apps?*	***RQ2.*** *What are the differences in the ways in which service providers intend customers to have service experiences vs. the ways in which customers actually experience smartphone apps?*	***RQ3.*** *In what ways do customers' experiences from using apps compare and match up with app developers' expectations?*

Purpose	To explore service experiences from a service perspective, with a particular focus on smartphone apps	To examine customers' use experiences in the smartphone app context	To compare conceptually how service providers intend customers to experience apps and how customers actually experience them	To compare and explore the match between customers' experiences from using apps vs. app developers' expectations of them

1.3 Delimitations

This section of the thesis draws out the delimitations that are used to define the scope and contribution of this thesis. Both theoretical and empirical delimitations are described below.

Theoretical delimitations

The concept of service experience is related closely to value creation, in which service experience may lead to value creation (Jaakkola et al., 2015; Helkkula, 2011; Vargo & Lusch, 2008). However, this thesis delimits itself to investigating service experience as a phenomenon in customers' everyday lifeworlds. Therefore, discussion of value creation in its different forms is not included as part of this research. This implies that whether a service experience leads to a certain type and extent of value creation is not discussed in detail. Instead, customers' experience in the service context (without any necessary link to value creation) forms the core of this thesis.

Empirical delimitations

Lately, apps have emerged as the key service platform through which customers use smart devices. Several smart devices on the market currently use apps, such as smartphones, wearables (e.g., smart watches, smart fitness bands, smart rings, smart shoes, etc.) and smart home appliances (e.g., smart vacuum robots, smart alarm clocks, smart TVs etc.). Among these devices, smartphones have been the pioneer technology for which smartphone apps were developed first. Among all the smart devices, smartphone apps currently have the highest penetration and use among ordinary customers in ordinary everyday life contexts. Therefore, this thesis empirically delimits itself to the investigation of only smartphone apps among different types of apps used nowadays.

In addition, this thesis does not focus on any specific type of app, but rather its empirical investigation is delimited to apps that customers experience in their ordinary everyday lives.

1.4 Key concepts and definitions

In this section, I present the key concepts and definitions that I use in this thesis.

The understanding of the theoretical concept of 'service' that is used in this thesis is adopted from the Service Logic (SL) of marketing, in which service is analysed as a perspective on business (Strandvik, 2013; Grönroos, 2011). Furthermore, linking to value creation, *service* has been defined as facilitation of customers' value-creation processes (Grönroos, 2006). Consequently, my understanding of the key theoretical concept of service experience is based on this conceptualisation of service. In this thesis, I define *service experience as customers' phenomenological experience of a service. Here, service means facilitation of value-creation processes for customers by service providers*. Among several characterisations of service experience (Helkkula, 2011), this thesis ascribes the *phenomenological characterisation that analyses service experience as a subjective, idiosyncratic and contextual phenomenon emerging from customers' lifeworlds*. Service experience, in its phenomenological characterisation, is the overall theoretical research concept for this thesis.

The empirical context of the thesis is *smartphone apps, which are software programs designed to run on specific operating system platforms on digital devices (Dube & Helkkula, 2018, 2015)*. They are conceptualised as service platforms in this research. *A service platform is an arena, or stage, that facilitates interactions and value creation between actors*, such as service providers and customers (Grönroos & Strandvik, 2008); among customers themselves (Rihova et al., 2013); or among businesses (Pekkarinen & Ulkuniemi, 2008). In this thesis, *apps are conceptualised as service platforms through which customers experience facilitation of value-creation processes*. Thus, customers interact with service providers (companies or app developers) and obtain service when they use apps on their smartphones.

The empirical setting of the research is based on the *customer lifeworld, which is the everyday life of the customer, in which he or she experiences smartphone apps as service platforms*. It should be noted that the technological understanding of smartphone apps as software applications is acknowledged, but is not the focus and scope of this thesis.

Along with service experience, this thesis utilises the concept of use experience as an empirical subset of customers' holistic service experience. Consequently, this thesis defines *use experience as phenomenologically determined experience in the use of a service*.

Smartphone apps, as service platforms, have the potential to function as the arena or stage through which customers may obtain service. For this, customers must use apps and interact with other actors that may be service providers (companies or app developers) or other

customers. For example, customers touch their smartphone screens to open a messaging app, such as WhatsApp, and send and receive text, audio and video messages through the app. In these interactions, customers undergo use experiences through WhatsApp.

It is extremely crucial to stress that the use of apps – and, therefore, use experiences – is not restricted to direct use experiences and also involves indirect use experiences. Direct use experiences refer to tangible and externally observable use of service, e.g., touch-and-click use of smartphone apps. However, the phenomenological characterisation of service experience postulates that customers may have both real and imaginary service experiences (Helkkula, 2012a). Indirect use experiences are such imaginary experiences in which the customer may not actually use an app (i.e., touch or click an app). This thesis expands the concept of use experiences to include both direct and indirect use experiences.

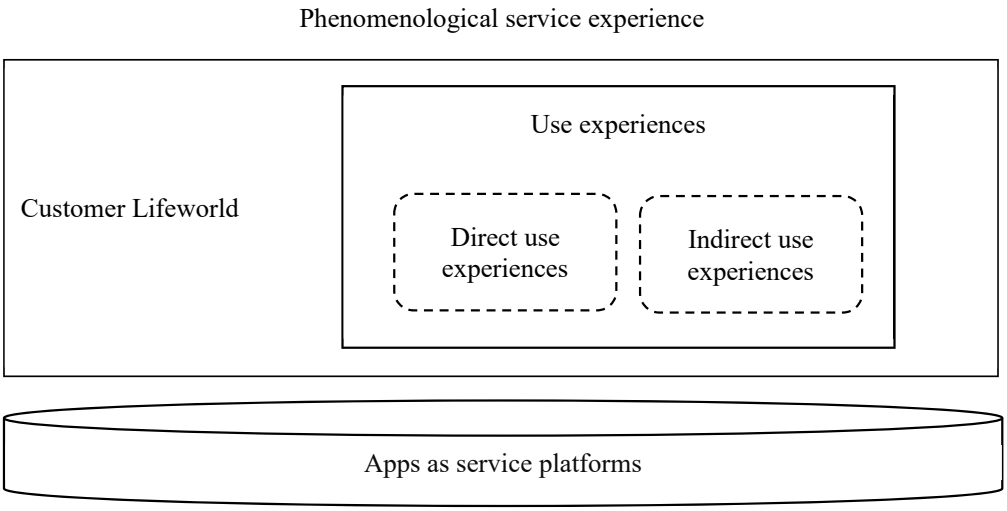


Figure 1 **Key concepts in the thesis**

The difference between service experience and use experience lies in both scope and research perspective. Service experience is the overall theoretical concept positioned in the customer lifeworld and, thus, adopts a customer perspective (from Customer-Dominant Logic, Heinonen et al., 2015). However, use experience focuses on service use and is only one component of overall service experience. Several studies restrict use experiences to ongoing service consumption and do not include pre-usage and post-usage experiences (Hellén & Gummerus, 2013). In this study, the phenomenological service experience also includes pre-

and post-usage experiences, as it adopts the customer perspective and is not restricted to any particular service. The following table presents the key concept definitions in this thesis:

Table 2 **Definitions of key concepts used in the thesis**

Concept	Definition
Service experience	*Customers' phenomenological experience of a service. Here, service means facilitation of value-creation processes for customers by service providers.*
Phenomenological service experience	*A research characterisation that analyses service experience as a subjective, idiosyncratic and contextual phenomenon emerging from the customers' lifeworlds.*
Use experience	*The phenomenologically determined experience in the use of a service. It includes both direct and indirect use experiences.*
Customer lifeworld	*The everyday life of the customer in which he experiences smartphone apps as service platforms*
Service platform	*An arena, or stage, that facilitates interactions and value creation between actors*
Smartphone apps	*Software programs designed to run on specific operating system platforms on digital devices. They are conceptualised as service platforms through which customers experience facilitation of value-creation processes*

1.5 Research process

The development of this research follows an abductive research process that is a systematic combination of both inductive and deductive research approaches (Kovács & Spens, 2005; Dubois & Gadde, 2002). This implies that the research process followed alternate immersions in theory and empirical data collection at different stages of research.

I started my research journey in 2010 with a foundational review of service research and a keen interest in the concept of service experience. When getting acquainted with customer and service experience concepts in service research, I came to the realisation that the present understanding of service experience is not fully compatible with new and flexible service contexts emerging with modern technologies. I have a background in engineering studies (electronics and communication engineering), and I always have been fascinated with mobile technologies. In 2012, I bought my first smartphone (Apple iPhone 4), which introduced me

to the exciting world of smartphone apps. My lived empirical experience with apps made me realise that they are the new service platforms that are closest to customers and open up a world of experiential opportunities. At the same time, smartphone apps represented a modern, technology-enabled service platform that challenges the contemporary understanding of service experience. Being captivated with this new mobile technology, I decided to choose smartphone apps as the empirical context of my thesis.

Having explored extant theoretical literature and chosen the empirical context, I jumped into empirical field research in summer 2012 and conducted a pilot study that investigated customers' app-use experiences with the help of customer narratives in app diaries. The analysis of customer narratives revealed that customers experience apps in multiple ways that are not adequately described in existing literature on service experiences. Following the abductive approach, I decided to examine service experience literature more deeply and discovered the phenomenological characterisation of service experience as the core theoretical concept that developed as the focal theoretical backdrop for this thesis. Coming back to field research, at the end of 2013, I conducted the main empirical studies for this thesis, which included semi-structured interviews on use experiences with multiple smartphone apps in customers' everyday lives.

The past few years have been dedicated to the development and publication of the papers and kappa of this thesis. Paper 1 was first submitted to the *Journal of Service Management* for review in May 2013 and was published in spring 2015. Paper 2 was published as a peer-reviewed book chapter in spring 2015. Paper 3 combines the findings from papers 1 and 2 and empirically investigates the combination in the context of smartphone app use. This paper has been presented at the Naples Forum on Service conference in summer 2015 and further revised and updated based on subsequent feedback from colleagues.

The following figure illustrates the research journey of this thesis.

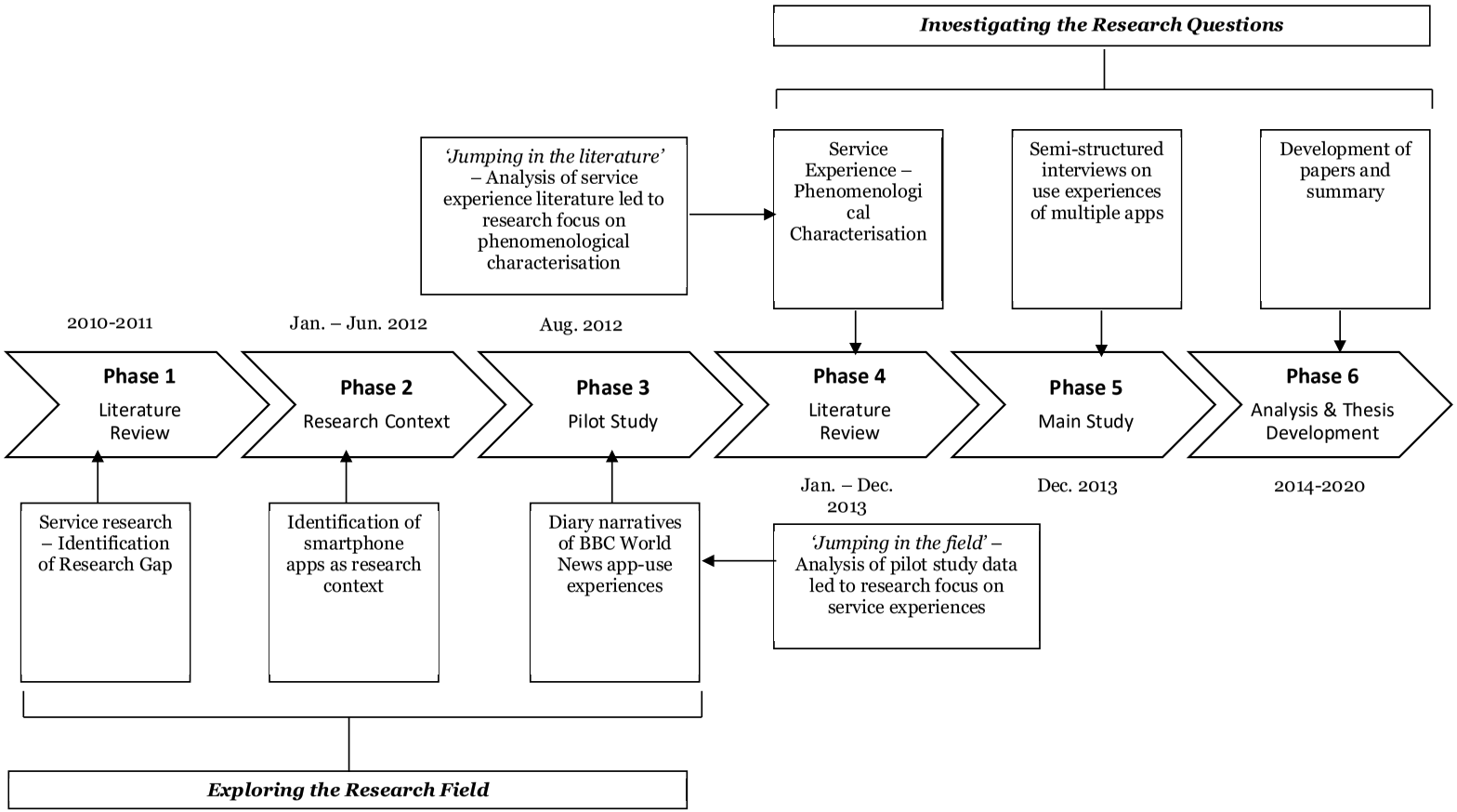


Figure 2 **Chronological description of the abductive research process**

1.6 Structure of the thesis

This thesis is a composite of the three aforementioned papers and the summary. Two of the three papers are published manuscripts, and the third has been presented as a full conference paper. Each paper addresses different aspects of service experience with smartphone apps and holds varied implications for the overall contribution of the thesis. The three papers' citation data are provided below:

Paper 1 (Double-authored, First author): Empirical

Dube, A., and Helkkula, A. (2015), "Service experiences beyond the direct use: indirect customer use experiences of smartphone apps", *Journal of Service Management*, Vol. 26 No. 2, pp. 224-248

Paper 2 (Triple-authored, First author): Conceptual

Dube, A., Helkkula, A. and Strandvik, T. (2015), "The Ripple Effect: Intended and Unintended App Experiences" in Gummerus, J. and von Koskull, C. (Eds.), *The Nordic School – Service Marketing and Management for the Future*, Helsinki: Hanken School of Economics pp. 273-281

Paper 3 (Single author): Empirical

Dube, A. (2019), "Mind the Gap: A Comparison between customer experiences from using apps and app developer expectations about these experiences", Full paper presented in *2015 Naples Forum on Service* Conference, June, Naples, Italy.

The papers are presented in the thesis in their respective order after the kappa.

The rest of the kappa is structured as follows: First, I will present a literature review of the key concept of the thesis, i.e., service experience, with a review of the evolution and different characterisations of service experience as a theoretical concept. Second, I examine this research's ontological, epistemological and methodological assumptions, followed by a detailed description of the empirical methods and data collection conducted for this research. Third, smartphone apps are examined as the empirical context of this research, with a concise characterisation of mobile services as the technological precursors of apps. Fourth, all three papers are summarised, and key contributions from each paper are presented. Fifth, I argue for and present the overall contribution of this thesis, along with implications for both researchers and managers. Finally, I describe the limitations associated with this research and make several suggestions for future research directions.

2 A DEEP DIVE INTO SERVICE EXPERIENCE RESEARCH: WHAT DO WE KNOW?

In this section of the thesis, I will review previous research on the key concept of this study: service experience. This section's purpose is to provide the reader with a synopsis of extant research on the key concepts and highlight the research gap that this study aims to fill. This literature review spans the research's key theoretical concepts (service experience, use experience, customer experience)

I will start this section with a literature review of service experience, beginning with the traditional conceptualisation of 'experience of services' to the present conceptualisation of 'experience of service (facilitation of value-creation processes)'. Service experience literature also is influenced by customer (and consumer) experience research originating from the understanding of service experience as 'experience of service**s** (as market offerings)'. Therefore, the literature review also presents a brief overview and reflection on the evolution of customer experience research in marketing. Subsequently, the research gap is identified and presented to the reader.

2.1 Research origins of the service experience concept

The terms *customer experience* and *service experience* have been used interchangeably with little caution, specifically in the fields of service management and marketing (Jaakkola et al., 2015; Klaus & Maklan, 2012). In the early 1980s, when service marketing research was emerging as a specific research stream (Gummesson & Grönroos, 2012), service experience was understood to be customers' experience of services as market offerings. In this understanding, customers' experience of service*s* formed a significant part of the disconfirmation paradigm of perceived service quality (Gummesson & Grönroos, 2012). Perceived service quality is investigated as the difference between customer expectations and customer experience with service offerings (Grönroos, 2007). If customers have positive customer experiences with service offerings, their perceived service quality would be higher.

The conceptualisation of service itself has evolved drastically from being conceptualised as 'market offerings' to being conceptualised today as 'business logic', specifically in the Nordic School of Service (see Gummerus & von Koskull (Eds.) 2015). This thesis ascribes to the Nordic School's understanding of service as business logic that portrays service as facilitation of 'interactive processes that support customers' value creation in their everyday practices' (Grönroos, 2008, p. 300).

Recent research in service experience recognises the breadth of the concept beyond the narrow boundaries of customer experience of services as market offerings. In her comprehensive review of service experience research, Helkkula (2011) conceptualises service experience as 'experience in a service setting', highlighting the phenomenological service experience that is not restricted to the service 'process' or service 'outcome'. As a continuation of characterising service experience as phenomenological, Helkkula et al. (2012a) claim that service experience is individual, yet social, and is both lived and imaginary, extending to both the past and future in customers' lifeworlds. Recently, Jaakkola et al. (2015) defined *service experience* as 'an actor's subjective response to or interpretation of the elements of the service, emerging during the process of purchase and/or use, or through imagination or memory' (Jaakkola et al., 2015, p. 186). This definition significantly highlights imaginary service experiences that do not require actual service use by customers.

It should be noted here that service experience can be understood as the experience of any actor involved in service (Jaakkola et al., 2015; Vargo & Lusch, 2008). However, in this thesis, service experience is limited to a specific actor's service experience, i.e., the customer. In accordance with the Nordic School's conceptualisation of service (i.e., the facilitation of value-creation processes), this thesis defines *service experience as customers' phenomenological experience of a service. Here, service means facilitation of value-creation processes for customers by service providers.*

As this thesis defines *service experience* as customer experience in the service context, a brief overview of customer experience research in marketing is presented in the next section.

2.2 Predecessors of the service experience concept in marketing

The key predecessor of the service experience concept is the 'customer experience' concept in marketing, where it is one of the most significant marketing and consumer research concepts (Tronvoll et al., 2011). Consensus exists among academics and practitioners that customer experiences are precursors to enhancing customer satisfaction (Verhoef et al., 2009) and strengthening competitive advantage (Bolton et al., 2014) for firms. Emerging as the latest battlefield for competitive advantage, customer experience has been identified as the currency for the modern economy (Pine & Gilmore, 1999). It should be noted that customer experience overlaps with related concepts of consumer experience and consumption experience (Arnould et al., 2002; Carù & Cova, 2003). However, this thesis refers to the concept as *customer experience* in accordance with the terminology used in service marketing (Gummesson and Grönroos, 2012) and customer-dominant logic (Heinonen & Strandvik, 2015).

In marketing research and practice, customer experience generally is understood to be the first-level concept involving customers, in which experience involves a subjective, and often transformative, customer response to marketing stimuli (Carù & Cova, 2015). Customer experience is the precursor to several secondary- and tertiary-level concepts, such as service quality (Grönroos, 2006), customer satisfaction (Verhoef et al., 2009), value co-creation (Vargo & Lusch, 2008; Sandström et al., 2008; Lusch & Vargo, 2006), customer loyalty (Iglesias et al., 2011) and brand equity (Brakus et al., 2009). On the other hand, customer experience often is a desired outcome of marketing and planning processes, such as service environment and servicescape (Pareigis et al., 2012; Pareigis et al., 2011), branding (Lindberg-Repo et al., 2009), service design (Teixeira et al., 2012; Edvardsson et al., 2010), service innovation (Berry et al., 2006a) and economic activity in general (see *experience economy*, Pine & Gilmore, 1999). The importance of customer experience as a tool for competitive advantage forms the basis of the popular phrase 'experience economy', used by Pine and Gilmore first in 1998, in which customers do not seek products or services, but rather seek experiences.

Marketing in the 1960s and 1970s was dominated heavily by a rational-cognitive conceptualisation of customers. This conceptualisation's theoretical underpinnings were derived from microeconomics theory, in which an individual is viewed as a rational individual seeking to maximise his or her utility under current resource constraints. However, several disciplines have challenged this assumption, and marketing needed to include the emotive-aesthetic aspect of consumption to stand along with disciplines like psychology in challenging the myth of a rational consumer (Arnould & Thompson, 2005). Unlike customers' rational responses to marketing stimuli, consumption experience emerged as a hedonic and subjective phenomenon. Hedonic responses (multisensory images, fantasies and emotional responses) add to the explanation of consumer behaviour facets, such as mental models, decision making and product usage (Holbrook, 2006).

Customer experience captured the spotlight and was put forth as the crucial marketing and consumer research concept in the early 1980s by scholars Holbrook and Hirschman. In their seminal article (1982), the authors drew research attention to the 'experiential aspects of consumption', in which the existing understanding of consumers as rational decision makers was criticised and questioned. The authors contrast the hegemonic (in the '1980s) logical information-processing view of consumer behaviour with an experiential view that emphasises the symbolic (in reverence to the ideas of Levy [1959]), hedonic and aesthetic aspects of consumption. The argumentation's core is based on the insight that consumers scarcely behave as the rational processing robots that microeconomic theory traditionally has assumed. Instead, consumers pursue 'fantasies, feelings and fun,' which point to 'irrational'

consumer behaviour tendencies. The authors also question the predominant, heavy emphasis on quantitative methods, which tend to favour the logical processing view of consumption. In addition, constructs such as consumer satisfaction were found to be lacking the experiential aspect of consumption, which is as important a driver of consumer behaviour as the rational view.

With the emergence of experiential consumption as an alternative to rational consumption, experiential consumption was positioned in the categories of 'extraordinary' and 'hedonic' consumption in the 1990s and early 2000s (see Abrahams, 1986; LaSalle & Britton, 2003). By its very name, *extraordinary consumption*, or *extraordinary experience,* indicated a consumption experience that is different from everyday, routine consumption experiences. Abrahams (1986) described an extraordinary experience as one that 'corresponds to more intense, framed and stylised practices' (Abrahams, 1986, p. 50), thereby focussing on specific types of practices compared with *ordinary* consumption. In their frequently cited article, Arnould and Price (1993) investigated extraordinary customer experiences and claimed that extraordinary experiences do not need to have pre-determined customer expectations and can occur with prior vague customer expectations. The authors investigated the characteristics of extraordinary experiences in a white-water river-rafting setting. This setting's defining feature is the hedonic and extended service encounter and the association of vague consumer expectations with the encounter's outcome. This is instrumental in developing more intense relationships among the service provider and consumer, as well as more time to absorb and reflect on the intense emotional aspects of experience.

Unlike the positive image painted by experience researchers about extraordinary experience, several scholars also highlighted the challenges associated with the nature of extraordinary experiences. Tumbat and Belk (2011) investigated tensions among consumers and service providers in the context of extraordinary experiences tied to commercial climbs up Mt. Everest. The article's central argument is that extraordinary experiences do not necessarily create a consumption community, lower social barriers, or evoke a sense of accomplishment of common goals, as has been the consensus in consumer research up to that time. Extraordinary experiences still can take place with divergent goals, few ties to a community and unlowered social barriers, as is exhibited in this ethnographic study.

Moving in tandem with the research development of extraordinary experiences, customer experiences also were described as *hedonic* in nature. Hedonic experiences were identified as experiences that primarily appealed to customers' sensory stimulation. Consumption in the context of art, music, dance, hospitality, food and drinks was marked with hedonic experiences. A new stream of marketing research, termed *experiential marketing*, emerged in

the late 1990s that focussed on developing differentiation for firms by providing extraordinary and hedonic customer experiences (Schmitt, 1999).

By the turn of the 21st century, customer experiences emerged as the sought-after currency of an *experience economy* (Pine & Gilmore, 1999, 1998), defined as the economic realm in which consumers buy and providers sell experiences, and described as the next evolutionary step for global economies. This follows from the economic development model of an agrarian economy leading to a goods economy, which, in turn, is displaced by a services economy, which has now been superseded by the experiences economy. It is interesting to note that the focus on experiences as the unit of economic exchange veils the dichotomy of goods vs. services, which has been the cornerstone of services marketing development. The authors assert that experiences need not only be created in hedonic settings, but that experiences are 'staged' whenever companies engage consumers in a memorable way. Thus, the focus of experiential consumption has shifted from hedonic (from the early '80s days of Holbrook and Hirschman) to *memorable experiences*. The authors prescribe five strategies for staging memorable experiences: giving experiences a theme (which drives design elements); providing positive cues for making consumer impressions; removing negative cues; providing carry-back memorabilia; and engaging all the senses in experiential consumption.

Recently, an emergent realisation occurred among customer experience scholars that experience need not be special and can occur in everyday and mundane contexts (Helkkula et al., 2018b; McColl-Kennedy et al., 2015; Meyer & Schwager, 2007). Satirically criticised as 'Disney Land' experiences (Carù and Cova, 2003), customer experience scholars have called for a normalisation of customer experiences so that they occur in 'normal, day-to-day' contexts (Edvardsson et al., 2005, p. 149). Thus, customers have experiences in every context, whether mundane and ordinary (Meyer & Schwager, 2007) or memorable and extraordinary.

The omnipresence of customer experience in every consumption context is argued strongly by Carù and Cova (2003) by re-examining the concept of customer experience against the backdrop of natural sciences (experiment experience), philosophy (self-transformation from experience), sociology and psychology (subjective and cognitive experience) and anthropology and ethnology (experience as a way of living). Delinking the concept of experience from something special (hedonic, memorable or of any special benefit to marketers), Carù and Cova (2003) describe an ordinary experience as one that 'corresponds to everyday life, routine, the past and the passive acceptance of events' (Caru & Cova, 2003, p. 275).

In recent years, several researchers have adopted a phenomenological conceptualisation of customer experience (Jaakkola et al., 2015; Vargo & Lusch, 2008; Meyer & Schwager, 2007)

leaning towards the emotional aspects of experiences and how they aid self-transformation for customers in everyday ordinary contexts, even at the cost of cognitive aspects. In a recent article on 'fresh perspectives on customer experience', McColl-Kennedy et al. (2015) recognise the omnipotence of customer experience and call for further research in everyday contexts of the holistic customer experience.

The aforementioned evolution of customer experience characterisation in marketing research is illustrated in Figure 3.

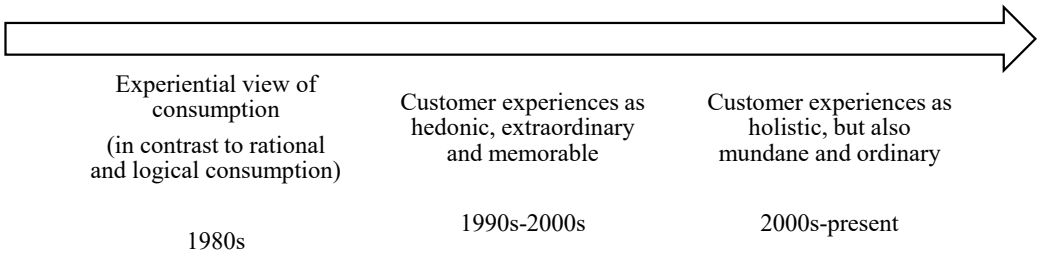


Figure 3 **Evolution of customer experience in marketing research**

In summary, customer experience research has its origins in the early-1980s call to move towards an experiential view of consumption. On this journey, customer experience has evolved from being extraordinary to ordinary – mundane, but holistic in nature.

2.3 Evolution of the service experience concept

We now narrow the review focus in marketing research to service marketing. We can observe that, concurrent with the acknowledgement and appreciation of experiential aspects of consumption, service research had established the disconfirmation paradigm in consumer evaluation of service quality. According to the disconfirmation paradigm, service quality is perceived by customers as the difference between customer expectations and actual experience of services (Parasuraman et al., 1988; Grönroos, 1984). However, the customer experience in this equation was conceptualised as the experience of the service offering during the defined service-encounter window (see 'Moments of truth', Normann, 2001). In the early 1990s, Arnould and Price (1993) attacked the disconfirmation paradigm and introduced the concept of 'extraordinary experiences'. One of this article's key contributions is the refutation of the disconfirmation paradigm, which is the dominant theoretical explanation for the linkage

between consumer expectations, service performance and consumer satisfaction. Traditionally, the disconfirmation paradigm states that consumer satisfaction is a net result of the divergence between consumer expectations and service performance. However, in the case of extraordinary experiences, consumers have vague expectations, and consumer satisfaction was not one final outcome, but evolved over the extended service encounter. Furthermore, the authors claimed that 'service encounter research increasingly recognises that service experience is inherently interpretive, subjective and affective' (Arnould & Price, 1993, p. 28).

Owing to its origins as experience of services in the service-quality models, service experience was established as the primary customer response to service offerings (Grönroos, 2007). In the early 1990s, extensive research was conducted on service encounters' nature and success factors (Bitner et al., 1990; Bitner, 1990), which led to the influential concept of servicescape. *Servicescape* is defined as the service environment, including surrounding space, that influences customers' service experience (Bitner, 1992). The main argument put forth was that a well-designed servicescape leads to a better service experience for a customer and, in turn, to higher perceived quality. The servicescape concept identified service experience as being dependent on customers' surrounding environment. This understanding has supported the field of service design, which aims to develop services from the customers' perspective and pays attention to service clues (Berry et al., 2006b) that are instrumental to customers having a good service experience.

Concurrent with the broadening of customer experience from extraordinary and hedonic to ordinary and mundane, service experiences also underwent a similar shift in understanding. In the early 2000s, there was a realisation that all services, not only extraordinary or hedonic services, are associated with service experiences. This shift in understanding corresponded with the treatise of the experience economy. Grönroos (2007, p. 12) reaffirmed his earlier claim on service experience being the precursor to perceived service quality by asserting that 'all services are perceived as either positive, neutral or negative experiences'. Extending the generalisation, Schembri (2006, p. 385) asserted that 'products, whether they are predominantly goods or services, are essentially experiences'.

In recent years, a growing consensus has developed that service experiences can occur even before a service encounter (Edvardsson et al., 2010) and also may extend to after a service encounter (Helkkula, 2011). The development of Service Logic (Grönroos & Voima, 2013; Grönroos & Ravald, 2011; Grönroos, 2008) and Service-Dominant Logic (SDL) (Vargo & Lusch, 2008, 2004) has directed the reconceptualisation of service from being a market offering to being a business logic. Concurrently, service experience understanding has been

broadened beyond service encounters to include the customer's everyday life and subjectivity, with an emphasis on the customer as the focus of service experience.

2.4 Research characterisations of service experience

Throughout its evolution, the concept of service experience has undergone paradigm shifts in its research characterisation. In her systematic literature review on service experience, Helkkula (2011) put forth three types of service experience characterisations: (a) service experience as a process; (b) service experience as an outcome; and (c) service experience as a phenomenon. However, these three characterisations did not originate from the same perspective and have different underpinnings depending on whether the service provider or customer perspective is the guiding focus.

Helkkula (2011) has outlined two characterisations of service experience that are oriented from the service providers' perspective:

As a process. The process characterisation of service experience has its origins in the servicescape concept put forth in the early 1990s (Bitner, 1992). This characterisation understands service experience as a process with modifiable elements that can be 'managed' by service providers so that customers can have an optimum service experience (Lovelock & Wirtz, 2007; Reimer & Kuehn, 2005). Such modifiable elements (architectural elements, Helkkula, 2011) enable service providers to manage service provision, customer interaction and technological elements of service (Pareigis et al., 2012).

The process characterisation of service experience finds wide acceptability in extant service innovation (see *process archetype of service innovation*, Helkkula et al., 2018a) and service design literature. In this characterisation, various elements of a service can be designed to elicit a favourable customer response, manifesting as customers' service experience (Dube and Helkkula, 2015; Helkkula 2011). Scholars have presented several techniques to design and manage service experiences, such as service blueprinting (Patricio et al., 2011), service engineering, hyper-reality (Edvardsson et al., 2005), experience room (Edvardsson et al. 2010), customer journey mapping (Zomerdijk & Voss, 2010) and customer experience clues management (Lindberg-Repo & Dube, 2015a; Berry et al., 2006b). In a similar vein, Kwortnik and Thompson (2009) have called for an integrative service- and operations-based management system, termed *service experience management*, to develop services that facilitate superior service experiences for customers.

As an outcome. The second characterisation of service experience from the service providers' perspective is service experience as an outcome. In this characterisation, service experience is a result and an evaluation of service performance (see customers' online buying experiences as a moderator for service failure and recovery, Holloway et al., 2005) with ramifications for other service management concepts such as customer satisfaction (Cronin et al., 2000), service quality (Grönroos, 2007, 1984), word-of-mouth (Klaus & Maklan, 2012), brand equity (Berry et al., 2006a) and competitive advantage (Verhoef et al., 2009).

Service experience as an outcome characterisation is popular in service management research, in which measurement of service experience is crucial for assessing service performance (Menon & Bansal, 2007).

2.4.1 Phenomenological characterisation of service experience

Both aforementioned characterisations of service experience – as process and as outcome – are tied to the concept of service as an offering provided by the service provider. However, this thesis focuses on the customer and evaluates service experience from the customers' perspective. In this view, service experience is understood neither as a process, nor as an outcome. Instead, service experience is characterised as a phenomenon from the customers' perspective (Schembri, 2006; Vargo & Lusch, 2008; Helkkula, 2011). In this phenomenological characterisation of service experience, the service offering recedes into the background, and customers' everyday context becomes the platform through which service experiences occur (Akaka et al., 2015). This thesis understands phenomenological service experience as the research characterisation that analyses service experience as a subjective, idiosyncratic and contextual phenomenon emerging from the customers' lifeworlds.

According to the phenomenological characterisation, service experiences are 'internal, subjective, event-specific and context-specific' (Helkkula, 2011, p. 375), entailing a subjective experience of time, with service experience occurring in the past, present and future (Carù & Cova, 2005). The internal aspect implies that service experiences are given meaning through customers' internal sense-making of the experience, which also leads to a subjective interpretation varying from individual customer to customer. Event and context specificity highlights the importance of customers' everyday lifeworlds, in which several events happen in customers' everyday lives within a multiplicity of contexts. Thus, the phenomenological characterisation of service experience brings the spotlight back to the customer as the subject of experience. The ways in which service will be experienced depend on the customer himself, not on the service provider or service as an offering.

Furthermore, in the phenomenological characterisation, service experience co-creation has both lived and imaginary experiences, fluid time frames (past, present and future experiences), individual and collective experiences, and service experiences that extend beyond the boundaries of service encounters (Jaakkola et al., 2015). Thus, the phenomenological characterisation expands the scope of service experience beyond the traditional understanding of service experiences from the service provider perspective.

2.4.2 Core definitions of service experience

Let us revisit a crucial question: What is a service experience? Several researchers have understood *service experience* to be a 'response' from the customer to various stimuli, or the service process itself.

Meyer and Schwager (2007, p. 118) define *service experience* as 'the internal and subjective response customers have to any direct or indirect contact with a company', thereby highlighting the response to be customer-dependent and internalised. In contrast, Sandström et al. (2008, p. 118) explain service experience as an external outcome: 'A service experience is the sum total of the functional and emotional outcome dimensions of any kind of service'. To elucidate further, Edvardsson et al. (2005, p. 151) cover different types of responses as service experience by postulating, 'We define a service experience as a service process that creates the customer's cognitive, emotional and behavioural responses, resulting in a mental mark, a memory'. Taking the evolution of the concept further, a recent definition by Jaakkola et al. (2015, p. 186) combined both the internal and external responses by stating, 'Service experience is an actor's subjective response to or interpretation of the elements of the service, emerging during the process of purchase and/or use, or through imagination or memory'.

Table 3 **Service experience characterisations and definitions by various authors**

Definition	Author/s
'We define a service experience as a service process that creates the customer's cognitive, emotional and behavioral responses, resulting in a mental mark, a memory'.	Edvardsson *et al.* (2005, p. 151)
'It is argued that services are dynamic experiences, co-constructed with customers in accordance with their views'.	Schembri (2006, p. 386)
'...the internal and subjective response customers have to any direct or indirect contact with a company'	Meyer and Schwager (2007, p. 118)
'A service experience is the sum total of the functional and emotional outcome dimensions of any kind of service'.	Sandström *et al.* (2008, p. 118)

'The term "service experience" refers to the customer's personal experience of the service process as a result of interactions with the service organization and its frontline staff, facilities and technology'.	Edvardsson *et al.* (2010, p. 313)
'...individual experiences – which are usually internal, subjective, event-specific and context-specific'	Helkkula (2011, p. 375)
'Service experience is an actor's subjective response to or interpretation of the elements of the service, emerging during the process of purchase and/or use, or through imagination or memory'	Jaakkola et al. (2015, p. 186)

Other than a response, service experience is also understood as the interpretation and sense-making of the service process itself. Since experiences are interpretations, they are subjective and contextual: 'individual experiences – which are usually internal, subjective, event-specific and context-specific' (Helkkula, 2011, p. 375). As an interpretation of the service process, Edvardsson et al. (2010, p. 313) define service experience as 'the customer's personal experience of the service process as a result of interactions with the service organization and its frontline staff, facilities and technology'.

2.5 Use experiences

Within the field of service marketing, service use has been used as a concept to refer to service consumption for value creation (Fisk et al., 1993; Payne et al., 2008; Grönroos & Voima, 2013). In the understanding of services as processes, service use implies customer participation (active or passive) in these processes to 'consume' services. Only by 'using' services can customers derive benefits from them, giving rise to the term *value-in-use*. Furthermore, the customer experience in service use is referred to as use experiences (Solomon et al., 1985; Moeller, 2010).

From the service provider's perspective, service use may entail two scenarios. The first is service use in service encounters, in which customers and service providers jointly interact (see joint sphere, Grönroos & Ravald, 2011). In the second scenario, customers may have service use in a 'sole value-creation sphere' (Grönroos & Ravald, 2011), which occurs in the customer's world without service providers' participation. Therefore, the term 'use experiences' may refer to customers' experiences of service use in both scenarios.

On the other hand, from the customer's perspective, service use and use experiences are analysed regardless of the service provider. In this view, customer activities (Mickelsson, 2013) that are instrumental in value creation characterise service use. These include both joint interaction activities facilitated by service providers, as well as those activities that fall beyond the service providers' scope. In a similar vein, going beyond traditional service-encounter boundaries, service use may be extended to pre-purchase and post-purchase scenarios (Hellén & Gummerus, 2013).

This thesis adheres to this expanded scope of service use and understands service use to encompass all activities that lead to value creation. Therefore, in addition to current and factually observable use, use experiences also include customer experiences from both the past and future, as well as mental or imaginary service use. It should be noted that this thesis uses the term 'use experiences', not 'user experiences', to highlight experience in the context of service use.

2.6 Summary

This chapter presented a theoretical review of the research concept, i.e., service experience.

Service experience's origins lie in both customer experience, as well as in service marketing research. As a sub-theme of customer experience, service experience is a critical phenomenon that impacts other concepts in the marketing field. Several characterisations of the customer (service) experience phenomenon have been made, from extraordinary and hedonic experiences to the current understanding of ordinary and mundane experiences. The phenomenon of experience also has been analysed in research domains other than marketing, and one of the key characterisations of experience is transformation experiences that result in customer transformation and learning (Frontczak, 1998).

In service marketing research, service experience initially was characterised as customer experience of service offerings. From this initial characterisation, the concept has evolved over the years into three characterisations of service experience: (a) a process; (b) an outcome; and (c) a phenomenon. Among these, both 'a' and 'b' are characterisations from the service provider's perspective, whereas this thesis focuses on characterisation 'c' from the customers' perspective. This thesis defines *service experience* as the customers' phenomenological experience of a service. Here, *service* means facilitation of value-creation processes for customers by service providers.

3 METHODOLOGY AND PHILOSOPHICAL ASSUMPTIONS

> 'It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts'.
>
> –Sherlock Holmes, Sir Arthur Conan Doyle, *A Scandal in Bohemia*, from *The Complete Adventures and Memoirs of Sherlock Holmes*

What is research? *Research* is a systematic investigation conducted to advance knowledge. However, a research investigation is conducted with certain philosophical and research assumptions that determine its direction and possible outcomes. In this section, I will present and analyse three philosophical assumptions of ontology, epistemology and methodology for my research project. Furthermore, I also put forward my philosophical positioning for this research project *vis-a-vis* a larger canvas of various assumptions.

This section is structured as follows: First, *phenomenology* is introduced to the reader as the philosophy for this research. Second, a brief description of phenomenology's evolution as a philosophical tradition is presented. Third, in consecutive order, the three philosophical assumptions of ontology, epistemology and methodology are discussed. Fourth, a discussion section will highlight my overall philosophical positioning. Fifth, the empirical context of this research – smartphone apps – is described, then research methods in the field are described in detail to close out the section.

3.1 Phenomenology as a philosophical approach

> 'For phenomenology, the world that appears to us, be it in perception, in our daily concerns or in our scientific analyses, is the only real world' (Zahavi, 2008, p. 678).

Taking customers' firsthand experiences as the starting point and the unit of analysis, this research follows phenomenology both as an overarching philosophy, and as a methodology. Zahavi (2012) defines *phenomenology* as 'a philosophical analysis of different modes of appearance and related hereto as a reflective investigation of those forms of understanding and structures of experience that allow the objects to show themselves as what they are' (p. 115). Thus, phenomenology is the study of conscious experiences as experienced from the subjective perspective of the research subject. It should be noted that phenomenology does not concern itself with unarticulated or unconscious experiences. Instead, the question that it

attempts to address is: 'What is the meaning, structure and essence of the lived experience of this phenomenon for this person or group of people?' (Patton, 2002, p. 104)

The central construct in phenomenology is *phenomenon*. What is the phenomenological understanding of the concept of phenomena? Or, in simpler terms, what are phenomena according to phenomenologists? In the phenomenological tradition, a phenomenon is what an object *apparently is* to the subject and how an object manifests itself to the subject. It is a *mode of givenness*. (Zahavi, 2008, p. 675). In this research, smartphone apps are conceptualised as phenomena in the way that they manifest themselves to customers through their app experiences. Therefore, this research adopts phenomenology as both a philosophical, as well as a methodological, approach.

It is worthwhile to describe the core concepts in my research project and their associations with phenomenological concepts. In my research, the phenomena that my respondents (research subjects) experienced were smartphone apps. The empirical data comprise customers' conscious app experiences, which I also construe as my unit of analysis. Furthermore, the analytical methodology is hermeneutical, which focuses on the ways in which my subjects interpret their own app experiences, in part and in whole. The following table illustrates my research concepts.

Table 4 **Core concepts in the research project**

Phenomenon	Smartphone apps
Subject	App users
Data	Conscious experiences
Unit of analysis	Individual first-person account of experiences
Method of analysis	Hermeneutical

3.2 Ontological assumptions – Social Constructionism as ontological foundation

> 'What is defined or perceived by people as real is real in its consequences' (Thomas and Thomas, 1928, p. 572).

Ontology refers to the fundamental query about reality: What is real and should be researched? The ontological question has two primary answers – either the reality to be investigated exists *as is*, independent and external to the subject, or reality is the outcome of individual subjective consciousness. Burrell and Morgan (1979, p. 1) capture these two

extreme positions in its definition, asserting that it is a question of 'whether "reality" is of an "objective" nature or the product of individual cognition. In other words, whether "reality" is a given "out there" in the world or the product of one's mind'.

This research project adheres to phenomenological sociology, in which subjects perceive reality through conscious experiences of their lifeworlds. Furthermore, the perception of lifeworld is also social in nature, implying the existence of other subjects and consciousness levels that share lifeworlds. Owing to this interpretive and socially produced version of reality, Social Constructionism (SoCo), forms the ontological basis for my research. The constructionist ontological approach is focussed on uncovering the processes that comprise the understanding of social reality, rather than social reality itself. In a similar vein, this thesis explores customers' understanding of their experiences using smartphone apps, rather than the technical aspects of apps themselves.

Phenomenology is interested in the experiences as such; it does not seek to provide an explanation for the origins or causes of experiences (Overgaard and Zahavi, 2009; Merleau-Ponty, 1945/2005). SoCo adopts a similar stance in criticising the existence of an objective reality. This ontological view fits my research approach, in which I contend that customers understand apps through their experiences. Thus, apps as service are not given per se; their service is dependent on the ways in which customers experience them. This stance is critical of the traditional services understanding, in which companies present offerings as services, regardless of customer experience of so-called services.

According to the social constructionist view, language has a performative role and is a vehicle for social action. One of the key findings in my research project supports the vital role of language, as it has been observed that app users also construct meanings from their experiences when they talk about them. Thus, customer experiences of apps are interpreted consciously when customers talk about them, a view in line with SoCo ontology.

3.3 Epistemological assumptions – experiences as phenomenological evidence

Epistemology is the 'study of the criteria by which we can know what does and does not constitute warranted, or scientific, knowledge' (Johnson & Duberley, 2000, p. 3). In my research, I treat *first person interpretations of personal experiences* as *knowledge*, on which my research claims are based. This underlies a phenomenological epistemology, where personal subjective experiences qualify as evidence and data for research investigations.

Lifeworld – the epistemological canvas

In phenomenology, all experiences (as epistemological evidence) occur in the lifeworld of the subject. *Lifeworld* is characterised as the subject's everyday experienced world, which is different from the exact and precise scientific world (Sokowlowski, 2000). The subject interacts with other subjects, or other things, in his or her own lifeworld, and different phenomena are manifested in the lifeworld. For my research project, the subject's lifeworld is the everyday life of the customer using smartphone apps. For example, when one checks the weather through a weather app while travelling on a bus, checks stock prices or news at work, or plays Angry Birds with kids, all these experiences happen in the customer's everyday lifeworld.

There are two approaches to intersubjectivity (Sokolowski, 2000, pp. 152–154): It either can be viewed as experiencing the common social world, where it is acknowledged that other subjects have other experiences as well, or it can be viewed as the subjective experience of other subjects themselves. In this research, intersubjectivity is manifested in the ways that smartphone app customers can understand that the same apps can be used in different ways, or that different people have different motivations and experiences with apps.

3.4 Methodological assumptions

Apart from being understood as a philosophical approach, phenomenology also guides the hermeneutic methodology in my research project. Phenomenology involves a series of steps (Langdridge, 2004) that are essential to understanding subjects' firsthand experiences. Phenomenology essentially is hermeneutical, i.e., it aims to understand the ways in which the subjects themselves interpret their experiences. This hermeneutical understanding proceeds first in parts, then as a whole.

Phenomenology With Hermeneutic Methodology – Key Concepts

Phenomenology falls under the broader umbrella of hermeneutics, which rejects the Cartesian dualism of subject and object, and treats individuals' social world as a unified entity. To extend the argument to my research, smartphone apps and their users are not two separate entities, but rather one. Also, the phenomenon and its experience are not separated. Instead, the 'subjects' perceive the phenomenon through their experiences. Furthermore, in phenomenology, it is essential to arrive at an interpretation of the meanings that subjects assign to their experiences. Thus, phenomenology, as an interpretive social science, is unavoidably hermeneutical (Little, 1991; Thompson et al., 1990).

One of the key concepts in phenomenology is *intentionality*, which implies that subjects' consciousness always is directed towards something, i.e., they always are experiencing something (a phenomenon). There are no unattached experiences. Thus, in my research project, smartphone customers do not merely have experiences, but rather have service experiences from apps. Customers derive experiences of the service they get from apps, and in this way, experience apps as phenomena.

For the researcher, it is essential to *bracket* or attain *epochè* in analysing subject experiences (Langdridge, 2004). This entails suspending all prior knowledge and beliefs about the research problem, and analysing respondents' experiences from scratch. Zahavi captures bracketing as a phenomenological methodological tool in the following prescription: 'Phenomenology… seeks to reflect on the conditions of possibility of experience and cognition, and it suspends our natural and everyday metaphysical assumptions (in particular, our assumption about the existence of a mind-independent world) in order to investigate them critically' (Zahavi, 2008, p. 663).

The analysis method for my research project follows the hermeneutic methodology. First, I attempt to read through the experience narratives without any prior conception or bias. Second, I aim to interpret individual app experiences' contextuality and intentionality through individual respondents' lifeworlds. This interpretation is recursive in nature, i.e., I go back and forth hermeneutically in understanding the motives and effects of app experiences in individual respondents' lifeworlds.

Summary

In my research project, phenomenology is chosen as a suitable philosophical research approach. Social constructionism forms the ontological foundation of phenomenological sociology, which is the stream of phenomenology within which I philosophically position my research. I follow the hermeneutic methodology to interpret customer app experiences, in which customers perceive apps through their experiences.

3.5 Context of research: Smartphone apps

In this section, I will describe the empirical context of this thesis – smartphone apps. The section begins with a brief introduction and conceptualisation of smartphone apps, followed by a succinct review of mobile services as research precursors to smartphone apps.

Apps, or applications, are software programs that are designed to run on specific operating system platforms on digital devices (Dube & Helkkula, 2018, 2015). With the fast evolution in digital computing technology, more and more digital devices with computing capabilities are developed and launched in the market. One of the defining features associated with digital devices running apps is 'smart technology'. Smart devices possess extensive computing powers and are equipped to sense and respond according to users' contexts (Gummerus et al., 2018). Apps are used on such smart devices and are the service platforms for customer use.

Apps are being developed at a breakneck pace, and today, they are used for customer interfacing with a host of devices, including smartphones, tablets (such as iPads), laptops, smart wearables (e.g., smart-watches) and household machines that interact with each other through apps (see Internet of Things [IoT], Gubbi et al., 2013). Apps are developed for both stationary and mobile devices. Stationary device apps include those that are used with devices such as desktops and IoT-enabled stationary devices (e.g., smart-refrigerator). A specific category of apps is termed mobile apps, which work on smart-devices that are mobile in nature, such as smartphones, tablets and wearable devices. The most popular and one of the first smart devices that customers can use individually is the smartphone. Smartphones were the first smart-devices when they were developed in 1992. Since then, most apps have been developed for smartphones, and customers use smartphone apps the most in their everyday lives.

The following figure shows different types of apps.

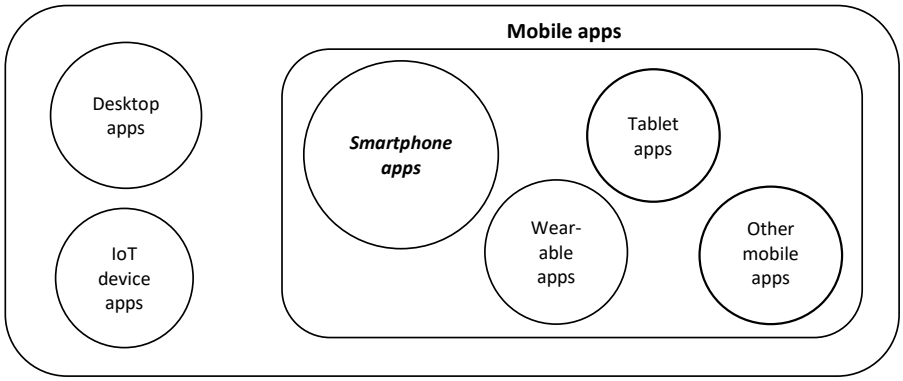


Figure 4 **Types of apps**

Apps from major operating system platforms such as Apple iOS, Google Play and Windows follow a 'freemium' revenue model. In this model, the customer has the option to download and use either (a) a free version of an app (that does not require any payments to the app

developer) or (b) a premium app with added features and functionality at an additional cost (requires payments to the app developer). The model is based on an effort to engage customers with the stripped-down version of an app (free version), then offer an upgrade to the paid version (premium version) for more enriching graphics, use options and other capabilities. It should be noted that the carrier charges remain the same (telecom or broadband Internet provider) regardless of the free or paid version of the app downloaded.

The freemium revenue model is augmented by two additional revenue-generating streams for app developers (Ghose & Han, 2014). The first is in-app ads. They allow apps to host ads from other apps or companies, generating ad revenue for the host app developers. Such ads generally are done in the free version of the app, in which customers have the option to upgrade to an ad-free, premium, paid version of the app. The second additional revenue stream is in-app purchases that app developers mostly offer themselves (Ghose & Han, 2014). When in-app purchases are offered, the host app either is offered as a free app or the one-time download price is considerably low, as in-app purchases contribute to the additional revenue. Such purchases allow customers to have a more enriching experience, e.g., in gaming apps, as the free versions might offer one or two basic avatars of the app-player, whereas customers have the option to buy enhanced-avatar versions with better costumes, weapons or other capabilities for playing the game. Regardless of the revenue model, mobile apps' revenues globally were estimated to be approximately USD $462 billion in 2019 (Statista, 2019c).

Smartphones have given customers the power to access apps as service platforms and derive service anywhere and anytime. Such enhanced flexibility and ease of use are a unique development in service provision for customers. Consequently, this thesis employs apps that are specifically developed for smartphones and are termed smartphone apps. Thus, this thesis delimits itself to the empirical context of smartphone apps only.

3.5.1 Mobile services as precursors to apps

Mobile services, or m-services, are the precursors to contemporary mobile apps. Network operators often provide mobile services, which include several value-added services (VAS) such as news, ringtones, chat, geo-location services, gaming, banking and payment services, among several others. Gummerus and Pihlström (2011, pp. 1–2) define *mobile services* as 'content and transaction services that are accessed and/or delivered via a mobile handheld device (e.g., PDA, mobile, cellular or smartphone, GPS, etc.) based on the interaction/transaction between an organisation and a customer'.

The advent of mobile services in the 1990s was a revolution in terms of service delivery, as the new service channel (mobile) was closest to and most integrated with customers' everyday lives. In the beginning of the 21st century, mobile services were still in the nascent stage, but the superior advantage of mobility associated with service delivery (delivering service close to the customer – in the mobile phone in his pocket) was widely appreciated (Leppäniemi & Karjaluoto, 2005; Balasubramanian et al., 2002). Reputed business and political magazine *The Economist* published a special report in October 2001 highlighting the differences and benefits associated with using mobile phones for service delivery. The report highlights four benefits: 'If you have a mobile phone, the network operator knows who you are, where you are, can direct you to the portal of its choice and can charge you money. This is a very different world from that of the fixed Internet' (*The Economist*, 2001).

A quick extension of the above claim in today's mobile world of apps would reveal that the last two benefits for companies, i.e., to restrict (direct) the user to the portal of choice and to charge money mostly have been eroded. The explosive growth in the freemium model for apps (large number of free and premium paid apps) and the negligent cost of using any particular app to the user (as data charges from mobile broadband or WiFi) radically have altered the business model and customer experience with apps in the mobile world.

Service managers traditionally have conceptualised and used mobile services as marketing channels (Gummerus & Pihlström, 2011). In managers' mental models, mobile services can be used as marketing channels through which service is 'delivered' to customers (Rydén et al., 2015). It should be noted that in this thesis, although apps theoretically are viewed as descendants of mobile services, they are not empirically investigated from the service providers' mental-model perspective. Thus, they are not conceptualised as marketing channels or mobile services as market offerings, but rather are conceptualised as service platforms that are embedded deeply into customers' everyday lives.

Returning to mobile services, as the ancestor of smartphone apps, the key differences between the two lie in flexibility, ease of use and development and earnings model. The following table summarises the key technical and business-attribute differences between mobile services and smartphone apps.

Table 5 **Mobile services vs. smartphone apps attributes**

	Mobile services	**Smartphone apps**
Components	Content provider (service provider), channel (telecom operator)	Content provider (app developer), channel (telecom operator/WiFi), platform (operating system of smartphone)
Devices	Cell phones, PDAs, smartphones	Smartphones, tablets, wearables, smart devices (Internet of Things)
Screen size and graphics	Smaller screen size, simpler graphics	Large screen size with advanced graphics
Channel	GPRS, EDGE, 3G, WiFi	3G, LTE (4G), 5G, WiFi
Content	Mobile service providers (mostly companies)	App developers (both companies and individual developers)
Platform	Fragmented, depends on mobile phone	Operating-system-based platforms, e.g., Apple iOS, Google Play (Android), Windows Apps
Revenue model	Content charges, carrier charges, revenue sharing with premium services, reverse billing	Freemium model (free and paid/premium apps), ads within apps, purchases within apps
Development and ownership	Largely companies as mobile service providers	Companies (branded apps), individuals (C2C apps)

3.5.2 Conceptualisation of smartphone apps as service platforms

Scholars such as Grönroos and Gummerus (2014) have put forth the concept of a value co-creation platform that represents the co-creation processes between service providers and customers. Extending the concept to service experience, Grönroos argues for a co-experiencing platform (Jaakkola et al., 2015) that facilitates the experiential emergence and determination of value-in-use. Borrowing the concept of platform from these conceptualisations, this research conceptualises smartphone apps as service platforms.

Consequently, this research conceptualises smartphone apps as *service platforms through which customers experience facilitation of value-creation processes*.

It should be noted that apps themselves are neither service experiences nor service experience platforms. Customers create (or co-create) their own service experiences through the direct or indirect usage of apps. The service experience emerges in the customers' experiential realm in which the customer is the subject and centre of experience, not the apps. This distinction between service platforms and service experience becomes clearer with the example of a customer who doesn't use apps, directly or indirectly. For such a customer, apps remain potential service platforms, but they cannot facilitate service experiences for the customer.

3.6 Research methods: Description of empirical data

This thesis investigates customers' phenomenological service experience of smartphone apps. The phenomenological approach to service experience analyses service experience as a phenomenon that is situated in the customer lifeworld (Helkkula et al., 2018b). The customer lifeworld is subjective, contextual and unique for each individual customer (Heinonen & Strandvik, 2015). Therefore, to capture the phenomenological service experience, customers' own interpretation of their experiences is the starting point for this research.

The unit of analysis in this thesis is an individual customer's service experience of smartphone apps. Such experiences are not restricted to an individual app. Instead, they comprise use experiences of several apps as used and experienced by customers in their own lifeworlds. Consequently, it should be noted that the unit of analysis is not any specific app-use experience.

Thompson et al. (1989) claim that phenomenology (specifically, existential phenomenology) is an advisable research methodology for researching consumer experiences. Existential phenomenology proposes that experience is contextual, and the approach is convenient when the aim of empirical research is to obtain thematic descriptions of consumer experiences (Thompson et al., 1989). To capture customers' self-interpretation of their own app experiences, phenomenological narratives form suitable empirical data for this thesis. Narratives form fruitful empirical data because they divulge the ways in which the respondents interpret their own experiences (Helkkula & Pihlström, 2010; Shankar et al., 2001). Consequently, this thesis bases its findings on the empirical data of customers' self-written diary narratives and phenomenological semi-structured narrative interviews.

3.6.1 Description of empirical studies

The research design employed for this thesis comprised a) a pilot study and b) a main study. In addition, c) a third source of empirical data included collection and analysis of app store descriptions of smartphone apps that respondents experienced.

In the pilot study, respondents were asked to write auto-narratives of their service experience with a particular smartphone app. The auto-narratives were written in a research diary specifically provided for this exploratory experimental study. In the main study, semi-structured narrative interviews were conducted in which respondents narrated their service experience with multiple apps in their everyday lives.

The scope of app use was restricted to one particular app in an experimental setting in the pilot study, whereas the main study included respondents' descriptions of service experience of multiple apps in their everyday lives. This research methodology was helpful in a) first gaining a deep understanding of app service experiences in a controlled experimental setting with one app, and b) expanding on the initial findings by conducting interviews about service experience of multiple apps in the natural settings of respondents' everyday lives.

For the pilot study, respondents used the BBC World News app to write their service experience in the form of diary narratives. The BBC World News app is available on three leading app platforms: Apple's App Store; Android's Google Play; and Nokia's Ovi Store. All three app versions are designed to be utilised by users globally outside the United Kingdom (BBC 2013a, b). The app uses features that include the ability to watch news videos, read news in text, listen to BBC radio (in multiple languages) and become a free-lance journalist by sending news content (in the form of text and video/audio recordings) to the BBC (BBC, 2013a, 2013b).

For the main study, respondents narrated their service experiences with several apps. The narratives comprise respondents' self-interpretations of their everyday experiences with several apps. The apps mentioned in the narratives include several popular apps (both in free and paid versions), such as WhatsApp, Candy Crush Saga, Angry Birds, CamScanner and Facebook. All these apps also are available in the three major app versions (Apple App Store, Google Android and Nokia Ovi). For a more detailed description of the types of apps included in the main study, please refer to the literature review on smartphone apps. Table 6 shows the three-phase research design for this thesis.

The third source of data, i.e., app-store descriptions of apps that respondents experienced in the main study, was self-collected by the researcher. The purpose of this data triangulation

was to gain insights into app developers' expectations of experiences that customers may have with their developed apps.

Table 6 **Three-phase research design with pilot and main study phases**

Phase	Method	Type of service experiences	No. of apps experienced	Type of respondents	No. of respondents
Pilot study	Diaries (auto-narratives)	Experiences in an experimental setting – identifying themes	One app	Homogeneous sample	7
Main study	Interviews (semi-structured, narrative-based)	Everyday life experiences – identifying and further analysing themes	Several apps	Heterogeneous sample	23
App store descriptions	Self-search	App developers' expectations of customers' experiences	Several apps	-	-

Pilot Study: Diary auto-narratives of service experience of one app

The first phase of data collection was conducted using a diary research method, as the aim was to explore service experience of apps in an experimental setting. The diary research method is one of the most popular qualitative research methods, in which the aim is to capture a phenomenon by documenting it through its process elements 'as it happens' (Patterson, 2005). In addition, the diary research method captures the unveiling of a phenomenon (in this thesis, service experience) and provides an in-depth understanding in 'real time' (Bolger et al., 2003), although the method is restricted, as it yields a comparatively narrow collection of narratives (Leipämaa-Leskinen, 2011).

In the exploratory stage, the diary research method may be combined with purposive sampling of respondents (Siemieniako and Kubacki, 2013). Therefore, the pilot study purposely sampled seven business master's students from the Indian Institute of Foreign Trade in New Delhi, India. These respondents' auto-narratives were recorded in 'app diaries' in August 2012. The chosen respondents were selected using two criteria:

1. All seven respondents were aware of and had previous experience with the BBC through watching BBC news or TV documentaries, or visiting the BBC website.

2. All the respondents possessed smartphones, but none had heard of, or used, the BBC World News app before. Thus, the app was a new service for the respondents that they experienced specifically for purposes of this pilot study experiment.

The BBC World News app is a multi-engagement app that offers several engagement opportunities for users. Through the app, users can read news, watch videos, listen to radio news and send self-documented news stories (with recorded video/audio) to the BBC (BBC 2013a, 2013b). Thus, the app facilitated a rich service experience for users, as it offered several value-creation opportunities for them. The app offered additional engagement by providing multiple reasons to use the app several times daily, as the study period coincided with London's Summer Olympics in 2012. Table 7 shows the respondents' details, smartphone brands and models, and app platforms that were used to download and use the app for the experiment.

Table 7 **Study details for pilot study of empirical research**

Number	Gender	Phone Brand	App Platform
R1.	Male	HTC Explorer	Android
R2.	Female	iPhone 4.0	iOS
R3.	Male	BlackBerry 8520	BlackBerry
R4.	Male	HTC Wildfire	Android
R5.	Male	Nokia N8	Symbian
R6.	Male	Sony Xperia Neo V	Android
R7.	Male	Samsung Galaxy S2	Android

The free BBC World News app was used for the experiment that was downloaded and installed by each respondent before the start of the experiment. The respondents were instructed to use the app at least once daily over a period of seven days (one week) in August 2012. The respondents were asked to write narratives in their 'app diaries' (research diaries provided to respondents) about their service experience with the BBC World News app every day of the experiment. It should be noted that no specific guidelines were given on the topics or themes to focus on when writing the experience narratives. The respondents were encouraged to scribble anything related to their app experience and not restrict topics to mechanical descriptions of app features. This ensured that the respondents interpreted and recorded their service experience with the BBC app in relation to their lifeworlds (Heinonen & Strandvik, 2015; Helkkula et al., 2012a) and were not constrained to app features. The diary auto-narratives were recorded in English text, and the app diaries were collected after the experiment with assurances to the respondents that their narratives would be analysed and reported anonymously.

After the experiment, the auto-narratives were hand-coded into individual Word documents for each respondent. The pilot study's key aim was to gain an in-depth understanding of service experience of apps in an experimental single app setting. To gain a deep understanding, each Word document was read and interpreted twice, and the emergent themes about service experience with a single app were recorded inductively. Subsequently, these emergent themes from each respondent were compared with other respondents' themes to gain both an individual, as well as collective, understanding of respondents' service experiences.

Main study: Semi-structured narrative interviews on service experience of multiple apps in everyday life

The main study for this thesis included semi-structured narrative interviews with respondents concerning their everyday life service experiences with multiple apps in natural settings, unlike the pilot study, in which respondents wrote app diaries on their service experience of one particle app (BBC World news) in an experimental setting.

Narrative interviews were used in the main study to interpret respondents' individual experiences with multiple (more than one) apps contextualised in their everyday lives (Stokes & Bergin, 2006). To gain an understanding of respondents' service experiences in the natural settings, narrative interviews were chosen as the most suitable method for empirical data (Goulding 2005, 1999; Thompson, 1997). All respondents used several apps in multiple contexts in their everyday lives, including for gaming, navigation, e-mailing and social media engagements. The main study was conducted in November-December 2013 in India with 23 respondents who represented diversity in ages, genders, professions and family status.

Semi-structured interviews were employed to help respondents narrate their service experiences without any structural interviewing hindrances (Silverman, 2013). This enabled respondents to narrate their experiences not in a question-answer format, but rather in a conversational interviewing style. The semi-structured interview format implied that a written interview guide was developed beforehand, and the interviewer facilitated conversations on key themes concerning everyday app service experiences (Ayres, 2008), including topics such as brand and type of smartphone owned, app platform (iOS, Android or Ovi) used, number of apps on the respondent's phone, number and name of apps used at least once every day, contextual settings in which apps are used, individual and social (group/family) app experiences and respondents' changing emotions, feelings and feedback on their ap experiences.

Selection of respondents followed a random sampling mechanism in which ordinary users of smartphone apps were selected for narrative interviews. It was ensured that respondents for the main study were chosen from the same geographical area (Northern India) as respondents for the pilot study. This was done to minimise differences between language, app popularity and technological advancement levels. The chosen respondents were bilingual, with Hindi as the mother tongue and English as the second language. However, several respondents opted to conduct their narrative interviews in Hindi, as they found it more suitable for describing their app experiences. The interviews conducted in Hindi were translated by the researcher and verified with another bilingual Hindi-English speaker. Each interview lasted between 16 and 43 minutes.

During conversations in the semi-structured interviews, the respondents interpreted and narrated their own everyday service experiences with several apps that they use in multiple contexts. In the main study, several different apps were included in respondents' narratives about their everyday app experiences, unlike the pilot study, in which a single app (BBC World News) was used for empirical data collection. The respondents in the main study narrated their app experiences with different types of apps, such as news, email, games, social media, health/fitness, music, transportation, navigation, communication, weather, information and entertainment. Table 8 shows a comparative description of different types of apps in the main study that the respondents experienced in their daily lives.

Table 8 **Types of experienced apps by respondents in the main study**

Type of app	Description	Phase II apps
News	Apps that share news with users through text, audio, video and photos	*Times of India, NDTV, Hindustan Times, BBC World News*
Email	Apps offering email service	*Gmail, Outlook*
Games	Gaming apps (single- and multi-player)	*Angry Birds, Candy Crush Saga, Fruit Ninja, Sudoku, Angry Granny, Ant Smasher*
Social media	Apps that facilitate use of social media sites	*Facebook, LinkedIn*
Health/fitness	Apps focussing on health and well-being	*Pulse Reader, Runtastic Pedometer*
Music	Apps offering music as a service	*Saavn (music streaming)*
Transportation	Apps offering real-time information on public transport	*Train running status (live) app*
Navigation	Apps offering GPS and cartographic service	*Google Maps*

Communication	Apps using voiceover IP (VOIP) and other similar technology to offer audio and video communication	*Skype, Whatsapp*
Weather	Apps offering real-time information on weather based on customers' location and time	*Yahoo weather app*
Information	Apps providing information about different topics such as movies, recipes et al.	*Wikipedia, Bollywood Hungama (movie reviews), Tarla Dalal recipes*
Entertainment	Apps offering entertainment as a service to customers through videos, interactive graphics et al.	*Talking Tom, YouTube*

After the interviews, they were translated (from Hindi to English, if necessary), then transcribed for each respondent in a separate Word document. The interviews were first read and analysed individually. In the next step, the interviews were read again, and the emergent themes were noted for each respondent. These themes were cross-analysed among different respondents with the help of colour coding. Table 9 shows the details of the respondents included in the main study of the empirical research.

App-store descriptions: Self-collected app-store descriptions of apps experienced by customers in the main study

The researcher self-collected the app-store descriptions by visiting the two major app stores, i.e., Apple and Google. This data's purpose is to understand app developers' expectations of experiences that customers may have by using their apps. These expectations were compared and matched with actual customer experiences to explore the gaps between them.

Table 9 **Study details for main study of empirical research**

Number	Gender	Age	Phone Brand	App Platform	Education	Profession	Family Situation
R1.	Male	20	Samsung Galaxy Grand	Android	Bachelor's (pursuing)	Student	Single
R2.	Male	29	Google Nexus 4	Android	Bachelor's	Innovation Manager (Manufacturing)	Married
R3.	Female	26	Samsung Galaxy S3	Android	Master's	Industrial Designer	Engaged
R4.	Female	60	Samsung Galaxy Note	Android	Bachelor's	Homemaker	Married, Grandmother
R5.	Female	31	iPhone 5	iOS	Bachelor's	IT Engineer (Mobile UI Designer)	Single, Mother
R6.	Male	35	Samsung Note 2	Android	PhD	Manager (Environmental)	In a relationship
R7.	Female	26	Sony Xperia Neo	Android	MBA	Manager (Manufacturing)	Single
R8.	Male	33	Xolo Q800	Android	Master's	Lecturer (Math)	Married, Father
R9.	Male	30	Nokia Lumia 910	Windows	Master's	Computer Programmer	Married, Father
R10.	Male	17	Samsung Galaxy Ace S5830I	Android	School	Pupil	Single
R11.	Male	16	Samsung Galaxy Mega	Android	School	Pupil	Single
R12.	Male	15	Samsung Galaxy Grand	Android	School	Pupil	Single
R13.	Female	42	Micromax Canvas	Android	Master's	Research Officer	Married, Mother
R14.	Female	38	Samsung Galaxy Grand	Android	Master's	Lecturer	Married, Mother
R15.	Male	27	Samsung Galaxy	Android	Bachelor's	Assistant Teacher	Single
R16.	Male	24	Samsung Galaxy 4, Akash Tablet	Android	Bachelor's	Assistant Teacher	Single
R17.	Male	23	Karbonn A4 Plus	Android	Bachelor's	Undergoing teaching training	Single
R18.	Male	25	Samsung Galaxy 4	Android	Bachelor's	Undergoing teaching training	Single
R19.	Female	24	Nokia Lumia	Windows	Master's	Undergoing teaching training	Married
R20.	Male	71	Karbonn Titanium, iPhone 4	Android, iOS	Bachelor's	Retired Pharmaceutical Sales Manager	Married, Grandfather
R21.	Male	29	Samsung gt19000	Android	MBA	Business Journalist	In a relationship
R22.	Female	58	Micromax Phone, Samsung Galaxy Tab, Samsung Phone	Android	Master's	Senior Lecturer	Married, Mother
R23.	Female	28	iPhone 4S	iOS	Masters	Researcher	In a relationship

4 SUMMARY AND CONTRIBUTION OF EACH PAPER

In this section, I present brief summaries and contributions from each of the three papers included in this thesis. Each paper addresses a particular research question and helps achieve the overall research purpose of the thesis. Two of the papers are published in peer-reviewed outlets (a journal and a research book), whereas the third paper has been presented at a research conference.

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Table 10 **Papers in the thesis**

	Overall Thesis	Paper 1 (Empirical, published)	Paper 2 (Conceptual, published)	Paper 3 (Empirical)
Title	*Service Experience in Customers' Everyday Contexts: An Investigation of Customers' Experiences from Using Smartphone Apps*	*Service experiences beyond the direct use: Indirect customer use experiences of smartphone apps*	*The Ripple Effect: Intended and unintended service experiences of smartphone apps*	*Mind the Gap: A comparison between customer experiences from using apps and app developer expectations about these experiences*
Associated thesis research questions	***Research gap***: There is a gap in investigating phenomenological service experience with an empirical service context that matches the flexibility of time and space constraints, as suggested by the phenomenological characterisation.	***RQ1.*** *What types of use experiences do customers have when they use smartphone apps?*	***RQ2.*** *What are the differences in the ways in which service providers intend customers to have service experiences vs. the ways in which customers actually experience smartphone apps?*	***RQ3.*** *In what ways do customers' experiences from using apps compare and match up with app developers' expectations?*
Purpose	To explore service experiences, from a service perspective, with a particular focus on smartphone apps	To examine customers' use experiences in the smartphone app context	To compare conceptually how service providers intend customers to experience apps and how customers actually experience them	To compare and explore the match between customers' experiences from using apps vs. app developers' expectations of them
Methodology	See Papers	Conceptual overview of service experience research and an empirical two-phase study comprising (a) diary narratives using a specific app and (b) 23 semi-structured interviews on the use of multiple apps	Conceptual comparisons with examples of intended and unintended app experiences	(a) Semi-structured interviews with 23 customers on their service experience with multiple smartphone apps, and (b) app store descriptions, provided by app developers, of apps used by the respondents
Key Findings	See Papers	In addition to direct use experiences, indirect use experiences also play an important role in the holistic service experience. Compared with direct experiences, indirect use experiences do not require the actual use of apps or direct contact with the user.	Customers have multiple service experiences from individual apps, termed the Ripple Effect. These experiences that app developers expect the customers to have are intended experiences. On other hand, these experiences that are unexpected by service providers are unintended experiences. Both intended and unintended experiences can emerge from individual service (an individual app).	The findings show different types of use experiences that customers have with smartphone apps. They include direct and indirect use experiences. Furthermore, customers may have experiences that were expected by app developers, as well as experiences that were not anticipated or unexpected by app developers. This paper identifies four types of experience combinations as

				components of service experience with smartphone apps.
Contribution	The thesis contributes by adding two aspects to the concept of service experience that have gained little attention in research: indirect use experiences and unintended service experiences from the service providers' perspective. These aspects are also applicable for service contexts other than smartphone apps.	Previous research on service experience mainly has focussed on direct use experiences. This paper highlights that in addition to direct use experiences, indirect use experiences are also an important part of the phenomenological service experience.	The paper conceptually draws attention to unexpected service experiences that are unintended by service providers. Such unintended experiences emerge in customers' lifeworlds and form part of the phenomenological holistic service experience.	This study contributes to service research by comparing and matching customers' experiences using smartphone apps with the app developers' expectations on them. The study shows that in addition to direct use experiences, customers also incur indirect use experiences in ways that may be both expected or unexpected for app developers.
Implications	-Service experiences also include those that are beyond direct and intended service experiences. -Customer (vs. user) is the subject of phenomenological service experience. -Mobile services (as offerings) are precursors to smartphone apps as service platforms. -Service providers must keep in mind service experiences beyond traditional boundaries of direct service use. -Unintended service experiences can provide a rich source of service innovations. -Service experience provides a versatile framework for customer segmentation.	Highlights indirect use experiences as a vital component of service experiences and encourages researchers not to restrict use experiences to direct use only. Indirect use experiences enable managers to gain deep insights into the everyday use experiences of current and potential customers.	This paper contributes in shifting the focus from service to the customer's context in shaping service experiences. Unintended experiences show the gap between service providers' understanding of customer needs and the customers' self-understanding of their own needs. For managers, unintended experiences are often hidden, leading to a partial understanding of the ways in which service is being experienced. Unintended experiences reflect the hidden customer needs that can form the basis of service innovations. Also, reasons for service success or failure are understood fully only by service providers when they have access to both intended and unintended service experiences.	This research is one of the first attempts to compare and match customers' direct and indirect use experiences of apps with app developers' expectations about such experiences. The four types of experience combinations represent a versatile framework that app developers can use to map out all possible experience combinations that customers may have while using their apps. It is vital for app developers/researchers to gain an understanding of these possible types of use experiences because they influence final evaluations of the apps. In addition, the enhanced understanding will help app developers refine their communications about apps to potential customers.

4.1 Paper 1

The first paper in the thesis focuses on service use as a component of phenomenological service experience. It addresses Research Question 1: *What types of use experiences do customers have when they use smartphone apps?* In recent years, service experiences have been identified as one of the key service research priorities (Ostrom et al., 2010). Service experiences have been investigated in multiple service contexts, but service experiences with smartphone apps have not been investigated. To address this research gap, this paper's purpose is to examine customers' use experiences in the smartphone app context. It is published as a peer-reviewed journal article in the *Journal of Service Management* in 2015.

This paper adopts the phenomenological characterisations of service experience that are analysed as the platform for emergence of experiential value (Helkkula, 2011; Vargo & Lusch, 2008). Furthermore, this study differentiates and sheds light on both direct and indirect use experiences that have not been investigated adequately as components of the holistic service experience.

The empirical part of this study comprised a two-phase research design. In Phase I, research diaries, known as app diaries, were employed in which seven respondents were asked to document their experiences using the BBC World News app for one week. In Phase II of the study, 23 narrative semi-structured interviews were conducted about respondents' everyday experiences of using multiple apps through their smartphones. The indirect use experiences may be imaginary and emerge from an imagined use of apps by respondents. Both direct and indirect use experiences are components of the holistic phenomenological service experience (Helkkula et al., 2012b; Meyer & Schwager, 2007).

A four-part analysis framework of question themes – such as 'what', 'how', 'when' and 'where' (Lindberg-Repo & Dube, 2015b; Heinonen 2004) – was used to analyse direct and indirect use experiences. The 'what' of use experiences represented outcomes through direct or indirect app-use experiences. Such outcomes (from both direct and indirect use experiences) included replacement of an alternative service through app use, increased brand awareness of app users, contemplation of self-identity and anticipation of social benefits. These experienced outcomes of app-use experiences were both direct and indirect.

The 'how' of use experiences expressed the experienced service process of direct and indirect app use. The experienced service process (through both direct and indirect use experiences) comprised experienced service elements (i.e., experienced app attributes), such as experiencing service delivery, and app aesthetics in relation to the app-user interface.

The ‘when’ of use experiences described the temporal dimension of direct and indirect use experiences. First, both direct and indirect use experiences included the sensing of technical time that app technology used to update the experienced app content in real time. Second, direct and indirect use experiences also comprised respondents’ experienced personal passage of time in terms of their past, present and future.

The ‘where’ of use experiences illustrated the spatial dimension of direct and indirect use experiences. The spatial dimension included the app user’s surroundings, as experienced in his or her direct and indirect use experiences. In addition, the spatial dimension of use experiences also included experiencing geographical location of the user with respect to the app content being experienced, as customised for a specific geography. The following figure portrays direct and indirect use experiences of smartphone apps within the four-part framework of the what, how, when and where of use experiences.

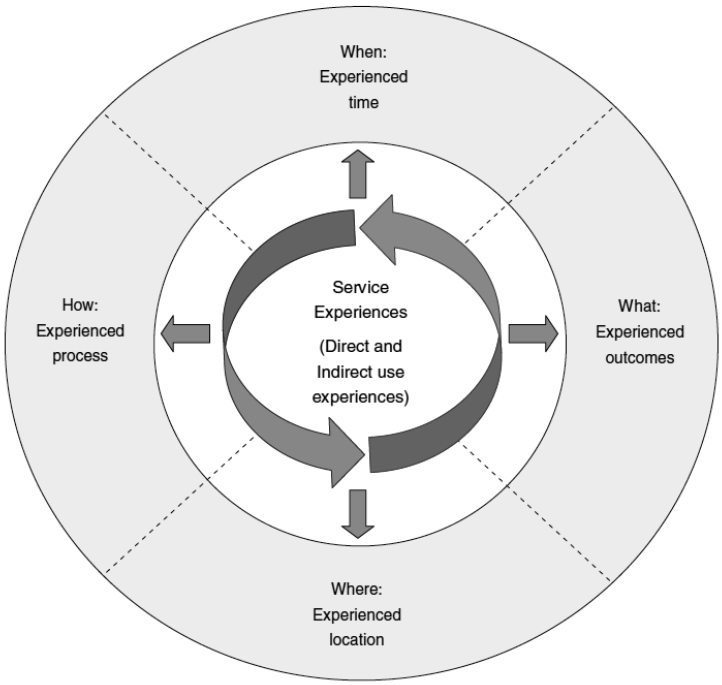


Figure 5 **Four-part framework of direct and indirect use experiences**

4.1.1 Contribution and implications of Paper 1

Service experience research has characterised the concept in three characterisations: as a process, as an outcome and as a phenomenon. However, all these characterisations focus on only direct use experiences except a few studies that suggest the emergence of phenomenological service experience through indirect interactions (Jaakkola et al., 2015; Meyer & Schwager, 2007; Helkkula et al., 2012a). This paper contributes in establishing indirect use experiences that include indirect contact or indirect use as a vital component of the phenomenological holistic service experience. Indirect use experiences can emerge when customers do not use apps themselves, but may hear about other customers' app use or are exposed to information about apps, e.g., through social media. The paper also shows that indirect use experiences, as part of phenomenological service experience, contribute to value co-creation. The paper supports broadening the definition of the 'use' concept to include indirect use while analysing value co-creation (Grönroos & Voima, 2013; Chandler & Vargo, 2011).

The paper yields two key implications for service managers and app developers. First, indirect use experiences provide crucial input for service innovation and app improvements for managers and app developers as indirect use experiences, in addition to direct use experiences, and are instrumental in customer value co-creation. Second, the four-part framework put forth in this paper demonstrates that customers' service experience, through direct and indirect use experiences, is not restricted to experience outcomes or experienced service processes, such as app interfaces. Instead, the phenomenological app service experience includes time and space dimensions (Heinonen, 2004) of app experience that are based on individual customers' everyday lives. Thus, app developers should not constrain themselves to improving only the technical app features. Instead, app developers should aim to analyse the everyday lives of their potential customers for app development and service improvements (Aarikka-Stenroos & Jaakkola, 2012; Teixeira et al., 2012).

4.2 Paper 2

The second paper in the thesis focuses on service provider understanding of customers' service experience. It addresses Research Question 2: *What are the differences in the ways in which service providers intend customers to have service experiences vs. the ways in which customers actually experience smartphone apps?* Correspondingly, this paper's purpose is to compare conceptually how service providers intend customers to experience apps and how

customers actually experience them. The paper is published as a peer-reviewed book chapter in the research book *The Nordic School: Service Marketing and Management for the Future*.

Service researchers and managers both agree on the importance of customers' service experiences in analysing customers' needs and the ways in which service can be improved (Grönroos & Gummerus, 2014; Heinonen, et al., 2013; Grönroos & Voima, 2013). However, little attention has been paid to the contrasts between intended experiences (as intended by the service provider) and customers' actual service experience. This paper addresses this research gap through a conceptual analysis in which theoretical comparisons are drawn between intended and unintended service experiences of customers with smartphone apps.

This paper presents the Ripple Effect as a metaphor for customers having multiple service experiences with individual offerings, such as smartphone apps. The multiple service experiences are conceptualised as distinct ripples or waves that are triggered through individual apps. Some of these ripples represent intended service experiences, which are experiences that service providers (or app developers) had envisaged that customers will have with their apps. On the other hand, several ripples may represent unintended service experiences that the service providers didn't expect customers to have with their apps. A ripple's distance from the centre represents the experience's unintended nature, and the further away the ripple, the more unintended the experience a customer may have with an app. In addition, service providers may expect customers to have potential service experiences that customers actually may not have at all. This may happen because either the customer doesn't know how to derive such potential experiences from an app, or he might not need to have such experiences. The following figure illustrates intended and unintended experiences as components of service experience.

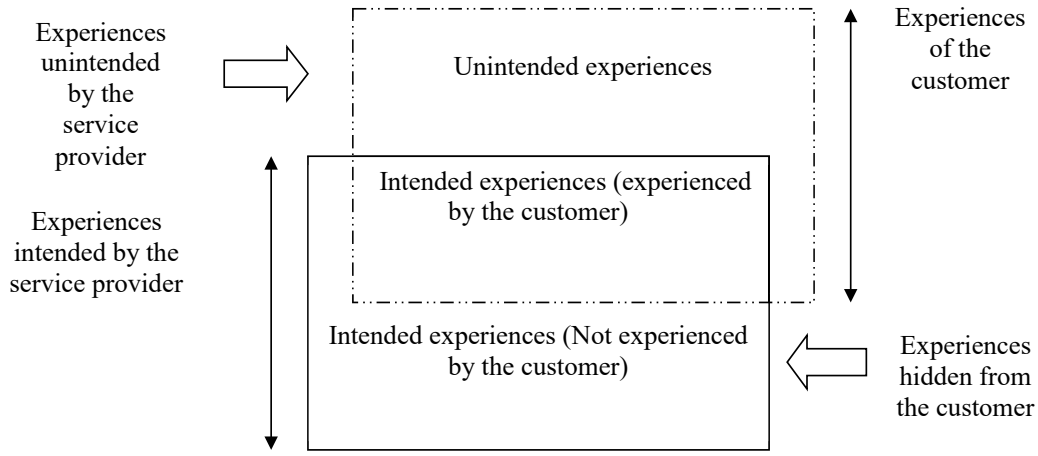


Figure 6 **Intended and unintended experiences as components of service experience**

4.2.1 Contribution and implications of Paper 2

The paper contributes to the phenomenological service experience by delineating intended and unintended service experiences to be components of the holistic service experience. Furthermore, the paper draws attention to the fact that customers' service evaluation is dependent on both intended and unintended experiences. Unintended experiences often may be hidden from service providers and reflect customers' hidden or uncovered needs. Subsequently, the paper highlights that service success or failure is dependent on customers' intended and unintended experiences.

The paper offers several managerial implications. Service providers or app developers should strive to discover hidden unintended experiences, as they often exemplify customers' needs and innovativeness. However, potential experiences that were expected by service providers, but were not experienced by customers, exhibit customers' everyday value contexts. Service providers should aim to deepen their understanding of these customer value contexts to facilitate service improvement and innovation.

4.3 Paper 3

The third paper in the thesis takes the conceptual foundations explored in Paper 2 and investigates them in the empirical context of smartphone app use. The paper addresses Research Question 3: *In what ways do customers' experiences from using apps compare and match up with app developers' expectations?*

The empirical study used in this paper comprises (a) 23 semi-structured narrative interviews in which the respondents narrate their everyday service experience with smartphone apps and (b) app store descriptions, provided by app developers, of apps that the respondents use. The respondents describe their everyday experiences that they incur from using apps on their smartphones.

The findings show that customers' experiences from using apps comprise any of the four combinations of:

(a) direct use experiences involving factual and observable service use

(b) indirect use experiences that involve either imaginary experiences or other users' experiences

From the app developer's perspective, customers have:

(c) expected (or intended) experiences that app developers anticipated customers to have (described in app descriptions on app stores)

(d) several customers' experiences may be unintended, or unexpected, to the app developer.

The above items describe aspects of phenomenological service experience that are grounded in the everyday life context of the customer and involve customer sense-making of the service phenomenon.

4.3.1 Contribution and implications of Paper 3

This research is one of the first attempts to empirically investigate the combination of customer use perspective (direct or indirect) with app developers' perspective (expected or unexpected experiences). This paper contributes in demonstrating the ways in which findings

from Paper 1 and Paper 2 are applicable to customers' everyday life context. Paper 1 shows that phenomenological service experiences comprise both (a) direct use experiences that arise from factual and observable direct service use by customers, and (b) indirect use experiences that may be imaginary in nature or can refer to others users' experiences. However, Paper 2 focuses on service providers' understanding of customers' service experiences. Paper 2's findings show that customers may have service experiences that are expected, or intended, by service providers, but customers also may have service experiences that are unexpected, or unintended, by service providers. In applying these two findings to the empirical context of smartphone app use, Paper 3 exhibits customers having direct and indirect experiences from app use that may be intended or unintended for app developers. Thus, Paper 3 contributes in bringing together Paper 1 and Paper 2's findings by demonstrating their presence in customers' everyday life context.

This paper contribute in demonstrating several salient aspects of the phenomenological characterisation of service experience. First, phenomenological service experiences may be lived experiences or imaginary in nature (Jaakkola et al., 2015). The findings show that customers have both types of experiences in the form of concrete experiences (lived) or abstract conceptualisations (imaginary). Second, the phenomenological characterisation postulates that service experience is subjective and event- and context-specific (Helkkula, 2011; Lipkin, 2016). These aspects are manifested in the fact that the same customers may have different experience combinations. Thus, customers are not restricted to any one particular experience combination, but instead are guided by their own idiosyncrasies, as well as the event and context of service use (in this case, use of apps).

For managers, this paper strongly advocates for opening up their mental models (Vink et al., 2019) to include indirect and unintended experiences in their app development processes. The paper's findings show an analytical framework that can be used to map out all possible experience combinations that customers may have while using their apps. The findings show that customers' experience combinations guide their app search, download and deletion behaviour. Thus, app developers can classify their users according to the experience combination that they may employ and target customers who exhibit certain experience combinations only by developing their apps accordingly. It should be noted that although this framework was developed with the empirical context of smartphone apps, it is applicable to other service contexts as well. The framework is based fundamentally on the ways in which customers sense and interpret their experiences. Therefore, the framework largely is independent of the service context as long as it provides similar ubiquitous availability and ease-of-use in everyday life as offered by smartphone apps.

5 CONTRIBUTION AND IMPLICATIONS

In this section of the thesis, the overall contribution of the research and its implications will be discussed in detail.

5.1 Contribution

This research's purpose was to explore the customers' service experiences from a service perspective, with a particular focus on smartphone apps.

Consequently, this thesis attempts to answer three research questions that deal with (1) investigation of types of use experiences of smartphone apps, (2) the differences in the ways in which service providers intend customers to have service experiences vs. the ways in which customers actually experience smartphone apps and (3) the ways in which customers' experiences from using apps match (or do not match) with app developers' expectations.

The findings of this thesis show that customers' service experiences of smartphone apps include both direct use experiences (that require direct app use), as well as indirect use experiences (that do not require direct app use). Furthermore, customers have both intended and unintended service experiences in which several unintended service experiences are hidden from service providers. In the context of app use, the findings show that direct and indirect use experiences, which may be expected or unexpected by app developers, represent four types of combinations of experiences that customers have from using smartphone apps.

The aforementioned conclusions bring the spotlight back to the experiential aspects of consumption, as highlighted by Holbrook and Hirschman (1982) more than three decades ago. The main argument of the experiential consumption viewpoint was that customers do not behave merely as rational machines that respond to marketing stimuli. Instead, consumption is an inherent experiential phenomenon often associated with 'fantasies, feelings and fun' (Holbrook, 2006; Holbrook & Hirschman, 1982). Since then, experience researchers repeatedly have cautioned that customer experience is subjective and involves emotional components (McColl-Kennedy et al., 2015; Helkkula et al., 2012a; Meyer & Schwager, 2007). The findings from Paper 1 of the thesis bring the spotlight back to the customer in asserting that customers also may have indirect service use experiences beyond the traditional boundaries of factual and observable service use. Such indirect use experiences occur in customers' lifeworlds and are crucial components of the holistic service experience. In a similar vein, the findings of intended and unintended experiences from Paper 2 of this thesis reinforce such experiential aspects of consumption by calling attention to service experiences

that service providers (app developers) did not expect customers to have. Such unintended experiences also are intrinsically subjective and idiosyncratic, emerging from customers' own lifeworlds.

From combining the findings and further analysing the implications from the three papers, this thesis contributes by putting forth an evolved conceptualisation of service experience that stems from the phenomenological service experience of smartphone app use as a service platform.

5.1.1 An evolved conceptualisation of service experience

This thesis extends the phenomenological characterisation of service experience by claiming that customers have both direct and indirect use experiences with smartphone apps and that such experiences may be intended or unintended by service providers. Furthermore, this thesis highlights that when customers use apps, they utilise direct, as well as indirect, use experiences, leading to evaluations that may be intended or unintended by service providers.

The findings from this research contribute in expanding the prevailing understanding of service experience. Despite repeated calls to shift the conceptual lens from the service offering, or service setting, to the customers' context in understanding customers' service experiences, several scholars imply that the service provider and service are the determinants of service experience. Illustrations of service centricity in determining service experience can be seen in claims by scholars such as Sandström et al. (2008), who argue that service experience is 'the sum total of the functional and emotional outcome dimensions of any kind of service'. In a similar manner, McKnight and Sechrest (2003) conceptualise service experience as an evaluation of service performance. This thesis challenges these claims and instead puts forth an evolved conceptualisation of service experience by demonstrating that customers can have both direct, as well as indirect, use experiences. The indirect use experiences occur beyond the conventional boundaries of factual and observable service use. It should be noted that other customers' use experiences are a crucial component of indirect experiences, as different customers collectively make sense of smartphone apps. Specifically, these customers who hear or see others' direct experiences are part of a collective sense-making that also is mediated through social and cultural factors (Edvardsson et al., 2011). This implies that the relationship between customers (having direct and indirect experiences) can play a role in how the apps are experienced. This collective sense-making also is explored in the context of service innovations (Corsaro et al., 2016; Witell et al., 2015), in which the diffusion and adoption of innovations is a collective phenomenon.

Apart from direct and indirect experiences, this research's findings also highlight the axis of intended vs. unintended experiences. The dominance of the service provider perspective is challenged and augmented in the evolved conceptualisation by highlighting unintended service experiences. Apart from intended service experiences, which are anticipated by service providers, customers also may have unintended service experiences, which arise in customers' own lifeworlds and often may be invisible to service providers.

Figure 7 shows the key contributions of this thesis juxtaposed with the prevailing understanding of service experience.

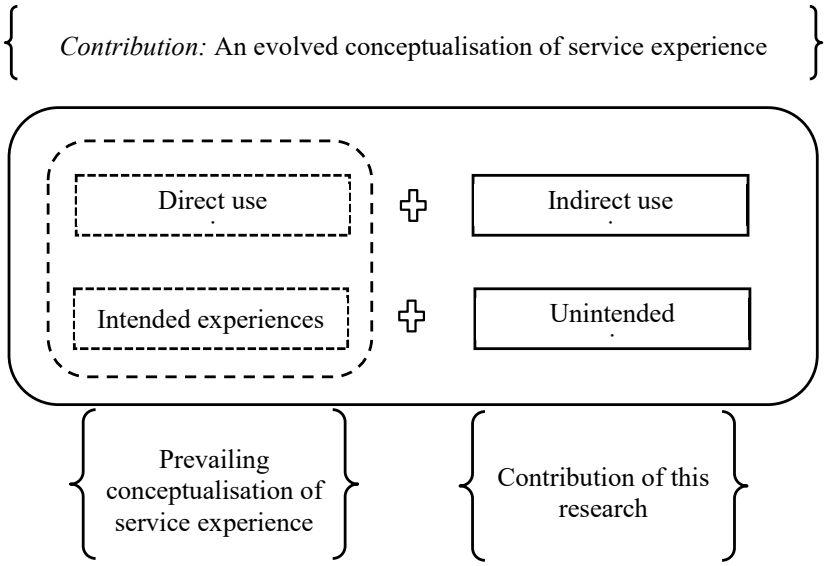


Figure 7 **The key contribution of the research**

5.1.2 Components of evolved conceptualisation of service experience

A combination of the two aspects of direct/indirect use experiences and intended/unintended experiences gives rise to four sub-types of phenomenological service experiences:

a) Direct and intended experiences

b) Indirect and intended experiences

c) Direct and unintended experiences

d) Indirect and unintended experiences

Out of these four components, service providers largely have focussed on the first component, direct and intended experiences. In this component, customers have service experience with direct service use (factual and observable service use) – experiences that are envisaged by service providers. Consequently, managerial mental models are largely focussed on such direct and intended experiences for doing business planning (Strandvik et al., 2014). The second component, indirect and intended experiences, lately has received research attention on the phenomenological conceptualisation of service experience that broadens the concept of service use beyond factual and observable use (Helkkula et al., 2012a,b). However, the difference between service provider anticipation and customers' actual service experiences has not been investigated sufficiently.

The third component, direct and unintended experiences, has received research and managerial attention in service innovation research, in which customers' creative use experiences are used for idea generation in front-end innovation development (Magnusson & Kristensson, 2003; Alam & Perry, 2002). Customers' unintended experiences may provide service innovation ideas that previously were not envisaged by service developers and arise from creative service use. However, it should be noted that this research stream focuses predominantly on factual and observable service use in the form of customers' direct experiences.

The fourth component, indirect and unintended experiences, is the key contribution of this thesis in highlighting an underutilised and scarcely investigated component of holistic service experiences. Such experiences may arise outside of factual and observable service use (e.g., imaginary experiences or other customers' experiences) and may be unanticipated by service providers. However, the findings show that such experiences also contribute to the holistic service experience and, in turn, influence customer value creation (Dube & Helkkula, 2015).

Scholar Jay Kandampully, in his commentary on the role of service experience in service management, argues that customers are active co-creators of their own experiences and that service experiences manifest as memories of customer-firm relationships (Jaakkola et al., 2015). In this claim, he hints at customer evolvement in phenomenological service experiences in which memories are created for customers. Such customer evolution is exhibited by respondents in this thesis by demonstrating unexpected experiences in their phenomenological service experiences of smartphone apps. Furthermore, phenomenological service experiences are subjective and event- and context-specific, and as a result, customers may undergo any of the four groups of experience combinations.

The following figure shows the four components of service experiences as a key contribution of this thesis.

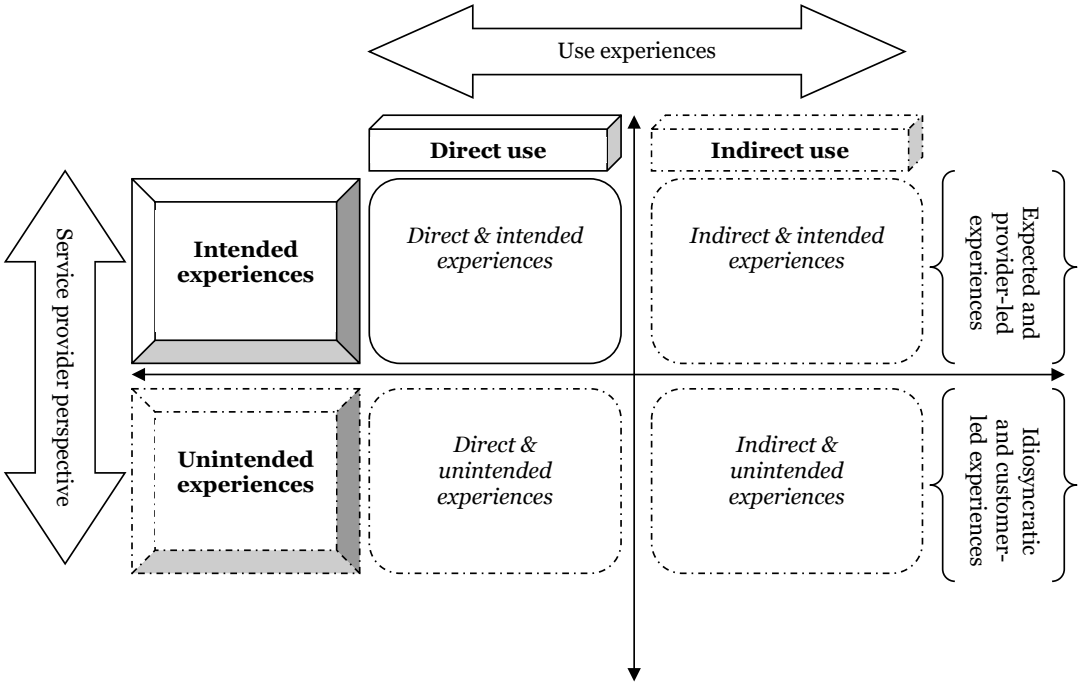


Figure 8 **Evolved conceptualisation of service experience with four components**

a) Direct and intended experiences

These refer to phenomenological service experiences that arise from direct use of smartphone apps and are intended by app developers. The expected experiences often are described in the app stores by app developers as value propositions for customers. These types of

phenomenological service experiences find strong support in service and customer experience research, in which the focus is on service experiences through direct interactions (Grönroos and Gummerus, 2014) and direct use (Dube & Helkkula, 2015). Moreover, the subjective and idiosyncratic aspects (Helkkula, 2011) of these service experiences are largely envisaged by service providers or app developers. Moreover, in this component, customers undergo experiences that are factual and observable, and are intended by service providers. For example, customers may learn to use a specific app (e.g., a sports-tracking app) through self-use for a specific purpose, as often described by app descriptions given by app developers in app stores.

b) Direct and unintended experiences

These refer to phenomenological service experiences that emerge from direct app use, but are unintended by service providers. App developers have little prior expectations of such experiences; therefore, they often are not included in app descriptions in app stores. Such experiences may be hidden from app developers, and they should strive to discover them. It should be noted that such experiences arise out of direct app use; therefore, apps' technical features and design influence these unintended experiences. Customers reflect their innovativeness and adaptability to their own everyday life contexts by experiencing apps for innovative value creation.

In this component of service experience, customers undergo experiences that are factual and observed, but service providers did not envisage such experiences. Examples include customers using specific apps in innovative and unconventional ways (e.g., using photo-editing apps as pocket mirrors) that app developers did not anticipate.

c) Indirect and intended experiences

These refer to phenomenological service experiences that arise from indirect use of smartphone apps, but are intended by service providers. App developers may envisage the indirect use of their apps and include the expected indirect use experience in their understanding of customer-value creation. However, it should be noted that because of indirect use, apps' technical features and design from app developers exert little influence in directing customer use experience. Scholars such as Meyer and Schwager (2007) and Vargo and Lusch (2008) support such phenomenological service experiences that encourage service experience through indirect interaction and use, yet are expected by service providers.

In this component, customers undergo experiences that are indirect, i.e., either through other customers' service experiences or through imaginary experiences. In such types of

experiences, customers still experience service in ways that service providers have envisaged. One scenario in which such experiences occur is when a customer might hear about another customer's service experience using an app and subsequently imagine using the same app in a similar way. For example, a customer may hear good reviews from his friend about playing a gaming app, then imagine himself playing the game. It should be noted that the customer possibly imagines playing the game in ways that the game's developers anticipated.

d) Indirect and unintended experiences

This is the most under-explored component of phenomenological service experience that emerges without any direct use and are also unexpected by service providers. The subjective, internal and idiosyncratic characteristics (Jaakkola et al., 2015) of phenomenological service experience is richly exhibited through these experiences where neither the customers nor their experiences are in the business radar of service providers. However, such experiences can reveal hidden value frameworks of potential customers to app developers for facilitating service innovation or app developments.

Customer experiences in this component occur through indirect experiences (others' experiences or imaginary experiences) and in ways unanticipated by service providers. For example, a customer might hear about a friend's service experience using a messaging app and may imagine using the app in ways (e.g., for doing business by conducting chat therapy) that the app's developer does not anticipate.

The following figure illustrates individual papers' contributions, as well as the overall contribution of the thesis.

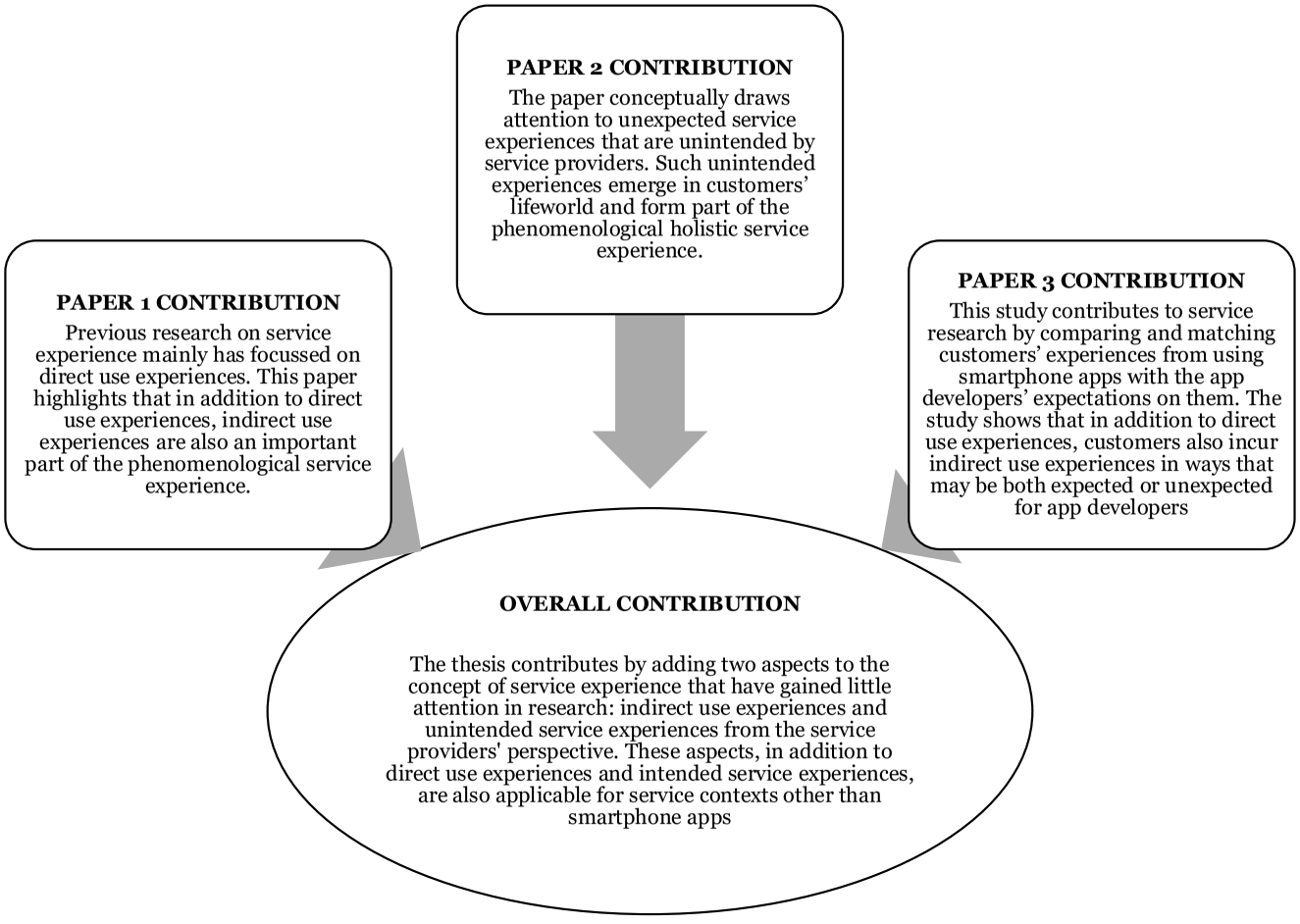


Figure 9 **Contribution of individual papers and overall contribution of the thesis**

5.2 Research implications

> 'Smartphones are not only functionally useful, but also include factors such as emotional signs, symbols and brands. Smartphone value is inherently experiential, contextual, individual, specific and meaningful to the customer'.
>
> --- Titans of Service, 2014, p. 95, Bo Edvardsson

In this section, I will elucidate the research implications of the findings of this thesis. The arguments and empirical evidence presented hold several implications for researchers in service research.

In this thesis, I conceptualised and analysed smartphone apps as service platforms that facilitate customer value creation through service experiences. One of the crucial experiential aspects of smartphone apps is their independence with respect to time and space constraints. Gummerus and Pihlström (2011) have identified time and location as components of context value in the case of mobile services. They highlight the importance of context in relation to customers' service experience and claim that 'contextual factors act as filters between the value proposition offered by the company and the actual service experience' (p. 10). Similar attributes are extendable to smartphone apps, in which customers have service experiences of apps anytime and anywhere. It should be noted that other mobile services' contextual factors, such as users' personal motivations and computing context (i.e., operating system of apps) (Schilit et al., 1994), are still relevant factors that influence service experiences of apps.

5.2.1 Beyond direct and intended service experiences

In recent years, the locus of value creation has shifted to a phenomenological determination of value by the beneficiary (see tenth foundational premise, Vargo and Lusch, 2008). Accordingly, service researchers have identified a phenomenological characterisation of service experience that is the platform for value creation (see value-in-experience, Helkkula et al., 2012a). The phenomenological service experience is characterised as both lived and imaginary, occurring in the past and future, and individual, yet social (Helkkula et al., 2012a, Dube, 2014). Also, phenomenological service experience is idiosyncratic, internal and event- and context-specific (Jaakkola et al., 2015; Helkkula, 2011). This thesis extends this characterisation of phenomenological service experience by highlighting indirect and unintended components, in addition to the extensively researched direct and intended experiences.

For researchers, this thesis highlights new and under-researched areas of service experience that demand more investigation. Indirect service experience encourages researchers to look beyond the traditional boundaries of service use and include imaginary (Jaakkola et al., 2015), mental (Grönroos & Voima, 2013) and social use (service experience of other customers, Helkkula et al., 2012a). In addition, unintended experiences guide research in understanding service experience as a phenomenon in customers' everyday lifeworld. Both these aspects of service experience, i.e. indirect and unintended experiences, are more visible in a social context when analysing service experience. The social context in the case of indirect and unintended experiences, in which customers access other customers' experiences and interpret them for their own context, is advocated strongly as a crucial component of service innovation (Mele et al., 2018). The authors argue that service innovation as a social process entails the actors interacting with each other, as well as the resources to co-create innovation in both formal and informal ways.

The key contribution of this thesis – an extended conceptualisation of phenomenological service experience – is derived from the empirical context of experiencing apps as service platforms. However, it can be extrapolated to generic service contexts in which time and space restrictions are fluid. This implies that as technology advances, the evolved conceptualisation of service experience holds more relevance in service contexts in understanding service experience from the customers' perspective.

5.2.2 Customer (vs. user) as the subject of phenomenological service experience

It should be noted that on the phenomenological basis of the concept of service experience, the subject of service experience is not necessarily the user (Jaakkola et al., 2015; Berry et al., 2002). The subject can be any actor who is co-creating value in a network (Vargo & Lusch, 2008). Thus, the subject of service experience can be the service provider (Berry et al., 2002), supplier/partner or user. The findings of this thesis demonstrate that customers can have phenomenological service experience without direct interaction or use of smartphone apps. Indirect use of smartphone apps (e.g., listening to a friend describing his or her app use) also leads to phenomenological service experience in the form of indirect use experiences.

This thesis understands the concept of the customer as the subject of service experience. A customer, who might not be a direct user of smartphone apps, may still have a phenomenological service experience of apps through indirect use experiences through any other user who is in close contact with the customer. Consequently, this thesis contributes in

delineating the separation between the user and customer roles, specifically in the empirical context of smartphone apps.

5.2.3 Mobile services (as offerings) vs. smartphone apps as service platforms

Extant research on mobile services (or m-services) treats them as service offerings. Several mobile service researchers have analysed the service delivery mechanism (mobile services channel, Pihlström, 2007), service concept (mobile services content, Vlachos & Vrechopoulos, 2008) and mobile services as complementary or supplementary offerings to existing service offerings (Heinonen & Strandvik, 2005; Nysveen et. al, 2005a,b).

As service offerings, mobile services have been investigated extensively for customer-perceived value (Pura, 2005) and value-in-use (Gummerus & Pihlström, 2011). Gummerus and Pihlström (2011) differentiate between context value and value-in-use, and argue that the context value of mobile services augment their value-in-use. Context value is understood by them to be customer perceptions of value that are associated with the context of use. In their conceptualisation, context of mobile service use includes four dimensions: time; location; lack of alternatives; and uncertain conditions. However, it should be noted that in the case of smartphone apps, the contextual background expands to cover the user's entire everyday life – including when the user is not even using the apps.

The most prominent feature of mobile services that caught the attention of service marketing researchers was that m-services enable the user to utilise them anytime and anyplace with a mobile phone (Heinonen & Strandvik, 2009, 2007; Pihlström & Brush, 2008). Smartphone apps provide similar freedom to customers, as they can be used through a smartphone anytime and anyplace. Thus, mobile services are technological precursors to smartphone apps. Surprisingly, mobile services and smartphone apps share few similarities from a service perspective.

This thesis contributes in defining smartphone apps as service platforms through which customers have service experiences. Readers must note that smartphone apps have exploded in terms of number and the types of services they can provide to facilitate customers' value creation. In several cases, smartphone apps have emerged as the primary platform for customer value creation, and they have embedded themselves in the everyday customer world more deeply than any previous service has been able to do. Thus, smartphone apps are not merely a new type of service offering (and, thus, extensions of m-services), but rather they enable facilitation of customers' value-creation processes (as service platforms) without time and space restrictions.

The following table provides a summary of the three key research implications of this thesis:

Table 11 **Research implications from the findings of this thesis**

	Research implications	**Explanation**
1.	*Beyond direct and intended service experiences*	This thesis extends phenomenological service experience by highlighting indirect and unintended components, in addition to the extensively researched direct and intended experiences.
2.	*Customer (vs. user) as the subject of phenomenological service experience*	This thesis contributes in delineating separation of the user and customer roles, specifically in the empirical context of smartphone apps, in which customers can have both direct and indirect use experiences with apps.
3.	*Mobile services (as offerings) vs. smartphone apps as service platforms*	This thesis contributes in defining smartphone apps as service platforms through which customers have service experiences. Smartphone apps are not merely a new type of service offering (and, thus, extensions of m-services), but instead enable facilitation of customers' value-creation processes (as service platforms) without time and space restrictions.

5.3 Managerial implications

Smartphones have emerged as the new 'must-have' device that is deeply integrated into customers' everyday lives. The key reason for smartphones' popularity is the use of smartphone apps that can adapt to customers' contexts. Specifically, the removal of time and space restrictions (as was also the case with m-services) makes apps especially attractive to customers. However, moving one step ahead of mobile services, apps have become more embedded in customers' everyday lives than any service ever has done before. Furthermore, apps are paving the way for entrepreneurship and economic growth. For example, Finland is famous for its smartphone app gaming startups, as it employed over 3000 employees and has revenues to the tune of 2 billion US dollars in 2018 (Valentine, 2019). To a large extent, this success can be attributed to customers' attraction to smartphone apps and their use experiences.

The findings of this thesis carry several implications for managers and app developers – implications that relate to facilitation of customers' value creation by apps as service. This thesis offers the following managerial implications.

5.3.1 Service experiences beyond traditional boundaries of direct service use

This thesis demonstrates that smartphone apps, as service platforms, facilitate customer value creation and replace traditional services (as offerings) in everyday customer lifeworlds. The findings of this thesis show that customers can experience apps from both direct and indirect use (e.g., listening to other customers' use experiences). These findings are also applicable to newer service platforms enabled by modern technologies and provide flexibility and ubiquitous ease-of-use. Therefore, when service providers develop service platforms, they must keep in mind the potential indirect use experiences that customers may have, regardless of direct interaction with service providers.

It should be noted that for traditional service providers, apps can replace their traditional service offerings, or they can be used as an information and customer interaction channel. The average smartphone user has several apps available in his or her pockets, and they provide an easy service platform to access and use. With the emergence of new smart-devices, such as wearables and Internet of Things (IoT)-enabled devices, apps are the primary interaction channel through which customers facilitate value creation. For example, customers monitor and check their recorded fitness data on fitness-tracking wearables through apps on their smartphones that are digitally coupled with the trackers (Gopalkrishnan, 2014). However, customers have service experiences that go beyond the direct use of these apps, such as

evaluation of self-identity as a healthy person even when not using fitness apps. Thus, it is imperative that fitness-app developers facilitate a positive evaluation of customers' self-identities, even when they are not directly using the fitness apps.

5.3.2 Unintended service experiences as a rich source of service innovations

The findings of the thesis show that customers have both intended and unintended service experiences. The unintended experiences reflect customers' innovative ways in which they create value through service experiences. Several of these unintended experiences can be hidden from service providers, so they must try to uncover them to understand customers' value-creation frameworks. In addition, customers may not have several of the intended experiences, thereby demonstrating the need for a change in service providers' understanding of customer-value frameworks. Both types of experiences, i.e., unintended experiences that are hidden from service providers and intended potential experiences that do not occur for customers, provide insights about the ways in which service providers can develop service innovations that can enrich service experiences and, consequently, value creation for customers.

One of the prerequisites for uncovering unintended service experiences of app users is to involve them in the process. As the focus of the experience, their involvement is necessary to gain a firsthand perspective of their sense-making of the experience. This strong participation by customers also is recommended for new app development, in which the unintended experiences are accommodated (and no longer remain unintended, but are now anticipated) in the app design process (see *NSD in technology-intensive services*, Jaakkola et al., 2017, and *virtualisation of value systems*, Sebastiani & Paiola, 2010).

This thesis has demonstrated the aspect of unintended experiences as part of service experiences in the use of smartphone apps. Although possible in other service contexts, unintended experiences clearly were discovered because apps are the closest service platforms, and customers can access them anytime and anywhere. The unintended experiences also can be viewed as innovative activities that customers perform with apps as service platforms (Edvardsson & Tronvoll, 2019). This ubiquitous presence of smartphone apps is impacting customer behaviour, in which customers are discovering innovative ways to have service experience with apps. Upcoming developments in app research are demonstrating yet-to-be imagined ways in which customers can have phenomenological service experiences. Newspaper reports from the *Times of India* in July 2014 describe a work-in-progress app and biosensor combination that can allow users to control wearable gadgets, such as Google Glass,

through thoughts. The sensor and the app together detect and analyse users' brainwaves and use the waves' strength as a guiding signal for the wearable to act, such as taking and sharing pictures (*Times of India*, 2014). This service innovation in app development brings the scientific fiction of making devices work with thoughts alone one step closer to reality.

5.3.3 Service experience as a versatile framework for customer segmentation

This thesis presents a framework that categorises four groups of distinct service experience combinations for using apps. For app developers, these categorizations demonstrate the need to segment app users depending on their specific experience combination. For app developers, the challenge is to become relevant in their customers' lives, and this framework may help in achieving this objective.

Research on customers' intentions to use apps has characterised certain apps as sticky in nature. Customers use such *sticky apps* actively for a long period of time, providing active customer engagement opportunities and increasing sales (Kim et al., 2015). App analytics is a growing field of research that investigates different app characteristics and maps them against customer demand (downloads and usage) for apps. Ghose and Han (2014) have investigated rich samples of 800 free and paid (400 each) apps to investigate causal linkages between app characteristics and customer demand for apps in two major app markets: Apple iOS and Google Play. Their findings show that customer demand for apps increases with (a) more detailed app-description in app market, (b) higher numbers of app-use screenshots, (c) app maturity (older apps), (d) cross-selling with other apps and (e) the volume and quality of user reviews. On the other hand, researchers have established that app demand decreases with (a) larger app file sizes (in megabytes) and (b) ads within apps. Also, male customers are more price-flexible compared with female customers when comparing downloading behaviour with paid apps.

It should be noted that the aforementioned app analytics focuses on service-provider activities and apps' technical attributes in determining app downloads and usage. However, customer experience of smartphone apps also impacts customers' attitudes towards experienced apps. Maghnati and Ling (2013) have explored the relationship between experiential value dimensions (as put forth by Mathwick et al., 2001) and customers' attitudes towards smartphone apps. Their results reveal that customers' experiential value dimensions of 'playfulness' and 'customer return on investment' positively influence customers' attitudes towards apps. Thus, when customers experience positive emotions (as components of

playfulness) and clear benefits (return on investment), they develop a positive attitude towards the apps that they experience.

However, the findings of this thesis claim that customers' contexts also guide app download, use and deletion behaviour. In their phenomenological service experiences, customers focus on value creation and apps' novelty features, and consequently, they undergo any combination of direct/indirect and expected/unexpected experiences. The combinations differ from each other in exhibiting different app download, use and deletion behaviour, e.g., if a customer finds that app novelty features have become mundane as a consequence of their experience, he or she may decide to delete the app. The deletion behaviour may be compared to earlier findings by Tronvoll (2011) on customer complaint behaviour as a consequence of negative emotions. It is crucial to reiterate that customers need not use apps directly to experience them. According to the phenomenological service experience, customers also may experience apps indirectly (e.g., by listening to other customers' app experiences), thereby guiding their app download, use and deletion behaviour. An example of this is when customers download a certain app after hearing about it from peers, but soon find out that it is not valuable for them in their everyday lives and consequently delete the app.

Summary

The findings of this thesis demonstrate that service providers must pay attention to the indirect and unintended aspects of customers' service experiences. These aspects of service experiences are equally valid for service contexts that provide similar flexibility, ease-of-use and a ubiquitous presence as smartphone apps.

In several fields, smartphone apps have emerged as strong challengers to traditional service platforms that are restricted by time, space and availability constraints. App-commerce and app-advertising examples demonstrate to service providers the relatively unexplored potential of utilising indirect and unintended service experiences. The following table summarises the three key managerial implications of this thesis:

Table 12 **Managerial implications of the thesis findings**

	Managerial implications	**Explanation**
1.	*Service experiences beyond traditional boundaries of direct service use*	When service providers develop service platforms, they must keep in mind the potential indirect use experiences that customers may have, regardless of direct interaction with service providers.
2.	*Unintended service experiences as a rich source of service innovations*	Unintended experiences that are hidden from service providers, as well as intended potential experiences that do not occur for customers, provide insights about the ways in which service providers can develop service innovations that can enrich service experiences and, consequently, value creation for customers.
3.	*Service experience as a versatile framework for customer segmentation*	Customers may have four groups of service experience combinations when using an app. For app developers, these combinations demonstrate the need to segment app users depending on their specific service experience combination. App download, use and deletion behaviour is guided by customers' specific experience combinations. In their experiences, customers focus on value creation and app-novelty features, and consequently adopt one of several possible combinations.

6 LIMITATIONS

The findings of this thesis should be interpreted in the context of some limitations. First, the empirical study was conducted using a specific type of service platform, i.e., smartphone apps. Apps provide unprecedented ubiquitous availability and ease-of-use for customers among service platforms. However, app-use experiences may be influenced by several other extraneous factors, e.g., Internet connectivity and speed, smartphone hardware and data limits that relate to the amount of data that customers can use in their monthly plans. This thesis has not examined these factors' impact on customers' service experiences in detail.

Second, specific app types, i.e., those that work on smartphones, are used as this study's empirical context. This choice was made to reflect the extreme closeness of smartphones in customers' everyday lives. However, in recent times, even closer smart devices, such as wearables (smart watches, smart clothing etc.) have emerged and also are embedded deeply into customers' everyday lives. This thesis has not explored service experiences with apps from such devices.

Third, this empirical study was conducted in a developing market (India) for smartphones, where they are gaining more and more market traction each year. However, this thesis has not compared the app-use experiences of customers in a developing market with those from advanced, developed markets, where smartphone penetration and app use already are high.

6.1 Suggestions for future research

Based on the findings, this thesis provides several suggestions for future research. First, further studies should investigate how extraneous factors – such as Internet connectivity and speed, the use of different types of smartphones and hindrances from customer data limits – influence service experiences. These factors may impact app experiences and, thus, influence customers' phenomenological service experience.

Second, future research must investigate service experiences within the empirical contexts of apps that work on other smart devices (e.g., smart wearable devices) that also are embedded deeply into customers' everyday lives. Furthermore, future research should explore customers' service experiences that may include not one, but several linked smart devices in an emerging technology known as Internet of Things (IoT). A news story in December 2015 reported on the development of a new app named Reality Editor, designed at the Massachusetts Institute of Technology (MIT) to integrate and control household 'smart' devices through app use. Termed an 'augmented reality app', Reality Editor aims to bring IoT closer to ordinary customers' daily

lives and extend the app experience to everyday home devices that surround customers (Gadgets 360, 2015). For example, with the use of this app, customers can program lamps to interface with TV controls so that when customers switch on the TV to watch a movie, the lamps begin dimming at the same time, through the Reality Editor app on the customer's smartphone.

Third, future research should investigate the service experiences of customers in different geographic regions that represent both developing and developed markets for smartphones. The innovative perception and value-creation potential for apps as service platforms may differ among customers from these two types of markets.

Table 13 **Thesis tabular summary**

Purpose	This research's purpose is to explore service experiences from a service perspective, with a particular focus on smartphone apps
Key concepts	Service experience, use experience, customer lifeworld
Context	Smartphone apps
Ontology	Social constructionism
Epistemology	Experience as the empirical evidence and studied phenomenon
Methodology	Phenomenological narratives
Perspective	Customer
Empirical data	Seven diary auto-narratives + 23 narrative interviews on customers' app experiences + app store descriptions of apps, provided by app developers, that the respondents used
Unit of analysis	Individual first-person accounts of customers' app experiences
Thesis structure	Paper 1: *Service experience beyond the direct use: Indirect customer use experiences of smartphone apps* Paper 2: *The Ripple Effect: Intended and unintended app experiences* Paper 3: *Mind the Gap: A comparison between customer experiences from using apps and app developer expectations about these experiences*
Key findings	Further analysis of phenomenological service experience reveals different aspects of experiences that have received little attention both from customer and service provider perspectives. This thesis puts forward the following aspects: • Direct and indirect use experiences (with service use) • Intended and unintended experiences (by service providers)
Key contributions	The thesis contributes by adding two aspects to the concept of service experience that have gained little attention in research: indirect use experiences and unintended service experiences from service providers' perspective. These aspects, in addition to direct use experiences and intended service experiences, are also applicable for service contexts other than smartphone apps Research implications: 1. Beyond direct and intended service experiences 2. Customer (vs. user) as the subject of phenomenological service experience 3. Mobile services (as offerings) vs. smartphone apps as service platforms Managerial implications: 1. Service providers must keep in mind customers' service experiences that occur beyond traditional boundaries of direct service use

	2. Unintended service experiences can provide a rich source of customer-driven service innovations 3. Service experience as a versatile framework for customer segmentation
Keywords	Service experience, use experience, smartphone apps, customer lifeworld

7 References

Aarikka-Stenroos, L. and Jaakkola, E. (2012), "Value co-creation in knowledge intensive business services: a dyadic perspective on the joint problem solving process", Industrial Marketing Management, Vol. 41 No. 1, pp. 15-26.

Abrahams, R.D. (1986), "Ordinary and extraordinary experience", in Turner, V.W. and Bruner, E.M. (Eds.), *The Anthropology of Experience*, University of Illinois Press, Urbana, Illinois, pp. 45–73.

Akaka, M., Vargo, S., Schau, H. (2015),"The context of experience", *Journal of Service Management*, Vol. 26 No. 2, pp. 206 – 223.

Arnould, E. and Thompson, C. (2005), "Consumer Culture Theory: Twenty Years of Research" *Journal of Consumer Research*, Vol. 31, pp. 868-882.

Arnould, E., Price, L., and Zinkhan, G. (2002), *Consumers*, McGraw-Hill, New York, NY.

Arnould, E. and Price, L. (1993), "River magic: extraordinary experience and the extended service encounter", *Journal of Consumer Research*, Vol. 20, pp. 24–45.

Ayres, L. (2008), "Semi-structured interview", in Given, L.M. (Ed.), *The SAGE Encyclopedia of Qualitative Research Methods,* SAGE publications, Inc., Thousand Oaks, CA, pp. 811–812.

Balasubramanian, S., Peterson, R.A., Järvenpää, S.L. (2002), "Exploring the implications of m-commerce for markets and marketing", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 348–361.

BBC (2014), "World's first 'smartphone' celebrates 20 years", available at: https://www.bbc.com/news/technology-28802053 (accessed September 22, 2016).

BBC (2013a), "Your guide to the BBC news android app", available at: http://news.bbc.co.uk/nol/ukfs_news/hi/newsid_9620000/newsid_9626100/9626103.stm (accessed November 20, 2013).

BBC (2013b), "Your guide to the BBC iPhone application", available at: http://news.bbc.co.uk/nol/ukfs_news/hi/newsid_8660000/newsid_8668000/8668044.stm (accessed November 20, 2013).

Berry L.L., Shankar V., Parish J.T., Cadwallader S. and Dotzel T. (2006a), "Creating new markets through service innovation", *MIT Sloan Management Review*, Vol. 47, No. 2, pp.56-63.

Berry, L., Wall, E., and Carbone, L. (2006b), "Service clues and customer assessment of the service experience: Lessons from marketing", *Academy of Management Perspectives*, Vol. 20 No. 2, pp. 43-57.

Berry, L.L., Carbone, L.P. and Haeckel, S.H. (2002), "Managing the total customer experience", *MIT Sloan Management Review*, Spring 2002, pp. 85–89.

Bitner, M.J. (1992), "Servicescapes: The impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 No. 2, pp. 57–71.

Bitner, M.J. (1990), "Evaluating service encounters: The effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 April 1990, pp.69- 82.

Bitner, M.J., Booms, B.H. and Tetreault, M. (1990), "The service encounter: Diagnosing favorable and unfavorable incidents", *Journal of Marketing*, Vol. 54 January 1990, pp.71- 84.

Bolger, N., Davis, A. and Rafaeli, E. (2003), "Diary methods: Capturing life as it is lived", *Annual Review of Psychology*, Vol. 54, pp. 579–616.

Bolton, R.N., Gustafsson, A., McColl-Kennedy, J.R., Sirianni, N.J. and Tse, D.K. (2014), "Small details that make big differences: a radical approach to consumption experience as a firm's differentiating strategy", *Journal of Service Management*, Vol. 25 No. 2, pp. 253-274.

Burr, V. (1995), "What is social constructionism?", in Burr, V. (Ed.), *An Introduction to Social Constructionism*, Routledge, London, pp. 1-11.

Burrell, G. and Morgan, G. (1979), *Sociological Paradigms and Organisational Analysis*, Part 1, Heinemann (republished Ashgate, 2006), London.

Brakus, J., Schmitt, B., and Zarantonello, L. (2009), "Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?" *Journal of Marketing*, Vol. 73, pp. 52-68.

Carù, A. and Cova, B. (2015), "Co-creating the collective service experience", *Journal of Service Management*, Vol. 26 No. 2, pp. 276-294.

Carù A. and Cova B. (2005),"The Impact of Services Elements on the Artistic Experience - The Case of Classical Music Concerts", *International Journal of Arts Management,* Vol. 7, No. 2, pp. 39-54.

Carù, A. and Cova, B. (2003), "Revisiting consumption experience: A more humble but complete view of the concept", *Marketing Theory*, Vol. 3 No. 2, pp. 267–286.

Chandler, J.D. and Vargo, S.L. (2011), "Contextualization and value-in-context: how context frames exchange", *Marketing Theory*, Vol. 11 No. 1, pp. 35-49.

Corsaro D., Sebastiani R., Mele C. (2016) "Practices of Service Innovation Diffusion", in Russo-Spena T., Mele C. and Nuutinen M. (Eds.), *Innovation in Practices: Perspectives and Experiences*, Springer, Switzerland, pp. 159- 179.

Cronin, J., Brady, M. and Hult, T. (2000), “Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments”, *Journal of Retailing*, Volume 76 No. 2, pp. 193–218.

Dube, A., and Helkkula, A. (2018), "Smartphone Apps" in Warf, B. (Ed.), *The SAGE Encyclopedia of the Internet,* Vol. 3, SAGE Publications, Thousand Oaks, London, pp. 801-802.

Dube, A. and Helkkula, A. (2015), “Service experiences beyond the direct use: indirect customer use experiences of smartphone apps”, *Journal of Service Management*, Vol. 26 No. 2, pp. 224-248.

Dube, A., Helkkula, A. and Strandvik, T. (2015), "The Ripple Effect: Intended and Unintended App Experiences" in Gummerus, J. and von Koskull, C. (Eds.), *The Nordic School - Alternative Perspectives on Marketing and Service Management*, Helsinki: Hanken School of Economics pp. 273-281.

Dube, A. (2014), “Becoming happy with “Angry” Birds: customers’ phenomenological service experience of virtual games”, in Kandampully, J. (Ed.), *Customer Experience Management: enhancing Experience and Value through Service Management*, Kendall Hunt, Dubuque, IA, pp. 363-368.

Dubois, A. and Gadde, L.E. (2002), “Systematic combining: an abductive approach to case research”, Journal *of Business Research*, Vol. 55, pp. 553-60.

Edvardsson, B. and Tronvoll, B. (2019, *in press*), “How platforms foster service innovations”, *Organizational Dynamics*, forthcoming

Edvardsson, B., Tronvoll, B., and Gruber, T. (2011), “Expanding understanding of service exchange and value co-creation: a social construction approach”, *Journal of the Academy of Marketing Science*, Vol. 39, pp. 327-339.

Edvardsson, B., Enquist, B. and Johnston, R. (2010), “Design dimensions of experience rooms for service test drives: case studies in several service contexts”, *Managing Service Quality*, Vol. 20 No. 4, pp. 312-327.

Edvardsson, B., Enquist, B. and Johnston, R. (2005), “Cocreating customer value through hyperreality in the prepurchase service experience”, *Journal of Service Research*, Vol. 8 No. 2, pp. 149-161.

Fisk, R.P., Brown, S.W., Bitner, M.J. (1993); ”Tracking the evolution of the services marketing literature”, *Journal of Retailing*, Vol. 69 No. 1, pp. 61-103.

Gadgets 360 (2015), “New Augmented Reality App to Let You Control Smart Objects”, *Indo-Asian News Service*, available at: http://gadgets.ndtv.com/apps/news/new-augmented-reality-app-to-let-you-control-smart-objects-777862, accessed on 1 April 2016

Ghose, A. and Han, S. (2014), “Estimating demand for mobile applications in the new economy”, *Management Science*, Vol. 60 No. 6, pp. 1470-1488.

Gopalkrishnan, A. (2014), “A Finnish dose of good health via apps”, *ThisisFinland Business and Innovation*, available at: http://finland.fi/Public/default.aspx?contentid=309485&nodeid=37605&culture=en-US, (accessed on September 3, 2014).

Goulding, C. (2005), “Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research”, *European Journal of Marketing*, Vol. 39 No. 3 pp. 294 – 308.

Goulding, C. (1999), “Consumer research, interpretive paradigms and methodological ambiguities”, *European Journal of Marketing*, Vol. 33 No. 9/10, pp. 859-873.

Grönroos, C. (2011), “A service perspective on business relationships: The value creation, interaction and marketing interface”, *Industrial Marketing Management*, Vol. 40, pp. 240–247.

Grönroos, C. (2008), "Service logic revisited: who creates value? And who co-creates? ", *European Business Review*, Vol. 20 No. 4, pp. 298 – 314.

Grönroos, C. (2007), *Service Management and Marketing: Customer Management in Service Competition*, 3rd ed., John Wiley and Sons Ltd., Chichester.

Grönroos, C. (2006), “Adopting a service logic for marketing”, *Marketing Theory*, Vol. 6 No. 3, pp. 317–333.

Grönroos, C. and Gummerus, J. (2014), “The service revolution and its marketing implications: service logic vs service-dominant logic”, *Managing Service Quality*, Vol. 24 No. 3, pp. 206-229.

Grönroos, C. and Voima, P. (2013), “Critical service logic: making sense of value creation and co-creation”, *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 133–150.

Grönroos, C. and Ravald, A: (2011), “Service as business logic: implications for value creation and marketing”, *Journal of Service Management*, Vol. 22 No. 1, pp. 5-22.

Grönroos, C. and Strandvik, T. (2008); “The interaction concept and its implications for value creation and marketing in service business”, in Rajala, A. and Antilla, M. (Eds.), *Fishing with Business Nets – Keeping Thoughts on the Horizon Professor Kristian Möller*, Helsinki School of Economics, Helsinki, pp. 51-65.

Grönroos, C. (1984), ”A service quality model and its marketing implications”, *European Journal of Marketing*, Vol. 18 No. 4, pp. 36-44.

Gubbi, J., Buyya, Marusic, S. and Palaniswami, M. (2013), “Internet of Things (IoT): A vision, architectural elements, and future directions”, *Future Generation Computer Systems*, Vol. 29 No. 7, pp. 1645-1660.

Gummerus, J., Lipkin, M., Dube, A., Heinonen, K. (2019), "Technology in use - Characterizing customer self-service devices (SSDS)", *Journal of Services Marketing*, Vol. 33 No. 1, pp. 44-56.

Gummerus, J. and von Koskull, C. (2015), *The Nordic School – Service Marketing and Management for the Future*, Hanken School of Economics, Helsinki.

Gummerus, J. and Pihlström, M. (2011), "Context and mobile services' value-in-use", *Journal of Retailing and Consumer Services,* Vol. 18 No. 1, pp. 521–533.

Gummesson, E. and Grönroos, C. (2012), "The emergence of the new service marketing: Nordic school perspectives", *Journal of Service Management*, Vol. 23 No. 4, pp. 479-497.

Heinonen, K. (2004), "Reconceptualizing customer perceived value – the value of time and place", *Managing Service Quality,* Vol. 14 Nos. 2/3, pp. 205–215.

Heinonen, K., & Strandvik, T. (2015). Customer-dominant logic: Foundations and implications. *Journal of Services Marketing*, *29*(6/7), 472–484.

Heinonen, K., Strandvik, T., & Voima, P. (2013). Customer dominant value formation in service. *European Business Review*, *25*(2), 104–123.

Heinonen, K., Strandvik, T., Mickelsson, K.J., Edvardsson, B., Sundström, E. and Andersson, P. (2010), "A customer-dominant logic of service", *Journal of Service Management*, Vol. 21 No. 4, pp. 531-548.

Heinonen, K. and Strandvik, T. (2009), "Monitoring value-in-use of e-service", *Journal of Service Management*, Vol. 20 No. 1, pp. 33-51.

Heinonen, K. and Strandvik, T. (2007), "Consumer responsiveness to mobile marketing", *International Journal of Mobile Communications*, Vol. 5 No. 6, pp. 603–617.

Heinonen, K. and Strandvik, T. (2005), "Communication as an element of service value", *International Journal of Service Industry Management*, Vol. 16 No. 2, pp. 186-198.

Helkkula, A., Kowalkowski, C., and Tronvoll, B. (2018a), "Archetypes of service innovation: Implications for value cocreation", *Journal of Service Research*, Vol. 21(3), pp. 284-301.

Helkkula, A, Dube, A., and Arnould, E. (2018b), "The Contextual Nature of Value and Value Cocreation", in Lusch R.F. and Vargo, S.L. (Eds.), *Handbook of Service-Dominant Logic*, Thousand Oaks, SAGE publications, pp. 118-132.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012a), "Characterizing value as an experience: implications for service researchers and managers", *Journal of Service Research*, Vol. 15 No. 1, pp. 59-75.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012b), "Practices and experiences: challenges and opportunities for value research", *Journal of Service Management*, Vol. 23 No. 4, pp. 554-570.

Helkkula, A. (2011), "Characterising the concept of service experience", *Journal of Service Management*, Vol. 27 No. 3, pp. 367-389.

Helkkula, A. and Pihlström, M. (2010), "Narratives and metaphors in service development", *Qualitative Market Research: An International Journal,* Vol. 13 No. 4, pp. 354-371.

Hellén, K. and Gummerus, J. (2013), "Re-investigating the nature of tangibility/intangibility and its influence on consumer experiences", *Journal of Service Management*, Vol. 24 No. 2, pp. 130–150.

Holbrook, M. (2006), "Consumption experience, customer value, and subjective personal introspection: An illustrative photographic essay", *Journal of Business Research*, Vol. 59, pp. 714–725.

Holbrook, M.B. and Hirschman, E.C. (1982), "The experiential aspects of consumption: Consumer fantasies, feelings and fun", *Journal of Consumer Research*, Vol. 9, pp. 132–140.

Iglesias, O., Singh, J., and Batista-Foguet, J. (2011), "The role of brand experience and affective commitment in determining brand loyalty", *Journal of Brand Management*, Vol. 18, pp. 570-582.

Jaakkola, E., Meiren, T., Witell, L., Edvardsson, B., Schäfer, A., Reynoso, J., Sebastiani, R., Weitlaner, D. (2017) "Does one size fit all? New service development across different types of services", *Journal of Service Management*, Vol. 28 No. 2, pp.329-347.

Jaakkola, E., Helkkula, A. & Aarikka-Stenroos, A. (2015), "Service experience co-creation: conceptualization, implications, and future research directions", *Journal of Service Management*, Vol. 26 No. 2, pp. 182-205.

Johnson, P. and Duberley, J. (2000), *Understanding Management Research: An Introduction to Epistemology*, SAGE Publications, London.

Kim, S., Wang, R. and Malthouse, E. (2015), "The effects of adopting and using a brand's mobile application on customers' subsequent purchase behavior", *Journal of Interactive Marketing*, Vol. 31, pp. 28–41.

Kovács, G. and Spens, K. (2005),"Abductive reasoning in logistics research", *International Journal of Physical Distribution & Logistics Management*, Vol. 35 No 2 pp. 132 – 144.

Klaus, P. and Maklan, S. (2012), "EXQ: a multiple-item scale for assessing service experience", *Journal of Service Management*, Vol. 23 No. 1, pp. 5–33.

Kwortnik, R.J.J. and Thompson, G. (2009), "Unifying service marketing and operations with service experience management", *Journal of Service Research*, Vol. 11 No. 4, pp. 389-406.

Langdridge, D. (2004), *Research Methods and Data Analysis in Psychology*, Pearson, Harlow.

LaSalle, D. and Britton, T.A. (2003), *Priceless: Turning Ordinary Products into Extra-Ordinary Experiences*, Harvard Business School Press, Boston.

Leipämaa-Leskinen, H. (2011), "Cultural analysis of dieting consumers' construction of bodies and identities", *Qualitative Market Research*, Vol. 14 No. 4, pp. 360-373.

Leppäniemi, M. and Karjaluoto, H. (2005),"Factors influencing consumers' willingness to accept mobile advertising: a conceptual model", *International Journal of Mobile Communications*, Vol. 3 No. 3, pp. 197-213.

Levy, S. (1959), "Symbols for Sale", *Harvard Business Review*, July-August, pp. 117-124.

Lindberg-Repo, K. and Dube, A. (2015a), *Titans of Service: Building strategic service leadership*, 2nd ed., Brand Audit Group, Helsinki.

Lindberg-Repo, K. and Dube, A. (2015b) "Customer value dimensions in e-healthcare services: Lessons from Finland", *International Journal of E-Services and Mobile Applications*, Vol. 7 No. 4, pp. 17-29.

Lindberg-Repo, K., Mehra, E., Gupta, N., Dube, A., Kaul, V. (2009), *Titans of Branding*, Gummerus Publishing, Helsinki.

Lipkin, M. (2016) "Customer experience formation in today's service landscape", *Journal of Service Management*, Vol. 27 Issue: 5, pp.678-703.

Little, D. (1991), *Varieties of Social Explanation: An Introduction to the Philosophy of Social Science*, Boulder, Westview.

Lovelock, J. and Wirtz, J., (2007), *Services Marketing: People, Technology, Strategy*, 6th Edition, Pearson International Edition.

Lusch, R. F. and Vargo, S.F. (2006), "Service-dominant logic: reactions, reflections and refinements", *Marketing Theory*, Vol. 6 No. 3, pp. 281–288.

Maghnati, F. and Ling, K.C. (2013), "Exploring the relationship between experiential value and usage attitude towards mobile apps among the smartphone users", *International Journal of Business and Management*, Vol. 8 No. 4, pp. 1-9.

Magnusson, P. and Kristensson, P. (2003), "Managing user involvement in service innovation", *Journal of Service Research*, Vol. 6 No. 2, pp. 111-124.

Mathwick, C., Malhotra, N., and Rigdon, E. (2001), "Experiential value: Conceptualization, measurement and application in the catalog and internet shopping", *Journal of Retailing,* Vol. 77 No. 1, pp. 39-56.

McColl-Kennedy, J.R., Gustafsson, A., Jaakkola, E., Klaus, P., Radnor, Z.J., Perks, H. and Friman, M. (2015), "Fresh perspectives on customer experience", *Journal of Services Marketing*, Vol. 29 No. 6/7, pp. 430-435.

McKnight, P. and Sechrest, L. (2003), "The use and misuse of the term 'experience' on contemporary psychology: a reanalysis of the experience-performance relationship", *Philosophical Psychology*, Vol. 16 No. 3, pp. 431-60.

Mele, C., Sebastiani, R. and Corsaro, D. (2018) "Service innovation as a social construction: The role of boundary objects", *Marketing Theory*, Vol. 19 No. 3, pp. 259–279.

Menon, K. and Bansal, H.S. (2007), "Exploring consumer experience of social power during service consumption", *International Journal of Service Industry Management*, Vol. 18 No. 1, pp. 89–104.

Merleau-Ponty, M. (1945/2005), *Phénomènologie de la perception*, translated as *Phenomenology of Perception* by Smith, C., first published at Paris, Gallimard, this edition published at Taylor & Francis e-library, London and New York.

Meyer, C. and Schwager, A. (2007), "Understanding customer experience", *Harvard Business Review*, February, pp. 117–126.

Mickelsson, K-J. (2013), "Customer activity in service", *Journal of Service Management*, Vol. 24 No. 5, pp. 534-55.

Moeller, S. (2010), "Characteristics of services – a new approach uncovers their value", *Journal of Services Marketing*, Vol. 24 No. 5, pp. 359-368.

Normann, R. (2001), *Reframing Business: When the Map Changes the Landscape*, John Wiley & Sons, Hoboken, NJ.

Nysveen, H., Pedersen, P., Thorbjørnsen, H., and Berthon, P. (2005a), "Intentions to use mobile services: Antecedents and cross-service comparisons", *Journal of the Academy of Marketing Science*, Vol. 33 No. 3, pp. 330-346.

Nysveen, H., Pedersen, P., Thorbjørnsen, H., and Berthon (2005b), "Mobilizing the brand, the effects of mobile services on brand relationships and main channel use", *Journal of Service Research*, Vol. 7 No. 3, pp. 257-276.

Ostrom, A., Bitner, M.J., Brown, S., Burkhard, K. Goul, M., Smith-Daniels, V., Demirkan, H. and Rabinovich, E. (2010), "Moving forward and making a difference: Research priorities for the science of service", *Journal of Service Research*, Vol. 13 No. 1, pp. 4–36.

Overgaard, S. and Zahavi, D. (2009), Phenomenological Sociology - The Subjectivity of Everyday Life, in Jacobsen, M.H. (ed.), *Encountering the Everyday: An Introduction to the Sociologies of the Unnoticed,* Palgrave Macmillan, Basingstoke, pp. 93-115.

Pareigis, J., Echeverri, P. and Edvardsson, B. (2012), "Exploring internal mechanisms forming customer servicescape experiences", *Journal of Service Management*, Vol. 23 No. 5, pp. 677–695.

Pareigis, J., Edvardsson, B. and Enquist, B. (2011), "Exploring the role of the service environment in forming customer's service experience", *International Journal of Quality and Service Sciences*, Vol. 3 No. 1, pp. 110–124.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring consumer perception of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-37.

Patricio, L., Fisk, R.P., Cunha, J.F. and Constantine, L. (2011), "Multilevel service design: From customer value constellation to service experience blueprinting", *Journal of Service Research*, Vol. 14 No. 2, pp. 180–200.

Patterson, A. (2005), "Processes, relationships, settings, products and consumers: the case for qualitative diary research", *Qualitative Market Research: An International Journal*, Vol. 8 No. 2, pp. 142–156.

Patton, M.Q. (2002), *Qualitative research & evaluation methods*, 3rd edition, SAGE Publications, Thousand Oaks, CA.

Payne, A.F., Storbacka, K. and Frow, P. (2008), "Managing the Co-Creation of Value", *Journal of the Academy of Marketing Science*, Vol. 36, pp. 83-96.

Perlow, L. (2012), *Sleeping with Your Smartphone: How to Break the 24/7 Habit and Change the Way You Work,* Harvard Business School Publishing, Cambridge, MA.

Pihlström, M., and Brush, G.J. (2008), "Comparing the perceived value of information and entertainment mobile services", *Psychology and Marketing*, Vol. 25 No. 8, pp. 732–755.

Pihlström, M. (2007), "Committed to content provider or mobile channel? Determinants of continuous mobile multimedia service use", *Journal of Information Technology Theory and Application*, Vol. 9 No.1, pp. 1-23.

Pine, B.J. and Gilmore, J.H. (1999), *The Experience Economy: Work is Theatre and Every Business a Stage*, Harvard Business School Press, Cambridge, MA.

Pine, J. and Gilmore, J. (1998), "Welcome to the experience economy", *Harvard Business Review*, July-August 1998, pp. 97-105.

Pekkarinen, S. and Ulkuniemi, P. (2008), "Modularity in developing business services by platform approach", *The International Journal of Logistics Management*, Vol. 19 No. 1, pp. 84-103.

Pura, M., (2005), “Linking perceived value and loyalty in location-based mobile services”, *Managing Service Quality*, Vol. 15 No. 6, pp. 509–538.

Reimer, A. and Kuehn, R. (2005), “The impact of servicescape on quality perception”, *European Journal of Marketing*, Vol. 39 Nos. 7/8, pp. 758–808.

Rihova, I., Buhalis, D., Moital, M. and Gouthro, M. (2013), “Social layers of customer-to-customer value co-creation”, Journal of Service Management, Vol. 24 No. 5, pp. 553-566.

Rydén, P., Ringberg, T. and Wilke, R. (2015), “How managers’ shared mental models of business-customer interactions create different sensemaking of social media”, *Journal of Interactive Marketing*, Vol. 31, pp. 1-16.

Sager, I. (2012), “Before iPhone and android came Simon, the first smartphone”, *Bloomberg*, available at: http://www.bloomberg.com/news/articles/2012-06-29/before-iphone-and-android-came-simon-the-first-smartphone, (accessed on May 5, 2016).

Sandström, S., Edvardsson, B, Kristensson, P. and Magnusson, P. (2008), “Value in use through service experience”, *Managing Service Quality*, Vol. 18 No.2, pp. 112–126.

Schembri, S. (2006), “Rationalizing service logic, or understanding services as experience?”, *Marketing Theory*, Vol. 6 No. 3, pp. 381–392.

Schilit, B., Adams, N., Want, R. (1994), “Context-aware computing applications. In: IEEE Workshop on Mobile Computing Systems and Applications”, December 8–9, available online at http://www.cs.cmu.edu/~anind/courses/ubicomp-f2009/Context-Schilit.pdf (accessed on March 16, 2016).

Schmitt, B.H. (1999), *Experiential marketing: How to get customers to SENSE, FEEL, THINK, ACT and RELATE to your company and brands*, The Free Press, New York, NY.

Sebastiani, R. & Paiola, M. (2010), "Rethinking service innovation: four pathways to evolution", *International Journal of Quality and Service Sciences*, Vol. 2 No. 1, pp. 79-94.

Shankar, A., Elliott, R. and Goulding, C. (2001), “Understanding consumption: Contributions from a narrative perspective”, *Journal of Marketing Management*, Vol. 17, pp. 429–453.

Siemieniako, D. and Kubacki, K. (2013), “Female students’ drinking seen through collages and diaries”, *Qualitative Market Research: An International Journal*, Vol. 16 No. 3, pp. 296–314.

Silverman, D. (2013), “Issues in research design” Silverman, D. (Ed.), *Doing qualitative research: A practical handbook*, SAGE Publications, Thousand Oaks, CA, pp. 43–68.

Sokowlowski, R. (2000), *Introduction to Phenomenology*, Cambridge University Press, Cambridge.

Solomon, M.R., Surprenant, C., Czepiel, J.A. and Gutman, E.G. (1985), "A role theory perspective on dyadic interactions: the service encounter", *Journal of Marketing*, Vol. 49 No. 1, pp. 99-111.

Statista (2019a), "Most popular Apple App Store categories in May 2019, by share of available apps", *Statista: the Statistics Portal*, available at: https://www.statista.com/statistics/270291/popular-categories-in-the-app-store/, (accessed on November 22, 2019)

Statista (2019b), "Market reach of the most popular mobile app categories in the United States as of September 2019", *Statista: the Statistics Portal*, available at: https://www.statista.com/statistics/579302/top-app-categories-usa-reach/, (accessed on November 2, 2019)

Statista (2019c), "Worldwide mobile app revenues in 2014 to 2023", *Statista: the Statistics Portal*, available at: https://www.statista.com/statistics/269025/worldwide-mobile-app-revenue-forecast/, (accessed on November 24, 2019)

Strandvik, T. (2013), "Volume introduction: Service logic – An introduction to Christian Grönroos's contribution to service logic" In Strandvik, T. (Ed) *Service Logic; Legends of Marketing: Christian Grönroos*, 3, SAGE Publications, London, UK, pp. xxi-xxviii.

Strandvik, T., Holmlund, M. and Grönroos, C. (2014), "The mental footprint of marketing in the boardroom", *Journal of Service Management*, Vol. 25 No. 2, pp. 241-252.

Strandvik, T. and Heinonen, K. (2013), "Diagnosing service brand strength: customer-dominant brand relationship mapping", *Journal of Service Management*, Vol. 24 No. 5, pp. 502-519.

Teixeira, J., Patricio, L., Nunes, N.J., Nobrega, L., Fisk, R.P. and Constantine, L. (2012), "Customer experience modelling: from customer experience to service design", *Journal of Service Management*, Vol. 23 No. 3, pp. 362–376.

Times of India (2014), "A gadget to control Google glass with thoughts", *Times of India*, available at: http://timesofindia.indiatimes.com/tech/more-gadgets/A-gadget-to-control-Google-Glass-with-thoughts/articleshow/38314369.cms (accessed on July 13, 2014).

The Economist (2001), "Why mobile is different", available at: http://www.economist.com/node/811984, (accessed on March 25, 2016).

Thomas, W.I. and Thomas, D. (1928), *The child in America*, Knopf, New York, NY.

Thompson, C.J. (1997), "Interpreting consumers: a hermeneutic framework for deriving marketing insights from the texts of consumers' consumption stories", *Journal of Marketing Research*, Vol. XXXIV, November, pp. 438-55.

Thompson, C.J., Locander, W.B. and Pollio, H.R. (1990), "The lived meaning of free choice: an existential phenomenological description of everyday consumer experiences of

contemporary married women", *Journal of Consumer Research*, Vol. 17 December, pp. 346-361.

Thompson, C., Locander, W.B. and Pollio, H.R. (1989), "Putting consumer experience into consumer research", *Journal of Consumer Research,* Vol. 16 No. 2, pp. 133–47.

Tronvoll, B. (2011) "Negative emotions and their effect on customer complaint behaviour", *Journal of Service Management*, Vol. 22 No. 1, pp.111-134.

Tronvoll, B., Brown, S., Gremler, D., Edvardsson, B. (2011) "Paradigms in service research", *Journal of Service Management*, Vol. 22 No. 5, pp.560-585.

Tumbat, G. and Belk, R. (2011),"Marketplace tensions in extra-ordinary experience", *Journal of Consumer Research,* Vol. 38 No. 1, pp. 42-61.

Valentine, R. (2019), "Finnish games industry employed over 3,000, brought in over $2b in 2018", available at: https://www.gamesindustry.biz/articles/2019-04-18-finnish-games-industry-employed-over-3-000-brought-in-over-usd2b-in-2018 (accessed on: January 26, 2020).

Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1–17.

Vargo, S.L. and Lusch, R.F. (2008), Service-dominant logic: Continuing the evolution, *Journal of the Academy of Marketing Science,* Vol. 36, pp. 1–10.

Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M. and Schlesinger, L.A. (2009), "Customer experience creation: determinants, dynamics and management strategies", *Journal of Retailing*, Vol. 85 No. 1, pp. 31-41.

Vink, J., Edvardsson, B., Wetter-Edman, K., & Tronvoll, B. (2019), "Reshaping mental models – enabling innovation through service design", *Journal of Service Management*, Vol. 30 No. 1, pp. 75–104.

Vlachos, P.A., Vrechopoulos, A.P. (2008), "Determinants of behavioral intentions in the mobile internet services market", *Journal of Services Marketing*, Vol. 22 No. 4, pp. 280–291.

Witell, L., Anderson, L., Brodie, R., Colurcio, M., Edvardsson, B., Kristensson, P., Lervik-Olsen, L., Sebastiani, R., Andreassen, T.W., (2015) "Exploring dualities of service innovation: implications for service research", *Journal of Services Marketing*, Vol. 29 Issue: 6/7, pp.436-441.

Zahavi, D. (2012), "Husserl, self and others: an interview with Dan Zahavi", in *Philosophical Interviews*, *AVANT*, Vol. III, No.1, pp. 114-121.

Zahavi, D. (2008), "Phenomenology", in Moran, D. (ed.), *Routledge Companion to Twentieth-Century Philosophy*, Routledge, London, pp. 661-692.

Zomerdijk, L. and Voss, C. (2010), “Service design for experience-centric services”, *Journal of Service Research*, Vol. 13 No. 1, pp. 67-82.

APPENDIX 1 LIST OF PAPERS

Paper 1:

Dube, A. and Helkkula, A. (2015), "Service experiences beyond the direct use: indirect customer use experiences of smartphone apps", *Journal of Service Management*, Vol. 26 No. 2, pp. 224-248.

Paper 2:

Dube, A., Helkkula, A. and Strandvik, T. (2015), "The Ripple Effect: Intended and Unintended App Experiences" in Gummerus, J. and von Koskull, C. (Eds.), *The Nordic School – Service Marketing and Management for the Future*, Hanken School of Economics, Helsinki, pp. 273-281.

Paper 3:

Dube, A. (2020), “Mind the Gap: A comparison between customer experiences from using apps and app developer expectations about these experiences”.

APPENDIX 2 THE PAPERS

The current issue and full text archive of this journal is available on Emerald Insight at:
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Service experiences beyond the direct use: indirect customer use experiences of smartphone apps

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Abstract

Purpose – The purpose of this paper is to examine customers' use experiences in a smartphone application (app) context. Apps have emerged as popular tools among marketing practitioners. In service research, however, smartphone apps, and their customers' use experiences, have received limited attention.

Design/methodology/approach – This paper provides a conceptual overview and draws on an empirical two-phase study comprising diary narratives of using a specific app and semi-structured interviews on the use of multiple apps by app users.

Findings – Results show that indirect use experiences play an important role in the holistic service experience. Compared with direct experiences, indirect use experiences do not require the actual use of apps or direct contact with the user. Also the context, such as the time and location of app use, is important for both direct and indirect use experience.

Research limitations/implications – This paper highlights indirect use experiences as a vital component of service experiences and encourages researchers not to restrict use experiences to direct use only. Indirect use experiences enable managers to gain deep insights into the everyday use experiences of current and potential customers.

Originality/value – First, previous research on service experience has mainly focused on direct use experiences. This study highlights that indirect use experiences are an important part of the service experience. Second, to the best of the authors' knowledge, this research is the first attempt to investigate the use experiences of smartphone apps in a service marketing context.

Keywords Value-in-use, Co-creation, Service experience, Phenomenology, Smartphone apps, Use experience

Paper type Research paper

1. Introduction

The mobile application (app) business has become increasingly significant in recent years. Smartphone apps are software app programs that are designed to run on specific operating system platforms. With the emergence of smartphones during the last decade, apps have become the key interaction and service provision mechanism between the smartphone and the customer. Apps provide several services and have an impact through their service experiences on the everyday lives of their users (Dube, 2014). For example, Apple offers more than 750,000 apps to its customers via its App Store (Monti, 2013). Available in both priced and free versions, apps have largely replaced the use of other mobile-based services.

Recently, apps have started to attract research attention in the marketing and managerial literature, particularly in the research in branding (Bellman *et al.*, 2011) and consumer adoption (Racherla *et al.*, 2012), where their effects on brands and product stickiness has been investigated. A growing body of managerial and marketing research has examined the effect of apps on several issues, such as web-usage (Kellogg, 2011), customer service jobs (Troianovski, 2013), and national and trans-national

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economies (European Commission, 2014). However, although service experiences have gained some research attention in recent years (Ostrom *et al.*, 2010); service experiences of smartphone apps, and use experiences in particular, have not yet been adequately researched. To address this research gap, the purpose of this paper is to examine customers' use experiences in the smartphone app context. In the empirical part of the study, we address the following research question:

RQ1. What types of use experiences do customers have when they use smartphone apps?

In this study, we draw on phenomenological experience in a service context, namely service experience. This concept has its origins in the paradigm shift away from researching consumer behavior from a logical, rationalistic perspective to an experiential, subjective interpretation (Holbrook and Hirschman, 1982). This phenomenological characterization also has support in the evolution of service-dominant (S-D) logic (Vargo and Lusch, 2008, 2004), which focuses on the service experience. In recent research, service experiences are seen as a core element in the emergence of experiential value.

The paper is divided into the following sections: first, theoretical reviews of both service experience and use experience literature are presented. Next, the methodology of the study is explained. This section outlines the two-phase study: the first phase includes diary narratives, and the second phase involves interviews with respondents on app-related use experiences. We then present the findings of the study. Two main types of use experiences emerged from the data analysis, which we name as direct and indirect use experiences. Direct use experiences include the actual use of apps and thus direct user contact. In contrast, indirect use experiences include those that do not require the actual use of apps or direct user contact. As use experiences form part of holistic service experience, both direct and indirect use contribute to customers' service experiences. Service experience research has, however, extensively focused on service experiences from direct use (Sandström *et al.*, 2008; Edvardsson *et al.*, 2010). In contrast, indirect service use, where customers are not in direct contact with service, is scarcely highlighted in investigating service experiences. Finally, we discuss the significance of app-related use experiences for researchers and managers, particularly of indirect use experiences.

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2. Literature review

The word "experience" has multiple connotations as it is used in different contexts. Employing "experience" as a verb ("I have/he has experienced […]") leads to a phenomenological characterization of the concept, in which the activity of experience is uniquely personal. On the other hand, the noun "experience" ("In my experience […]" or "I have learnt from my experiences […]") refers to the knowledge aspect of experience (tacit or explicit). In previous research, scholars have used similar conceptualizations of experience, including Carù and Cova (2003, pp. 269-270), who presented a compilation of conceptualizations of experience from different research streams: natural sciences (experiment experience), philosophy (self-transformation from experience), sociology and psychology (subjective and cognitive experience), and anthropology (experience as a way of living).

Despite such differences, all these conceptualizations of experience are used to express the subjectivity of human perception. In this paper, we first discuss

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experiences in the service context, and then emphasize a specific type of service experience – the use experience of smartphone apps.

2.1 Evolution of the service experience concept

The concept of service experience is an old, but relatively underdeveloped, concept in the marketing literature. The reason for this paradox lies in the way service experience has been hidden beneath other more focused concepts of services marketing, such as service quality, customer satisfaction, service environment and value-in-use. The genesis of the concept of service experience lies in the seminal article by Holbrook and Hirschman (1982), which attacked the rational, information-processing view of consumption in consumer behavior. The article stressed an experiential view of consumption, seeing it as "a primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses, and aesthetic criteria" (Holbrook and Hirschman, 1982, p. 132). This experiential view of consumption was a theoretical milestone, after which the view of consumption as a hedonic phenomenon gained increasing acceptance among marketing researchers.

Service marketing scholars also drew inspiration from the experiential view and applied it to consumption in the service setting. Consequently, service experience, or experience in a service setting (Helkkula, 2011), debuted in the context of hedonic "Disney Land" services (see Carù and Cova, 2003; Pine and Gilmore, 1999). Indeed, in the 1990s, service experience research focused on hedonic services (e.g. river rafting) (Arnould and Price, 1993). The two characterizations of service experience as "extraordinary" (Abrahams, 1986; LaSalle and Britton, 2003) and "memorable" (Pine and Gilmore, 1999) have received extensive attention in the literature.

The conceptualization of service experience then broadened from this restrictive approach; and was researched as a new economic offering for gaining competitive advantage in the experience economy. In parallel with the service experience research, economic sciences in general and marketing in particular focused on experiences as economic objects, which led to the development of the concept of the experience economy (Pine and Gilmore, 1998, 1999) and the research stream of experiential marketing (Schmitt, 1999). This characterization of experience as an economic offerings for competitive advantage argued for bringing the concept of service experience out of its twin niches of "hedonic" and "memorable" into the world of "normal, day-to-day service experiences" (Edvardsson *et al.*, 2005, p. 149). These two specific characterizations of hedonic and memorable experiences, however, have not been broadened with the same pace, and the latter has lagged behind the former.

Researchers have reached agreement on the omnipresence of service experiences, regardless of their hedonic or non-hedonic nature. Edvardsson *et al.* (2005, p. 151), referring to Johnston and Clark (2001), characterize service experience as a process that creates the customer's cognitive, emotional and behavioral responses, resulting in a "mental mark" or memory. This characterization brings service experiences into the customer realm and is based on the idea that service experiences occur in all types of service encounters, and they may even occur prior to (Edvardsson *et al.*, 2010) and post service encounters (Sandström *et al.*, 2008). Multiple characterizations of service experiences were developed in the early 2000s, treating them as processes that were developed in the customer realm, which were, nevertheless, manageable by the service provider (Pine and Gilmore, 1998). Service experiences have also been treated as outcomes of service processes, and their relationships with other marketing concepts were a dominant research theme in this period. Helkkula (2011) proposed a three-fold

framework for characterizing the concept of service experience. She delineated service experience as a process, an outcome, and a phenomenon.

2.1.1 Service experience as a process. The process approach of characterizing the service experience focuses on the dimensions or process elements of service experience, as well their functioning and management. These dimensions, or "architectural elements" (Helkkula, 2011) are associated with the process of service provision, including interaction with employees, technology and facilities (Edvardsson *et al.*, 2010, p. 313). Researchers following this characterization of service experience have produced both empirical and conceptual works that view the customer as the subject of the experience.

Bitner's (1992) seminal work on the "servicescape" has inspired researchers to investigate the management techniques of service experience, such as "service experience design" (Pine and Gilmore, 1998), "service experience blueprinting" (Patricio *et al.*, 2011), "hyper-reality" (Edvardsson *et al.*, 2005) and "experience room" (Edvardsson *et al.*, 2005, 2010). All these concepts rest on the principle that the service environment determines and creates favorable experiences (Bitner, 1992; Lovelock and Wirtz, 2007; Reimer and Kuehn, 2005). The effective management of the architectural elements can lead to favorable service experiences for the customers (Edvardsson *et al.*, 2005; Pareigis *et al.*, 2012). The latter assumption is, however, is made with caution, because researchers who followed this characterization of service experience also agree that service experiences are co-created with the customer (Pareigis *et al.*, 2011; Pine and Gilmore, 1998).

2.1.2 Service experience as an outcome. Service experience is characterized as not only a process but also an outcome (Helkkula, 2011). In this characterization, service experience has two outcome dimensions: functional and emotional, which are referred to as the "total service experience" (Berry *et al.*, 2002). Berry *et al.* defined the total service experience as the sum of all "clues" offered to the customer during the service provision. They categorized the clues into two types: functional, which relates to the actual functioning of the service, and emotional, which "concerns the emotions and includes the smells, sounds, sights, tastes and textures of the good or service, as well as the environment in which it is offered" (p. 86).

Researchers who characterize service experience as an outcome usually use survey-based quantitative techniques to investigate the linkages between service experience and other service marketing concepts (Helkkula, 2011). Holloway *et al.* (2005) presented students' online buying experiences as a moderator between service failure and recovery. Similarly, in treating service experience as an outcome, Menon and Bansal (2007) related service experiences to consumer cognition, expectations and emotions.

2.1.3 Service experience as a phenomenon. The precursor of the phenomenological characterization of service experience is the argument of Holbrook and Hirschman (1982), who viewed consumption as "conscious experience" (p. 137) with "meanings, hedonic responses and aesthetic criteria" of the consumer. They did not label the phenomenon as a service or goods experience, but described it as "consumption experience." This focus on the consumer understanding of experience is echoed by Carù and Cova (2003), who defined experience as "a subjective episode in the construction/transformation of the individual, with, however, an emphasis on the emotions and senses lived during the immersion at the expense of the cognitive dimension" (p. 273). Helkkula (2011) characterizes service experience phenomenologically as individually and socially determined and subjective in nature.

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The pivotal work by Vargo and Lusch (2004, 2008) put forth the S-D logic of marketing, which has contributed to the renewal of characterizing the service experience as a co-created phenomenon.

Service experience has also been claimed to serve as the foundation for the co-creation of value-in-use (Gummerus, 2013; Vargo and Lusch, 2008). This understanding of value-in-use is reflected in the suggested refined concepts of "value as an experience" (Helkkula *et al.*, 2012a) and "value-in-context" (Akaka *et al.*, 2013; Chandler and Vargo, 2011), which are both discussed in value co-creation.

The phenomenological characterization implies that service experiences are "internal, subjective, event-specific and context-specific" in the customers' everyday lives (Helkkula, 2011, p. 375). As service experiences may be based on internal experiences, they need be connected to direct experiences, in which a service provider and a customer directly interact with each other (Meyer and Schwager, 2007; Helkkula *et al.*, 2012a). Accordingly, in this paper, we call indirect use experiences those experiences in which a service provider and a customer are not in direct interaction with each other. Some indirect interaction channels are representations of a company's advertising, news reports, reviews, as well as electronic word-of-mouth (Meyer and Schwager, 2007).

A customer that experiences service is part of the service phenomenon. However, the customer may not be in direct contact with the service. For example, a customer might be influenced by being told about the app use experience of another customer. This implies that customers can also use services indirectly (Helkkula and Kelleher, 2010). Therefore, the indirect use experiences, which still occur in customers' everyday lives, should be included in analyzing service experiences.

2.2 Summary

In the three characterizations of service experience (outcome, process and phenomenon), most articles do not distinguish between direct and indirect experiences, except for a few notable exceptions. Meyer and Schwager (2007, pp. 118-119) define experience as "[…] the internal and subjective response customers have to any direct or indirect contact with a company." They refer to indirect experiences as customer experiences, which happen with the indirect contact of customers with service providers. Helkkula (2011) supports this concept, as proposed by Meyer and Schwager (2007), in arguing for indirect contact as a requisite for indirect experiences. Table I shows a compilation of key service experience definitions with phenomenon, process and outcome characterizations, and highlights the distinction between direct and indirect experiences made by only few researchers.

Among the three characterizations presented above, this study ascribes service experience as a phenomenon that comprises both direct and indirect use experiences.

3. Smartphone app use experiences

In this paper we understand the user as the person who uses the service (i.e. smartphone apps). We do not distinguish between use experience and user experience. We depict use experience as referring to the phenomenologically determined experience in the use of a service. Based on the phenomenological approach, use experience, or user experience, has been scarcely studied, with a few exceptions, such as Payne *et al.* (2008), and Helkkula and Holopainen (2011).

Definition	Author/s	Characterization
"Primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses and aesthetic criteria"	Holbrook and Hirschman (1982, p. 132)	Phenomenon
"[…] service encounter research increasingly recognizes that service experience is inherently interpretive, subjective, and affective"	Arnould and Price (1993, p. 28)	Phenomenon
"[…] experiences are inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual, or even spiritual level"	Pine and Gilmore (1998, p. 99)	Phenomenon and process
"Experience is defined as a subjective episode in the construction/transformation of the individual, with, however, an emphasis on the emotions and senses lived during the immersion at the expense of the cognitive dimension"	Carù and Cova (2003, p. 273)	Phenomenon
"We define a service experience as a service process that creates the customer's cognitive, emotional, and behavioral responses, resulting in a mental mark, a memory"	Edvardsson *et al.* (2005, p. 151)	Process
"[…] it is argued that services are dynamic experiences, co-constructed with customers in accordance with their views"	Schembri (2006, p. 386)	Phenomenon
"A service experience is the sum total of the functional and emotional outcome dimensions of any kind of service"	Sandström *et al.* (2008, p. 118)	Outcome
"The term "service experience" refers to the customer's personal experience of the service process as a result of interactions with the service organization and its frontline staff, facilities, and technology"	Edvardsson *et al.* (2010, p. 313)	Process
"[…] the internal and subjective response customers have to any direct or indirect contact with a company"	Meyer and Schwager (2007, p. 118)	Phenomenon (direct and indirect)
"[…] individual experiences – which are usually internal, subjective, event-specific and context-specific"	Helkkula (2011, p. 375)	Phenomenon (direct and indirect)

Table I. Service experience definitions and their characterizations

While use experiences in many studies are restricted to the ongoing consumption of a service and exclude pre-usage (or pre-purchase) and after-usage experiences (Hellén and Gummerus, 2013), customers should also be able to benefit from use experiences outside the current use. In this study, we do not restrict use experiences to only factual, externally observable use.

In contrast to traditional web sites, the visibility of apps is system-dependent and affected by the format of the specific app market, such as Apple's App Store or Android's Google Play. Web sites are hosted on servers, whereas apps have to be downloaded onto individual user smartphones, and thus they consume the device's memory space. Racherla *et al.* (2012) identified five dimensions (visibility, accessibility, capability, usability and functionality) in which smartphone apps differ from traditional web sites. The access to various apps and their functionality also depends largely on the capabilities of each smartphone. A basic, stripped-down smartphone has fewer enriching graphics and controls for displaying apps, compared with a high-end smartphone, such as the Apple iPhone 6. It should be noted that apps can also download information onto individual smartphones and can function without internet connectivity, a feature that is not available for traditional web sites. To illustrate, apps

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that provide navigation services can use preloaded maps and the GPS functionality of the smartphone. Lastly, the functionality of individual apps often differs from their parent web sites.

4. Methodology

This paper investigates customer use experiences of smartphone apps based on the phenomenological approach, which relates to use experiences that are individually subjective in a social context (Helkkula, 2011). Thompson *et al.* (1989) argue that phenomenology (in particular, existential phenomenology) is a suitable paradigm for researching consumer experiences. The tenets of existential phenomenology include understanding that experience is contextual, with research goals as thematic descriptions of consumer experiences (Thompson *et al.*, 1989). In accordance with the phenomenological approach, this research is based on the respondents' descriptions and interpretations of their app experiences.

In this study, app-related use experiences are interpreted in a two-phase research design. In the first phase, respondents were asked to write diaries of their experiences while using a specific app. This enables a deep understanding of single app use experience in an experimental setting, in Phase I of empirical study. In Phase II, interviews with the respondents provided data on everyday app use experiences with multiple apps. As customers use multiple apps simultaneously, Phase II of the study required respondent interviews, in which the focus was broadened to include more than one app. Table II shows the research design of the data collection methods used in Phases I and II.

In this research, the BBC World News app was used to capture respondents' use experiences in the form of diary narratives. The BBC World News app is available on three leading platforms: Apple's App Store, Android's Google Play and Nokia's Ovi Store. These BBC app versions are specifically designed for users outside the UK (BBC, 2013a, b) and are available for users globally. Using this app, users can watch news videos, read news in text; listen to BBC radio, and send news content to the BBC through their smartphones (BBC, 2013a, b).

In addition to the BBC app, this study includes user's interpretations of their everyday use experiences with a number of apps that they use in their everyday lives. These apps include several well-known apps, such as WhatsApp, Candy Crush Saga, Angry Birds, CamScanner and Facebook. These apps are also available on the three major platforms described above.

4.1 Phase I (experiment): collecting use experiences with diary narratives

To understand the phenomenon of customer use experience, we have made use of narratives, which constitute useful data because they reveal the ways in which the

Phase	Method	Type of use experiences	No. of apps experienced	Type of respondents	No. of respondents
Phase I	Diaries	Experiences in an experiment setting – identifying themes	One app	Homogeneous sample of respondents	7
Phase II	Interviews	Everyday life experiences – identifying and further analyzing themes	Several apps	Heterogeneous sample of respondents	23

Table II.
Research design for data collection

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respondents make sense of their use experiences (Shankar *et al.*, 2001). The diary research method has emerged as one of the preferred qualitative research methods. It aims to explore a phenomenon by recording the process elements as they happen (Patterson, 2005). The diary research method provides an in-depth understanding of use experiences in real time, which is not possible by other qualitative methods (Bolger *et al.*, 2003). However, the method has been criticized for providing access to a relatively narrow set of narratives (Leipämaa-Leskinen, 2011). We chose to conduct the first phase of data collection using the diary research method in order to gain a deep understanding of app use experiences in an experimental setting. In the exploratory stage, the diary research method can include the purposive sampling of respondents (Siemieniako and Kubacki, 2013).

The respondents were seven business students from the Indian Institute of Foreign Trade, New Delhi, India, and their narratives were recorded in "app diaries" in August 2012. These respondents were purposively selected according to two criteria. First, all the participants were aware, or had prior experience, of watching BBC news and/or documentaries on television and on the BBC web site. Second, no participant had used or was aware of the BBC app. These respondents used the BBC World News app during the experiment. The BBC World News app was chosen for the exercise because it offers engagement opportunities through reading news, watching videos and listening to radio news, as well as the option to contribute to BBC news by sending stories. In addition, the period of the study coincided with the London Olympics in 2012, thus offering multiple opportunities for the study participants to use the app many times each day. Table III provides information about the participants, including smartphone models, operating systems and the app market from which the BBC World News app was downloaded and used by the students in this study.

The respondents downloaded and installed the free app on their phones at the beginning of the exercise. All the respondents possessed a smartphone and used the app every day for seven days. We asked the respondents to write down their experiences of using the smartphone app each day of the exercise, but no directional instructions were given on what to write about their use experiences. The respondents were encouraged to write anything related to the exercise and not to restrict their narratives to usage of the app only. This was done to ensure that details of the participants' lives were also recorded in the diaries because these might affect their experiences with the app (Heinonen *et al.*, 2010). The respondents wrote their experiences in English, and diaries were provided for this purpose. The diaries were collected after the exercise, and the respondent narratives were coded and then saved

Number	Name[a]	Gender	Phone brand	App platform
1.	Robert	Male	HTC Explorer	Android
2.	Sarah	Female	iPhone 4.0	iOS
3.	Amit	Male	BlackBerry 8520	BlackBerry
4.	Suresh	Male	HTC Wildfire	Android
5.	David	Male	Nokia N8	Symbian
6.	John	Male	Sony Xperia Neo V	Android
7.	Anupam	Male	Samsung Galaxy S2	Android

Note: [a]Names have been changed

Table III.
Phase I BBC World News app use experience respondents

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as separate Word documents. In the analysis of the narratives, they were each read twice in order to familiarize the researchers with the emergent inductive themes of app use experience. Subsequently, the dominant themes of each narrative were compared with other narratives to gain an individual and holistic understanding of the respondent's experiences. Similar narrative themes were categorized into four themes of app use experiences.

4.2 Phase II: collecting use experiences via interviews

Whereas Phase I collected experimental use experiences, Phase II of the study was conducted to interpret app use experiences in the respondents' daily lives. We interviewed the participants to understand their individual experiences with a number of apps in detail (Stokes and Bergin, 2006). In this phase, we used semi-structured interviews to collect data on app use experiences. Semi-structured interviews are an appropriate qualitative research method when the researcher aim is to gain an understanding of the respondents' experiences of a phenomenon (Silverman, 2013). In accordance with the semi-structured format, the interview style was conversational and the interviewer ensured that the key aspects of everyday app use experience were covered. A written interview guide was prepared beforehand (Ayres, 2008) which included interview topics: type of smartphone and app platform, number of apps on phone, name of apps used every day, situations in which apps are used, individual or group/family app use experience and experiences, feelings and positive or negative feedback on apps.

The respondents were randomly selected from ordinary smartphone users and were drawn from the same geographical area as the Phase I respondents. All the respondents were bilingual in Hindi and English, and Hindi was their mother tongue. The 23 respondents represented different ages, gender, professions and family situations. All participants used multiple apps in their everyday lives, including gaming, navigation and social media apps. The semi-structured interviews in Phase II of study were conducted in November-December 2013 in India.

In the interviews, the respondents reflected on and talked about their everyday app use experiences. The duration of the interviews was between 16 and 43 minutes. The interviews were conducted in Hindi and subsequently transcribed and translated into English. In the analysis, the interviews were first read individually and then compared with each other. The four analysis themes from Phase I of the study were also used in Phase II. Table IV presents the details of the interview respondents for Phase II of the study.

5. Findings

Based on the analysis of the respondents' diaries and interviews, two main types of use experiences emerged from the data, which we labeled direct and indirect use experiences. Direct use experiences included user contact and the actual use of the apps. In contrast to direct use experiences, indirect use experiences included those that did not require the actual use of apps or direct contact with the user. Therefore, indirect use experiences can be imaginary in nature, and thus are a component of phenomenological, holistic service experience and value co-creation (Helkkula *et al.*, 2012b; Meyer and Schwager, 2007; O'Brien, 2004; Valberg, 1992). An example of this phenomenon is the way that a user can vividly imagine a journey or holiday when told by a friend about a travel app and its benefits.

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Table IV.
Phase II app use experience interview respondents

Number	Name[a]	Gender	Age	Phone brand	App platform	Education	Profession	Family situation
1.	John	Male	20	Samsung Galaxy Grand	Android	Bachelors (pursuing)	Student	Single
2.	Alex	Male	29	Google Nexus 4	Android	Bachelors	Innovation Manager (Manufacturing)	Married
3.	Tajel	Female	26	Samsung Galaxy S3	Android	Masters	Industrial Designer	Engaged
4.	Monica	Female	60	Samsung Galaxy Note	Android	Bachelors	Homemaker	Married, grandmother
5.	Phoebe	Female	31	iPhone 5	iOS	Bachelors	IT Engineer (Mobile UI Designer)	Single, mother
6.	Jacob	Male	35	Samsung Note 2	Android	PhD	Manager (Environmental)	In a relationship
7.	Ann	Female	26	Sony Xperia Neo	Android	MBA	Manager (Manufacturing)	Single
8.	Carl	Male	33	Xolo Q800	Android	Masters	Lecturer (Maths)	Married, father
9.	Joseph	Male	30	Nokia Lumia 910	Windows	Masters	Computer Programmer	Married, father
10.	Tom	Male	17	Samsung Galaxy Ace S5830I	Android	School	Pupil	Single
11.	Ben	Male	16	Samsung Galaxy Mega	Android	School	Pupil	Single
12.	Luke	Male	15	Samsung Galaxy Grand	Android	School	Pupil	Single
13.	Silvia	Female	42	Micromax Canvas	Android	Masters	Research Officer	Married, mother
14.	Betty	Female	38	Samsung Galaxy Grand	Android	Masters	Lecturer	Married, mother
15.	Mark	Male	27	Samsung Galaxy	Android	Bachelors	Assistant Teacher	Single
16.	Mike	Male	24	Samsung Galaxy 4, Akash Tablet	Android	Bachelors	Assistant Teacher	Single
17.	Harry	Male	23	Karbonn A4 plus	Android	Bachelors	Undergoing teaching training	Single
18.	Kevin	Male	25	Samsung Galaxy 4	Android	Bachelors	Undergoing teaching training	Single
19.	Cecilia	Female	24	Nokia Lumia	Windows	Masters	Undergoing teaching training	Married
20.	Victor	Male	71	Karbonn Titanium, iPhone 4	Android, iOS	Bachelors	Retired Pharmaceutical Sales Manager	Married, grandfather
21.	Adam	Male	29	Samsung gt19000	Android	MBA	Business Journalist	In a relationship
22.	Diana	Female	58	Micromax Phone, Samsung Galaxy Tab, Samsung Phone	Android	Masters	Senior Lecturer	Married, mother
23.	Amy	Female	28	iPhone 4S	iOS	Masters	Researcher	In a relationship

Note: [a]Names have been changed

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We use a four-theme analysis framework to present our findings:

(1) experienced outcomes from usage of apps (direct and indirect) – the what of app use experience;

(2) experienced process of apps usage, (direct and indirect) – the how of app use experience;

(3) experienced time in apps usage (direct and indirect) – the when of app use experience; and

(4) experienced location in using apps (direct and indirect) – the where of app use experiences.

We now present direct and indirect use experiences in these four analysis themes, as gathered from the respondent's diaries and interview.

5.1 The "what" of use experience: experienced outcomes

The "what" of use experience pointed to the outcomes, which the respondents experienced from the direct or indirect use of the apps. The experienced outcomes were multiple and included apps having replaced some other service or relationship, demonstration of increased brand awareness by the respondents, self-reflection on personal identity, and perceived social benefits. These experienced outcomes of app use experiences were both direct and indirect.

5.1.1 Direct use experiences: outcomes. Direct experienced outcomes arose from the direct use of smartphone apps, where the user himself/herself used apps. Govind, one of the diary respondents, described an experienced outcome in the form of an app replacing an existing service. On Day 7, he recorded in his app diary (the days of the exercise on which a particular comment was written down by the respondent in his/her diary are referred as Day 7, Day 1, etc.) that he had stopped his subscription to the paper version of his newspaper, *The Hindu*. He stopped the newspaper subscription because he now received news content from the BBC app. Thus, the BBC app replaced the existing paper news service to which he had been subscribing:

> I have stopped prescribing [sic] for the Hindu Newspaper. Use BBC app, save paper! (Govind, Day 7, Diary, Direct use experience).

Similarly, Monica, a homemaker, revealed during the interview that the Notebook app on her smartphone had replaced the paper calendar that she had used previously:

> I used to make notes on a paper calendar, such as when were my cows vaccinated last time, when did I order cow feed etc. Now I note down these things on my phone, it is much more convenient than the paper calendar. Paper calendar is thrown away every December but my phone stays (Monica, Interview, Direct use experience).

All respondents demonstrated a positive reception of the quality of the news delivered by the BBC app. This was partly because of the previous direct use experience of users, which contributed to brand awareness and positive brand judgment of BBC. In addition, the overall outcome quality of the app was perceived as positive, even before the actual use of the app started. Robert noted his judgments about the quality of the news and the app, as follows:

> In order to help the researcher, at least I got hold of a good (apparently) app. After all it is BBC's. Can't be that bad (Robert, Day 1, Diary, Direct use experience).

The respondents also related the experienced outcome of the BBC app use to enhancing their personal image in their peer group. The display of their possession of the BBC app increased the prestige of the respondent. A comment by Suresh illustrated the change in self-reflection concerning personal identity:

> To look more intellectual and smart I put the app on my phone's homepage. Anyone looking through my phone – well it is hard to ignore the app – would be like "this dude has BBC news app installed on his homepage unlike the others of his age group who just have gaming apps". Well, I can be such a child at times (Suresh, Day 1, Diary, Direct use experience).

Phoebe, a working mother, reflected on the changes in her identity and relationships with her family that took place after she started to use Facebook and WhatsApp messenger. She experienced the following outcome from direct use experiences:

> My phone has made me feel a bit unreal lately. I am into chatting, and Facebook. It has become so virtual; it's no longer that personal anymore. Instead of being with my family; I am playing a game or chatting. It makes me a little lazy (Phoebe, Interview, Direct use experience).

Another key experienced outcome from direct use experiences concerned perceived social benefits. The BBC app provided perceived social benefits to the users in acting as a channel for initiating social relationships. Anupam noted the usage of the app as a provider of sports news, which helped him to initiate conversations with female students who were enthusiastic about sports and like to discuss recent sports events:

> Browsed through the Olympics page and it helped me strike good conversations with few of the sports enthu [sic] girls of my batch. Thank you BBC App! ☺ (Anupam, Day 1, Diary, Direct use experience).

5.1.2 Indirect use experiences: outcomes. In addition to direct use experiences, the respondents also experienced outcomes from their indirect use experiences of apps. Amy provided an example of indirect use experience, in which an app replaced something else. In this case, Amy described the indirect use experience of her boyfriend relating to the Talking Tom app, which she uses on her phone. She says that her boyfriend was jealous (an experienced outcome) of the virtual cat, Tom, because he felt that he has been replaced by Tom in getting Amy's attention:

> My boyfriend is so jealous of Tom! I keep on telling him about what Tom did today and he thinks I love Tom more and I pay him more attention. He has even complained to me that he feels replaced by Tom (Amy, Interview, Indirect use experience of boyfriend).

Mark illustrated an experienced outcome (he perceived himself as smarter) from indirect use experiences in the form of a self-reflection on personal identity. He reflected on his smartness as a potential app user even before buying a smartphone:

> When I first decided to buy a smartphone, I was apprehensive of these new things called apps. Everybody talked about them and said they are awesome. I worried that I am not very technically skilled to handle these new technological things. Then I thought if everybody can use them, then I should be able to use apps as well, I am not less smart than others! (Mark, Interview, Indirect use experience).

Tajel, an industrial designer, communicated her indirect use experience of apps as the need for maintaining her social status. She felt that as an outcome of owning a smartphone with apps, she could uphold her status in society and avoid diminishing her social reputation. Tajel's comment illustrated the indirect use experience of apps,

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in which actual contact with apps was not necessary: the mere owning of a smartphone provides social benefits to the user:

> I want to maintain a reputation in society and that is why I have a smartphone. Everybody sees your phone and it doesn't look good if you have a small ordinary phone (Tajel, Interview, Indirect use experience).

5.2 The "how" of service experience: experienced process

The "how" theme links direct and indirect use experiences with the experienced service process of apps. Here, the service is experienced as a process with modifiable elements and include experiences in which the respondents made sense of service delivery functions and processes, and of the aesthetics of apps relating to the app interface.

5.2.1 Direct use experiences: process. As a direct use experience, the experienced process of apps focus on the technical features of the app interface, such as, the arrangement of the news tabs, the functional design of the app pages and the video quality. All these experiences relate to the ease of use and/or access to desired information on the app:

> I took a pop quiz today. It was fun to take it. They were about the latest happenings in the Pop music scene and pretty genuine also. Overall, it was a good pastime. The app is full with these kinds of things which keep you occupied. However, one has to go down the "Menu" to do that. It is not very accessible. I think that a user would not go down to this level "taking a pop quiz", which was fun, unless he is prompted by some highlighting feature on the page (Amit, Day 5, Diary, Direct use experiences).

The direct use experiences relating to service delivery were not independent of the smartphone platform used by the respondent. The experience narratives pointed out the relationship between the technical quality of the app and the platform on which it is delivered. The technical quality of service delivery by apps was affected by the app version (iOS, Android or other), the capabilities of the smartphone on which the app was used, and the speed of the mobile data connection. Suresh wondered whether his smartphone or his telecom service provider (Airtel) was at fault for the slow and interrupted download of the app on Day 1:

> While downloading the BBC News app I just realized that either my HTC [supposedly a smartphone] sucks big time or the 2G services of Airtel are at fault. It took me more than 30 minutes to download the app, and cell phone was hanging most of the time while the app was downloading. While believing the latter, I went to Katwaria Sarai to get services upgraded from 2G to 3G (Suresh, Day 1, Diary, Direct use experience).

Direct use experiences related to experienced process also included the sense-making of personal experiences in the process of using the app, such as reflecting on one's own aesthetic preferences while using the app interface. Several respondents were pleased with the red color of the BBC app, which served the function of making the app visually appealing and distinguishable during the process of app use:

> To begin with, the app looks cool to me. I loved the color combination. The red colored tabs and the ease with which one can jump and navigate the pages is brilliant (Anupam, Day 1, Diary, Direct use experience).

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5.2.2 Indirect use experiences: process. Experienced process of apps, as indirect use experiences, included the perceived evaluation of the app without direct use. Jacob described his indirect use experience of Angry Birds, a popular app game. He had not yet played the game, but he praised the features of the game, based on peer review:

> My friend told me about Angry Birds. I have not played it yet but he told me the story. He also said that the features of the game are pretty amazing; I think it would be cool to play the game on my phone (Jacob, Interview, Indirect use experience).

Luke, a young student, appreciated the design of paid apps compared with that of the free version of the same apps. However, he complained that he could not buy paid apps through his smartphone because he did not have a credit card, and his father would not allow him to use his card. Luke's father had heard from his colleagues that one's credit card information can be compromised when buying apps. Thus, Luke's indirect use experience of app purchasing process was not positive:

> Paid apps have better design as compared to the Lite (free) version of the app. I don't buy paid apps, I can't. I don't have a credit card and my dad doesn't allow me to use his [sic]. He is scared his credit card information will be stolen. Someone from his office has told him this (Luke, Interview, Indirect use experience).

5.3 The "when" of service experience: experienced time

The experienced time with app use, i.e. the temporal aspect of direct and indirect use experiences was exhibited by the respondents in two ways. The first included the real-time which apps use to update their content (experienced by the users) in synchronization with real-time events. The second includes the time experienced by the user, the way it is scheduled, and the past, present and future subjective experiences of the user. This is also in accordance with the phenomenological characterization of service experience, as propounded by Helkkula (2011) and Vargo and Lusch (2008). The experienced time, similar to the other themes, also involves direct and indirect use experiences.

5.3.1 Direct use experiences: time. Direct use experiences of apps in real-time refer to the experience of real-time events through synchronized apps. John described his hourly use of the BBC app and how it updated him on the latest information on a football match he was following:

> The latest football BBC sport news is the best and considering the transfer season window it has to be followed on nearly an hourly basis. Latest Liverpool FC news is bringing me to the app every hour now (John, Day 6, Diary, Direct use experience).

The direct use experience of time can also be described by users, for example, as "free time," "before an afternoon nap" or "time before sleeping." The determination of free time not only involved the time slots in a day when the respondent was not otherwise occupied, but also when (s)he is otherwise occupied but could still access and concentrate on the app. The examples included traveling time or during a lecture. Sarah illustrated her direct temporal use experience of the BBC app in the following comments:

> Also the app is very useful to keep myself updated when I am travelling or in class or when I have nothing else to do. Hence, this app comes to my rescue when I am attending boring classes. Right now, I am in class! (Sarah, Day 6, Diary, Direct use experience).

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Similarly, Monica enumerated her direct use experience occasions when she schedules her time to play Sudoku and other games on her phone:

> I play Sudoku just after my morning tea, also before my afternoon nap. I have to play at least one or two games in the night before I sleep. It has become a habit now and without playing, I don't feel good! (Monica, Interview, Direct use experience).

Direct use experiences of time included the experiential transportation of the respondents back or forward in time. The transportation back in time is manifested in the recalling of a past experience or of an entity or event that has not been on the respondent's cognitive radar for some time. Robert remembered Madonna upon reading about her appeal for the Russian band Pussy Riot, and he compared the presentation of a news article to a relic from a bygone era:

> Read the news about Madonna's appeal for Pussy Riot members' release. Was a long time since I heard anything about the Madonna [sic] (Robert, Day 7, Diary, Direct use experience).

> The whole news section had a black and white era feeling (Robert, Day 6, Diary, Direct use experience).

5.3.2 Indirect use experiences: time. Experienced time with indirect experiences is perceived by the users without the direct use of apps. Joseph complained about the frequent news alerts from the news app his friend uses, and wished to have fewer alerts referring to his indirect use experience of real-time app alerts:

> It irritates me that my friend's Times of India app buzzes so much with alerts. Does he really need to be so updated with the news? I wish to have a "peaceful" life wherein an app doesn't bother me so much with "breaking news" (sarcasm) (Joseph, Interview, Indirect use experience).

Victor, an elderly retired respondent, had an indirect use experience, in which he wished to have feature added to his apps. He wanted his apps to remind him when it was time to take his medicines:

> I wish apps could tell me when I should take medicines in a day. I need to take medicines 3 times a day and I always forget! (Victor, Interview, Indirect use experience).

Also, Victor foretells the future when asked about his app use experiences. He exhibits indirect use experience when he talks about the latest technology he has heard about from his daughter:

> My daughter has also told me about Google glass and its apps. I think in the future, we'll just walk around with these glasses, and all knowledge in the world will be in front of our eyes (Victor, Interview, Indirect use experience).

5.4 The "where" of service experience: experienced location

The "where" theme of direct and indirect use experiences signifies the spatial characteristics of app use. The narratives demonstrated that the "servicescape" (Bitner, 1992) of app experience was not confined to the app window on the user's smartphone but expanded to include the spatial surroundings and the location of the user. The experienced location was manifested in two ways: use experiences relating to the geographical location that the app technically uses in delivering its

content, and the use experiences relating to the experienced surrounding location of the user.

5.4.1 Direct use experiences: location. Respondents questioned the customization abilities of the BBC app in response to the geographic content of news in their direct use experiences. They wondered about the arrangement of news tabs in the app, which had "USA and Canada" as news tabs at the beginning of the tab list. The respondents wanted the app to adjust to the geographic location of the users – in this case, India – and automatically place the "Asia" news tab at the beginning of the list:

> Categories of US and Canada positioned next to the top stories puzzled me (Robert, Day 1, Diary, Direct use experience).

> Since most of the smartphone users have GPS enabled on them, it would be better for the app to realize the location of the user. It would then also come out with relevant information, news and statistics for the user (John, Day 1, Diary, Direct use experience).

Direct use experiences also included the experienced surrounding location of the user when using apps. The respondents noted that they used the app in various locations, such as the gym and when travelling:

> Well, one does learn multitasking in MBA life; I was listening to news while running on the treadmill (Suresh, Day 4, Diary, Direct use experience).

Diana, a senior lecturer, described her direct use experience of the CamScanner app while travelling:

> Even though I have a scanning machine at office, when I am out of office and travelling, I use CamScanner app. It's very convenient and you can use it even on a bumpy road (Diana, Interview, Direct use experience).

5.4.2 Indirect use experiences: location. Experienced location with indirect use experiences of apps does not include direct app use. Kevin expressed fondness for historical facts, and he described the imaginary experience of a potential app that he would like to use in the future:

> I am a history buff; I like to know about places and what happened there in the past. I wonder if I could use an app which detects the location of the city and tells me about its history, the local history (Kevin, Interview, Indirect use experience).

Silvia, a middle-aged working mother and a new smartphone owner, demonstrated her indirect use experience by noting that her smartphone had the capabilities of a small laptop, and it was very convenient for her to carry the phone:

> I saw my colleagues taking their smartphones everywhere. Now, I also have a smartphone with apps. I don't use it yet, but it's like a small laptop, a pocket laptop. I'd like to use it while travelling! (Silvia, Interview, Indirect use experience).

In summary, based on data from the app diaries and the interviews with app users, the phenomenological use experience of apps was delineated into four themes: "what," "how," "when" and "where." As mentioned earlier, the use experience narratives and interviews were not restricted to direct experiences (the actual usage of the app), but also included indirect experiences (requiring no actual app use). Table V presents the summary of direct and indirect use experiences with apps.

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Table V.
Four themes of direct and indirect use experiences

What (Experienced outcomes)	How (Experienced process)	When (Experienced time)	Where (Experienced location)
App replaces an existing service/ relationship: e.g., news apps replace newspapers (D), virtual pet apps replace existing relationships (I) Increased awareness of a specific brand: e.g., game app use increases awareness about the gaming brand (D), people become more aware of a clothing brand when they hear about their friends' app experiences (I) Self-reflection on personal identity: e.g. use of news apps makes users feel smarter (D), just ownership without actual use of news apps makes the owner feel smarter (I) Social benefits: e.g., use of certain apps helps users form social bonds (D), just ownership of a smartphone with apps without using them increases the social reputation of a user (I)	Evaluation of app functions during the process of use: e.g., users frequently evaluate app functions while using them (D), users frequently evaluate app functions when they observe other users for a period of time (I) Evaluation of aesthetic preferences during the process of use: e.g., users frequently evaluate the design of apps during the process of use (D), users frequently evaluate the design of apps when they observe other users for a period of time (I)	Experience of real-time events: e.g., users experience real-time entertainment content through apps (D), users indirectly experience real-time entertainment content when friends update them on the latest events (I) Use of apps affects the experience of time and how it is scheduled: e.g., users play app games during specific hours in a day (D), users wish to use a scheduling app that reminds them of the activities to be done at a specific time of the day (I) Experience of past events: e.g., users reminisce about a past event upon reading about it through an app (D), users are temporally transported into the past or future without direct app use, such as when talking with a friend (I)	Experience of location: e.g., users like apps that update according to the geographical location of the users (D) users wish to use or hear about other user experiences of apps that provide location-specific information (I) Experience of the users' surrounding location: e.g., users use apps in certain specific locations, such as while travelling in a bus (D), users wish to use or hear about other user experiences of apps in various locations (I)

Notes: D, Direct use experience; I, indirect use experience

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6. Discussion and conclusions

Our study focuses on customer service experiences, with a special emphasis on the use experiences of smartphone apps. This paper understands service experience and use experience as a holistic phenomenon, which is individually subjective in a social context and specific event (Lusch and Vargo, 2006; Schembri, 2006). Despite the current research interest in service experience (Ostrom *et al.*, 2010), and the growing importance of the mobile app business, the service literature has not yet focused on apps or their use experiences. To the best of our knowledge, this study is the first attempt to investigate the use experiences of smartphone apps in a service marketing context.

Service experience research has largely overlooked indirect experiences in researching service experience in process, outcome and phenomenon characterizations, except for few studies (Meyer and Schwager, 2007; Helkkula, 2011). We contribute to the service experience literature by proposing that in addition to direct use experiences, indirect use experiences are an important part of the holistic phenomenological service experience. Such indirect use experiences can be triggered when customers listen to the opinions of other customers or are exposed to other forms of communication, such as advertising. For example, a respondent might favorably view a fashion clothing brand when he or she listens to a friend describing the good features of the brand app. The respondent might not use the app, but he or she might positively evaluate the brand because of his or her friend's reviews of the app. Both direct and indirect use experiences relate to the app or to the user, and both are subjective and subject to individual sense-making.

Figure 1 summarizes the direct and indirect use experiences within the themes of what, how, when and where, and shows the outcome, process, temporal and spatial aspects of the use experience. Such question themes are typical in sense-making and reflect how respondents make sense of their app use experiences. The four themes are supported by similar characterizations of service quality (Grönroos, 2007), value (Heinonen, 2004; Heinonen and Strandvik, 2009) and service innovation (Rubalcaba *et al.*, 2012) in the service marketing literature.

In value research, previous studies have shed light on direct (Edvardsson *et al.*, 2010; Grönroos, 2007; Klaus and Maklan, 2012) and indirect interactions (Helkkula *et al.* 2012a) between customers and service providers in understanding value experiences. While value is experientially determined, indirect value experiences are a relevant part of value co-creation processes (Grönroos and Voima, 2013; Grönroos and Ravald, 2011). Based on the findings of this study, we conclude that indirect use experiences contribute to value co-creation in app use. Both direct and indirect app use experiences are connected to co-creation of value, even if the main focus has been on direct use experiences. Our findings extend the arguments of Chandler and Vargo (2011) and Vargo *et al.* (2008) in their criticism that the concept of "use" has been too restrictive and indicative of actual physical use. The criticism has focused primarily on the value-in-use concept, where value is understood as experiential. Grönroos and Voima (2013) have proposed expanding the definition of use beyond physical use to include mental use. Thus, the imaginary use of a service (Helkkula *et al.*, 2012a), in which the user visualizes using a service in his/her mind, can also co-create value-in-use. In a similar vein, value-in-context takes the lived lives of users into account (Edvardsson *et al.*, 2011; Gummerus, 2013; Vargo *et al.*, 2008), and the focus is on the context or the surrounding actors and the environment of the user, in determining value-in-use. Value-in-context emphasizes indirect use, in

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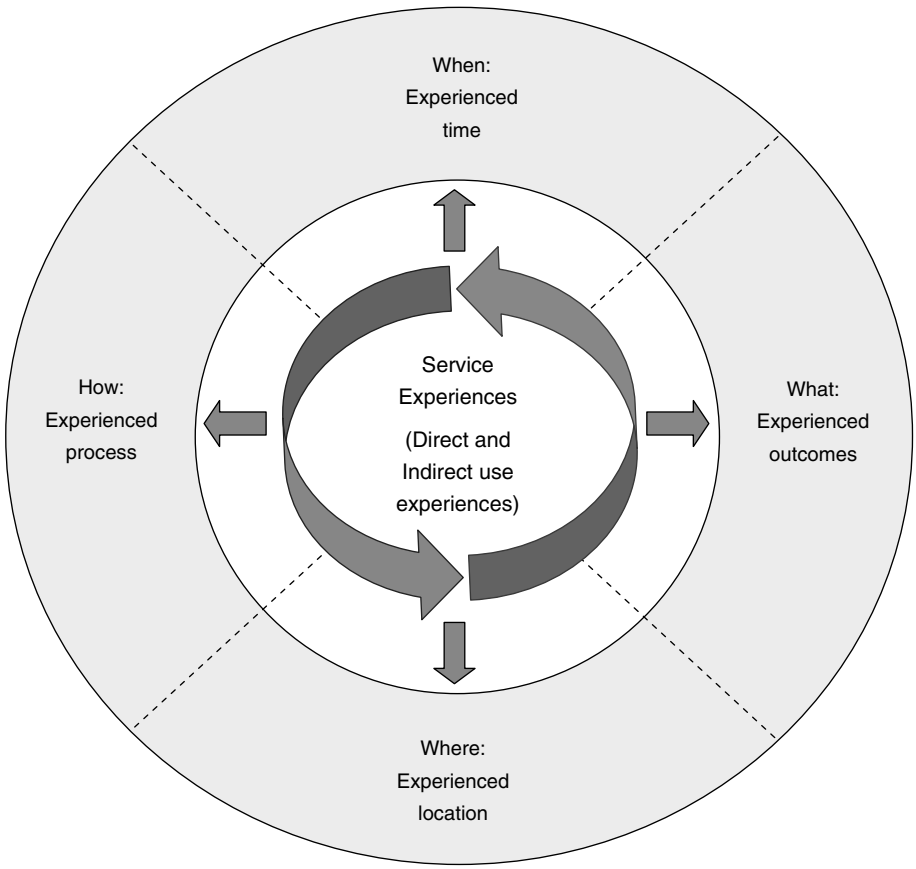


Figure 1.
Service experience with direct and indirect use experience of smartphone apps

which other parties of the context are involved and not only the direct use value of the user.

To conclude, this paper shows that in addition to direct use experiences, indirect use experiences also contribute to the holistic phenomenological service experience of customers. We argue that customers can experience smartphone apps either by directly or indirectly (e.g. through friends) using an app. Both direct and indirect use experiences affect the experienced process, outcome, time, and location of apps and are thus essential for the co-creation of the service experience.

6.1 Managerial implications

Our study has two types of implications for managers. First, although direct and indirect use experiences have similarities, there are differences that need to be taken into account when managers seek to develop their services and facilitate favorable customer use experiences. The differences between direct and indirect use experiences appear lie in the ability of service providers to facilitate or manage customer use experiences and value co-creation. Direct use experiences relate to the user being in direct contact with the app or app service, the technical features of apps, as well as the smartphones themselves. The implication for managers is that service providers have

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contact with their customers via the apps they provide. For example, app features and smartphone compatibility are relevant factors in use experience, so companies tend to focus on these when developing apps (Hall, 2013).

In indirect use experiences, companies do not have direct access to users or potential users. Most indirect users are unknown to the service provider. However, the indirect user may have very strong value-in-use experiences of an app they have never used. To illustrate, users might evaluate an app such as WebMD, which was designed to provide information about diseases and symptoms, positively in general. However, if a user has just recovered from a stressful health condition, then (s)he might be averse to even hearing about the app and would not evaluate it favorably. Thus, the implication for app developers and managers is that in addition to the direct use experiences, the experiential realms of users and potential users influence their app use experiences. Therefore, managers and app developers should examine the social contexts in which app use experiences take place, as well as how users make sense of their app use experiences.

Second, this research argues that customer discernment and appreciation of innovative services are fluid and determined by the customer's personal use experiences. Customers not only discern the outcome of new service concepts as benefits but also are sensitive to the entire use experience phenomenon, which includes the process, temporal and spatial dimensions of experiences. Thus, the strategic aim of service innovation managers (app developers) should be to enable positive use experiences with the innovative features in their services, rather than being restricted to technological or firm-based considerations in designing service innovations (Aarikka-Stenroos and Jaakkola, 2012; Teixeira *et al.*, 2012). Schembri (2006, p. 385) captures this sentiment in claiming, "products, whether they are predominantly goods or services are essentially experiences."

In summary, this study demonstrates to managers and app developers that although it is important to design excellent technical features of apps, it is also vital to appreciate that apps can be used in a number of ways that lead to both direct and indirect use experiences. Direct use experiences may be managed, but indirect service experiences are beyond the management of service providers and are influenced by the subjective and individual everyday life contexts of users. Based on findings, we encourage service providers to pay attention to both direct and indirect use experiences because both are relevant for the customer's overall holistic use experience and both affect value co-creation.

6.2 Limitations and further research

This study used a two-phase research design. The first phase had homogenous respondents, while the second phase included different respondents with a greater variety of life contexts. The number and types of apps covered in this study represent a small fraction of the total number of apps available globally. Further research should use versatile types of research settings with different types of sample groups and a variety of methods to gain a deeper understanding of the influence of individual everyday lives on app use experiences.

This study focuses on a specific type of service experience: use experience. Our findings are related to direct and indirect use experiences, and are based on the thematic questions, what, how, when and where, and therefore cover only a small fraction of the versatile themes in app business. Accordingly we would encourage service researchers to conduct further analysis of the mostly unexplored subject of app use experience. In particular, the social dimension of indirect use experience,

such as app experiences within a community or in a specific event, consumer behavior, and, brand-related apps are future areas of research to explore co-created app service experiences. For managerial purposes, future research on indirect use experiences, and how customers co-create value through such experiences, is a vital research area.

References

Aarikka-Stenroos, L. and Jaakkola, E. (2012), "Value co-creation in knowledge intensive business services: a dyadic perspective on the joint problem solving process", *Industrial Marketing Management*, Vol. 41 No. 1, pp. 15-26.

Abrahams, R.D. (1986), "Ordinary and extraordinary experience", in Turner, V.W. and Bruner, E.M. (Eds), *The Anthropology of Experience*, University of Illinois Press, Urbana, IL, pp. 45-73.

Akaka, M.A., Vargo, S.L. and Lusch, R.F. (2013), "The complexity of context: a service ecosystems approach for international marketing", *Journal of International Marketing*, Vol. 21 No. 4, pp. 1-20.

Arnould, E. and Price, L. (1993), "River magic: extraordinary experience and the extended service encounter", *Journal of Consumer Research*, Vol. 20 No. 1, pp. 24-45.

Ayres, L. (2008), "Semi-structured interview", in Given, L.M. (Ed.), *The SAGE Encyclopedia of Qualitative Research Methods*, SAGE Publications Inc., Thousand Oaks, CA, pp. 811-812.

BBC (2013a), "Your guide to the BBC news android app", available at: http://news.bbc.co.uk/nol/ukfs_news/hi/newsid_9620000/newsid_9626100/9626103.stm (accessed November 20, 2013).

BBC (2013b), "Your guide to the BBC iPhone application", available at: http://news.bbc.co.uk/nol/ukfs_news/hi/newsid_8660000/newsid_8668000/8668044.stm (accessed November 20, 2013).

Bellman, S., Potter, R.F., Treleaven-Hassard, T., Robinson, J.A. and Varan, D. (2011), "The effectiveness of branded mobile phone apps", *Journal of Interactive Marketing*, Vol. 25 No. 4, pp. 191-200.

Berry, L.L., Carbone, L.P. and Haeckel, S.H. (2002), "Managing the total customer experience", *MIT Sloan Management Review*, Vol. 43 No. 3, pp. 85-89.

Bitner, M.J. (1992), "Servicescapes: the impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 No. 2, pp. 57-71.

Bolger, N., Davis, A. and Rafaeli, E. (2003), "Diary methods: capturing life as it is lived", *Annual Review of Psychology*, Vol. 54, February, pp. 579-616.

Carù, A. and Cova, B. (2003), "Revisiting consumption experience: a more humble but complete view of the concept", *Marketing Theory*, Vol. 3 No. 2, pp. 267-286.

Chandler, J.D. and Vargo, S.L. (2011), "Contextualization and value-in-context: how context frames exchange", *Marketing Theory*, Vol. 11 No. 1, pp. 35-49.

Dube, A. (2014), "Becoming happy with 'Angry' Birds: customers' phenomenological service experience of virtual games", in Kandampully, J. (Ed.), *Customer Experience Management: Enhancing Experience and Value Through Service Management*, Kendall Hunt, Dubuque, IA, pp. 363-368.

Edvardsson, B., Enquist, B. and Johnston, R. (2005), "Cocreating customer value through hyperreality in the prepurchase service experience", *Journal of Service Research*, Vol. 8 No. 2, pp. 149-161.

Edvardsson, B., Enquist, B. and Johnston, R. (2010), "Design dimensions of experience rooms for service test drives: case studies in several service contexts", *Managing Service Quality*, Vol. 20 No. 4, pp. 312-327.

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Edvardsson, B., Tronvoll, B. and Gruber, T. (2011), "Expanding understanding of service exchange and value co-creation: a social construction approach", *Journal of the Academy of Marketing Science*, Vol. 39 No. 2, pp. 327-339.

European Commission (2014), "The €63 billion app boom. Nearly 5 million jobs in European app sector by 2018, says EU report", available at: http://europa.eu/rapid/press-release_IP-14-145_en.htm (accessed March 27, 2014).

Grönroos, C. (2007), *Service Management and Marketing: Customer Management in Service Competition*, 3rd ed., John Wiley and Sons Ltd., Chichester.

Grönroos, C. and Ravald, A. (2011), "Service as business logic: implications for value creation and marketing", *Journal of Service Management*, Vol. 22 No. 1, pp. 5-22.

Grönroos, C. and Voima, P. (2013), "Critical service logic: making sense of value creation and co-creation", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 133-150.

Gummerus, J. (2013), "Value creation processes and value outcomes in marketing theory: strangers or siblings?", *Marketing Theory*, Vol. 13 No. 1, pp. 19-46.

Hall, B. (2013), "Your app is not sticky enough", available at: www.ideatoappster.com/your-app-is-not-sticky-enough/ (accessed December 12, 2013).

Heinonen, K. (2004), "Reconceptualizing customer perceived value – the value of time and place", *Managing Service Quality*, Vol. 14 Nos /2/3, pp. 205-215.

Heinonen, K. and Strandvik, T. (2009), "Monitoring value-in-use of e-service", *Journal of Service Management*, Vol. 20 No. 1, pp. 33-51.

Heinonen, K., Strandvik, T., Mickelsson, K.J., Edvardsson, B., Sundström, E. and Andersson, P. (2010), "A customer-dominant logic of service", *Journal of Service Management*, Vol. 21 No. 4, pp. 531-548.

Helkkula, A. (2011), "Characterising the concept of service experience", *Journal of Service Management*, Vol. 27 No. 3, pp. 367-389.

Helkkula, A. and Holopainen, C. (2011), "Service innovation as an experience: differences between employee and user narratives", in Sundbo, J. and Toivonen, M. (Eds), *User-Based Innovation in Services*, Edward Elgar, Cheltenham and Manchester, pp. 281-302.

Helkkula, A. and Kelleher, C. (2010), "Circularity of customer service experience and customer perceived value", *Journal of Customer Behaviour*, Vol. 9 No. 1, pp. 37-53.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012a), "Characterizing value as an experience: implications for service researchers and managers", *Journal of Service Research*, Vol. 15 No. 1, pp. 59-75.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012b), "Practices and experiences: challenges and opportunities for value research", *Journal of Service Management*, Vol. 23 No. 4, pp. 554-570.

Hellén, K. and Gummerus, J. (2013), "Re-investigating the nature of tangibility/intangibility and its influence on consumer experiences", *Journal of Service Management*, Vol. 24 No. 2, pp. 130-150.

Holbrook, M.B. and Hirschman, E.C. (1982), "The experiential aspects of consumption: consumer fantasies, feelings and fun", *Journal of Consumer Research*, Vol. 9 No. 2, pp. 132-140.

Holloway, B.B., Wang, S. and Parish, J.T. (2005), "The role of cumulative online purchasing experience in service recovery management", *Journal of Interactive Marketing*, Vol. 19 No. 3, pp. 54-67.

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Johnston, R. and Clark, G. (2001), *Service Operations Management*, Prentice Hall, London.

Kellogg, D. (2011), "Mobile apps beat the mobile web among US android smartphone users", available at: www.nielsen.com/us/en/newswire/2011/mobile-apps-beat-the-mo (accessed February 3, 2014).

Klaus, P. and Maklan, S. (2012), "EXQ: a multiple-item scale for assessing service experience", *Journal of Service Management*, Vol. 23 No. 1, pp. 5-33.

LaSalle, D. and Britton, T.A. (2003), *Priceless: Turning Ordinary Products into Extra-Ordinary Experiences*, Harvard Business School Press, Boston, MA.

Leipämaa-Leskinen, H. (2011), "Cultural analysis of dieting consumers' construction of bodies and identities", *Qualitative Market Research: An International Journal*, Vol. 14 No. 4, pp. 360-373.

Lovelock, C. and Wirtz, J. (2007), *Services Marketing: People, Technology, Strategy*, 6th ed., Pearson/Prentice Hall, Upper Saddle River, NJ.

Lusch, R. F. and Vargo, S.F. (2006), "Service-dominant logic: reactions, reflections and refinements", *Marketing Theory*, Vol. 6 No. 3, pp. 281-288.

Menon, K. and Bansal, H.S. (2007), "Exploring consumer experience of social power during service consumption", *International Journal of Service Industry Management*, Vol. 18 No. 1, pp. 89-104.

Meyer, C. and Schwager, A. (2007), "Understanding customer experience", *Harvard Business Review*, Vol. 85 No. 2, pp. 116-126.

Monti, E. (2013), "Million dollar expense: buying out the app store", available at: http://gigaom.com/2013/09/29/million-dollar-expense-buying-out-the-app-store/ (accessed October 7, 2013).

O'Brien, D. (2004), "The epistemology of perception", available at: www.iep.utm.edu/e/epis-per.htm#SH3c (accessed November 22, 2013).

Ostrom, A.L., Bitner, M.J., Brown, S.W., Burkhard, K.A., Goul, M., Smith-Daniels, V., Demirkan, H. and Rabinovich, E. (2010), "Moving forward and making a difference: research priorities for the science of service", *Journal of Service Research*, Vol. 13 No. 1, pp. 4-36.

Pareigis, J., Edvardsson, B. and Enquist, B. (2011), "Exploring the role of the service environment in forming customer's service experience", *International Journal of Quality and Service Sciences*, Vol. 3 No. 1, pp. 110-124.

Pareigis, J., Echeverri, P. and Edvardsson, B. (2012), "Exploring internal mechanisms forming customer servicescape experiences", *Journal of Service Management*, Vol. 23 No. 5, pp. 677-695.

Patricio, L., Fisk, R.P., Cunha, J.F. and Constantine, L. (2011), "Multilevel service design: from customer value constellation to service experience blueprinting", *Journal of Service Research*, Vol. 14 No. 2, pp. 180-200.

Patterson, A. (2005), "Processes, relationships, settings, products and consumers: the case for qualitative diary research", *Qualitative Market Research: An International Journal*, Vol. 8 No. 2, pp. 142-156.

Payne, A., Storbacka, K. and Frow, P. (2008), "Managing the co-creation of value", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 83-96.

Pine, B.J. and Gilmore, J.H. (1998), "Welcome to the experience economy", *Harvard Business Review*, July-August, pp. 97-105.

Pine, B.J. and Gilmore, J.H. (1999), *The Experience Economy: Work is Theatre and Every Business a Stage*, Vol. 76 No. 4, Harvard Business School Press, Cambridge, MA.

Racherla, P., Furner, C. and Babb, J. (2012), "Conceptualizing the implications of mobile app usage and stickiness: a research agenda", available at: http://ssrn.com/abstract=2187056 (accessed September 29, 2013).

Reimer, A. and Kuehn, R. (2005), "The impact of servicescape on quality perception", *European Journal of Marketing*, Vol. 39 Nos /7/8, pp. 758-808.

Rubalcaba, L., Michel, S., Sundbo, J., Brown, S.W. and Reynoso, J. (2012), "Shaping, organizing, and rethinking service innovation: a multidimensional framework", *Journal of Service Management*, Vol. 23 No. 5, pp. 696-715.

Sandström, S., Edvardsson, B, Kristensson, P. and Magnusson, P. (2008), "Value in use through service experience", *Managing Service Quality*, Vol. 18 No. 2, pp. 112-126.

Schembri, S. (2006), "Rationalizing service logic, or understanding services as experience?", *Marketing Theory*, Vol. 6 No. 3, pp. 381-392.

Schmitt, B.H. (1999), *Experiential Marketing: How to Get Customers to SENSE, FEEL, THINK, ACT and RELATE to Your Company and Brands*, The Free Press, New York, NY.

Shankar, A., Elliott, R. and Goulding, C. (2001), "Understanding consumption: contributions from a narrative perspective", *Journal of Marketing Management*, Vol. 17 Nos 3/4, pp. 429-453.

Siemieniako, D. and Kubacki, K. (2013), "Female students' drinking seen through collages and diaries", *Qualitative Market Research: An International Journal*, Vol. 16 No. 3, pp. 296-314.

Silverman, D. (Ed.) (2013), "Issues in research design", in *Doing Qualitative Research: A Practical Handbook*, SAGE Publications Inc., Thousand Oaks, CA, pp. 43-68.

Stokes, D. and Bergin, R. (2006), "Methodology or 'methodolatry'? An evaluation of focus groups and depth interviews", *Qualitative Market Research: An International Journal*, Vol. 9 No. 1, pp. 26-37.

Teixeira, J., Patricio, L., Nunes, N.J., Nobrega, L., Fisk, R.P. and Constantine, L. (2012), "Customer experience modelling: from customer experience to service design", *Journal of Service Management*, Vol. 23 No. 3, pp. 362-376.

Thompson, C., Locander, W. and Pollio, H. (1989), "Putting consumer experience back into consumer research: the philosophy and method of existential-phenomenology", *Journal of Consumer Research*, Vol. 16 No. 2, pp. 133-146.

Troianovski, A. (2013), "Apps: the new corporate cost-cutting tool", available at: http://online.wsj.com/news/articles/?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424127887324678604578342690 (accessed April 7, 2013).

Valberg, J.J. (1992), *The Puzzle of Experience*, Clarendon Press, Oxford University Press, Oxford.

Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1-17.

Vargo, S.L. and Lusch, R.F. (2008), "Service-dominant logic: continuing the evolution", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1-10.

Vargo, S.L., Maglio, P.P. and Akaka, M.A. (2008), "On value and value co-creation: a service systems and service logic perspective", *European Management Journal*, Vol. 26 No. 3, pp. 145-152.

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THE RIPPLE EFFECT: INTENDED AND UNINTENDED APP EXPERIENCES

Apramey Dube, Anu Helkkula and Tore Strandvik

*This chapter conceptually examines customer experiences with smartphone apps and presents **the Ripple Effect** as a metaphor for the multiple experiences that customers have with apps. We suggest that customers have a number of experiences, which can be either intended or unintended by the app developers. Intended experiences refer to those app experiences that are in line with what the app developers expected the customers to have. The unintended experiences are in turn such experiences that the app developers did not expect the customers to have and that are often hidden to them. Therefore, as a metaphor, the Ripple Effect represents the intended and unintended experiences as ripples originating as customer experiences from individual service offerings: in this case, the smartphone app. Customers evaluate service offerings based on both intended and unintended experiences. The unintended experiences may be hidden to service providers and represent a rich source of innovation ideas.*

CUSTOMER EXPERIENCES WITH SMARTPHONE APPS

Both researchers and practitioners have paid attention to differences in how service providers intend the customers to use services, and how the customers actually use them (Grönroos and Gummerus, 2014; Heinonen, Strandvik and Voima, 2013; Grönroos and Voima, 2013). Currently, service providers are more and more interested in customers' experiences. However, to date, little is known about the differences between intended experiences (as intended by the service provider) and how customers actually experience service. In this chapter, we focus on both the intended and the actual customer experiences of smartphone apps.

Apps are downloadable software programs (Racherla, Furner and Babb, 2012), which provide specific service to the customers. They have emerged as one of the most popular service offerings in recent times. More than one million apps are offered by the two major app marketplaces: Apple's App store and Android's Google Play markets. Apps are developed by firms, as well as individual enthusiasts, who wish to float their business idea through apps as they are a relatively simple and easy-to-use marketing channel. App developers get ideas for their apps from their own everyday lives, feedback from friends and family, as well as from specific requests by companies. Many companies seek to develop apps as an extended platform, in addition to physical and website channels, to offer their services. Examples of such apps are banking apps (e.g. Citibank), airline apps (e.g. Lufthansa, KLM), and retail chain apps (e.g. H&M). Furthermore, a large number of apps have been developed by individual enthusiasts to address a specific challenge or to provide a niche benefit to the user. For example, the Runkeeper app measures the customers' running statistics, such as the number of kilometers run and time taken, and assists in posting these results on social

networking sites. Another example is the "Sing!" App: it provides the user with the opportunity to sing karaoke with a randomly paired singing partner around the world.

One of the key reasons for the emerging popularity of apps is the ease of use and close user contact. Apps are stored in the customers' smartphones and are thus available to a user irrespective of the time and place (Dube, 2014). Thus, apps are not temporally and spatially constrained, like most other services, and they are accessible to customers any time and from anywhere in their everyday lives. Therefore, we have chosen smartphone apps as the context of this chapter to illustrate the intended and actual customer experiences.

The purpose of this study is to discuss and compare conceptually how service providers intend customers to experience apps and how customers actually experience them. We provide examples of app experiences, where there is a clear difference between the intended and the actual experiences; subsequently, we highlight the role of unintended experiences.

INTENDED AND UNINTENDED EXPERIENCES

Apps are developed by companies for a number of reasons, such as to reduce costs or to increase revenues from an additional channel. App developers, like any service provider, design apps as solutions to satisfy what they would consider one or several customer needs that can be met with the service (Bellman et al., 2011; Racherla et al., 2012). Ideas for app development can come from several sources; they may stem from personal reflections on needs and wants, from peer feedback or from observations of customer practices, or from existing offerings in the market (von Hippel, 1988, 2001; von Koskull, 2009). In most cases, app developers have a vision of how the app will be experienced by customers. These expected or *intended experiences* by app developers are described as app use descriptions in app market places and home websites. For example, the website of travel service provide Skyscanner describes the different experiences customers can have with the Skyscanner app, which include checking flight prices, hotel accommodations, and car rental service (Skyscanner, 2014). Customers can read about the potential experience that they could derive from a particular app before downloading it. The descriptions of the intended experiences generally focus on positive aspects and highlight the potential benefits for the customer, since they aim to convince the customers to download the app.

When customers experience apps, they derive their experiences from their own personal contexts. Customer-Dominant Logic (CDL) put forth by Heinonen et al. (2010) argues for contextually grounded customer experiences where customers experience service offerings in different ways depending upon their personal contexts. In the case of mobile services, Gummerus and Pihlström (2011) propose service use experiences to be contextually grounded in customers' contexts. Apart from the intended experiences, customers can also have completely new and unexpected experiences from apps, which have not been conceived by app developers. We refer to these unexpected (from the service providers' point of view) customer experiences as *unintended experiences*.

Let us illustrate the phenomenon of intended and unintended experiences from an example of app experience. WhatsApp is a popular messaging service app, which is intended to be experienced as a personal messenger for contacting friends. Providing messaging services for a small annual fee, the app has emerged as a replacement for traditional messaging service provided by telecom operators. In addition to the intended personal messaging experience, WhatsApp is also experienced as an innovative communication medium for marketing and political campaigns. To the surprise of WhatsApp developers, the app was recently used as a life saver. A surgical operation was conducted in India using WhatsApp, where a severed hand was salvaged. The surgery was performed by a doctor who needed help and expert advice from his mentor for conducting emergency surgery, and he used the WhatsApp for instant communication with the mentor (Parmar, 2013). In this case, WhatsApp was experienced as a medical emergency life saver, a role which the developers might not have envisaged for the app. Thus, in addition to app experiences, which are intended by app developers, app users also create app experiences, which are unintended by developers but derived by users from their everyday life contexts.

Service providers also notice that when customers experience services (in this context, apps), they do not experience all the built-in features or potential uses of apps. Thus, apart from actual experiences (portion of intended experiences realized by customers), there is a component of the intended experiences that may not actually be experienced by the customers. These are the intended experiences by the service provider, which are *not experienced* by the customers. Such potential experiences are facilitated by the app, but the customer never experiences them. This can happen if the customers do not understand how to use a feature or *do not need* to experience certain features. As an example, the British Broadcasting Corporation (BBC) World News app provides a number of services to its customers. These services entail watching news videos, listening to the news in audio format in various languages, taking quizzes and playing general knowledge games, and providing the ability to send photos and videos of events to the BBC, which customers perceive to be newsworthy. It is to be noted here that customers may not use all these features (for example, sending newsworthy photos and videos might not be used often), and customers may experience the app through only some of its available features.

Based on this conceptual comparison, we argue that both service providers and customers have a partial view of app experiences. Service providers focus on the intended app experiences and are mostly unaware of the unintended app experiences. The customers in turn may experience only a portion of the intended experiences and thus may even be unaware of some app experiences that were intended by the service provider. Figure 1 illustrates comparisons between intended and actual customer experiences:

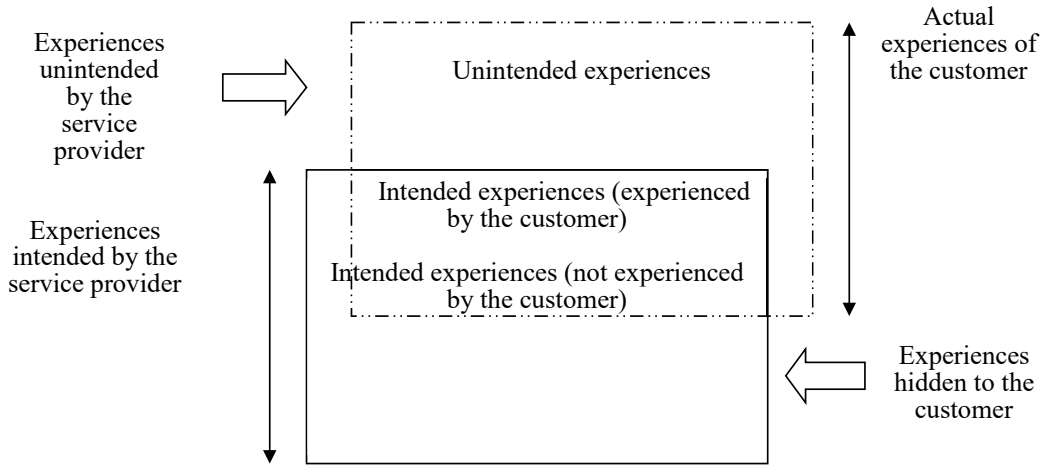


Figure 1. Comparisons between the intended and the actual customer experiences

THE RIPPLE EFFECT

When customers experience smartphone apps, they derive not one but many experiences from individual apps. We understand customer experiences to be subjective, unique, and influenced by individual customer contexts and events (Helkkula, Kelleher and Pihlström, 2012; Schembri, 2006). Consequently, multiple customer experiences are shaped by different events and the evolving contexts of individual customers.

Therefore, we suggest that an app acts as a trigger for customers to experience a number of experiences, and such triggering is akin to hitting the calm surface of a lake with a single stone. When the stone touches the water's surface, it creates multiple ripples or waves, which expand outwards from the point where the stone hit the water. Using this analogy, we conceptualize the phenomenon of multiple experiences with a single service as *the Ripple Effect*.

The Ripple Effect is a metaphor that refers to the multiple experiences customers may derive from an individual app. The ripples or waves generated in the Ripple Effect refer to multiple experiences, some of which are intended or expected by the app developers. Many of these experiences may be unintended by the app developers, but customers experience them in their own unique ways. Different customers may have different unintended experiences, which are characterized as different ripples. The further a ripple is from the core (where the stone hits the water), the more unintended the experience is from the service providers' point of view. This concept is illustrated by the customer experience of a smartphone app, Talking Tom. This app features a virtual pet cat, which the customer has to take care of as if it were a real pet. The intended experience of Talking Tom is to provide a virtual pet experience, which the customer derives by feeding, bathing, and playing with the virtual cat. An unintended

experience of this app could be that the customer who is taking care of Tom might devote too much time to the app, thus neglecting his/her relationship partner. This causes the partner to become jealous and creates tension between the two partners in the relationship. Thus, an unintended customer experience of Talking Tom, which is in this case a negative experience, entails creating a rift between couples.

Figure 2 illustrates the Ripple Effect:

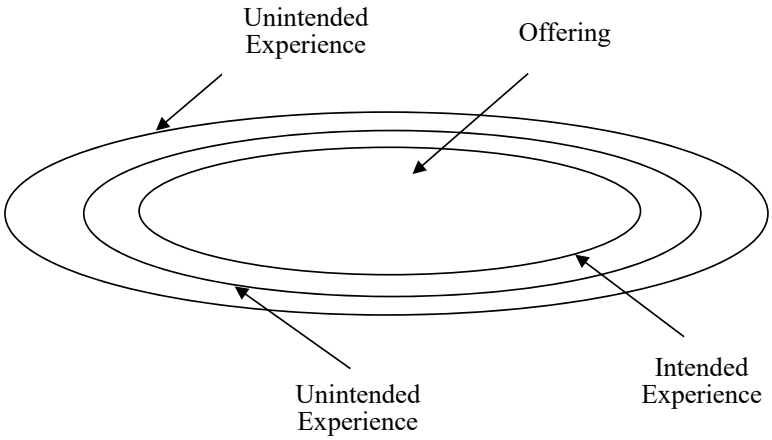


Figure 2. The Ripple Effect

From the app developers' perspective, the unintended experiences from different customers represent multiple ripples, moving further away from the core or intended experience of the app. Thus, from the perspective of the service provider, the Ripple Effect should be seen in relationship to the experiences that consider all/many users rather than individual ones. In this case, there might be a number of unintended experiences when aggregating customers. On the other hand, for individual customers, the ripples reflect innovative and multiple experiences that a particular customer derives from a specific app. A photo-taking app can be experienced as a simple photo taker (intended experience), or it can be experienced as an innovative mirror, where it replaces a pocket mirror in checking one's personal makeup (unintended experience). In this interpretation, we are interested in how profoundly the app changes the customer's life. In a similar vein, an elderly father might feel that his experience in apps plays a role in strengthening the father-daughter relationship he has with his daughter. His daughter may ask him for recommendations for new apps that she can experience. If the father invests a substantial portion of his time in researching apps and passing on the information to his daughter, he may feel that apps have become a channel through which his daughter makes him feel useful or included in her life.

The unintended experiences aggregate over different customers, and they are spread out in individual customers' lives as well. From a provider's point of view, the aggregate unintended experiences from a number of customers are more insightful in providing ideas for innovation. Customers create a rich pool of experiences, which may be unintended by the

service provider. However, from the customer's perspective, they may be very valuable in their individual contexts. Furthermore, unintended customer experiences can be triggered by unusual events or situations, such as an accident, as in the case of the surgery conducted with the help of WhatsApp that was discussed at the beginning of this chapter. In conclusion, we suggest that the customers' overall holistic experience includes both intended and unintended experiences and customers share both types of experiences among peers, on social media, and other avenues.

CONTRIBUTIONS AND IMPLICATIONS FOR BUSINESS AND RESEARCH

Customers create value for themselves from experiences that take place in their everyday life contexts. This book chapter argues that apps can act as a trigger for multiple customer experiences, which may be intended or unintended by the app developers.

The phenomenon of the Ripple Effect (which has both intended and unintended experiences) has four key implications for businesses and researchers:

Customer experiences (including both intended and unintended experiences) form the basis for customer evaluations

Customers evaluate offerings based on their experiences, which may consist of both types of experiences: intended and unintended. Frequently, customer evaluations are more significant for service providers when unintended experiences are present because companies do not have access to such experiences; they are often hidden from the service provider. Furthermore, companies base their assessment of customer evaluations only on intended experiences, which present an incomplete picture of the reasons behind product/service success or failure.

Discovering unintended experiences

Unintended experiences occur in customers' everyday lives and are often unknown to the service providers. In particular, service providers can benefit from discovering positive unintended experiences of customers for improving their services. Such experiences can be explored by observing everyday customer experiences, which include both intended and unintended components. Service providers can conduct focus group interviews and/or request customers to report their experiences in the form of diary narratives, where customers record their everyday experiences with the services. Also, customers share both intended and unintended experiences on social networking sites, which may have an influence on both existing and potential customers. Unintended experiences, in particular, can be accessed by companies by using social media to collect customer-to-customer communication.

Unintended experiences provide ideas for innovations

Unintended experiences include unique and innovative methods in which customers experience offerings. Frequently, unintended experiences reveal the hidden or tacit needs and wants of customers, which are not explicit to companies. Thus, managers can potentially

develop ideas for improving their products or services by accessing the unintended experiences of customers. As unintended experiences are unique, individual customers can provide unique innovation ideas, which can then be replicated for a larger number of customers.

Experiences intended by the service providers but not experienced by the customers highlight customers' value contexts

Some intended experiences by the service providers are never even experienced by the customers in reality. These cases occur either because the customers do not have sufficient knowledge of all the potential experiences that they can derive from particular services or they do not feel the need to enjoy such experiences. Thus, the not-experienced intended experiences illustrate the mismatch between the service provider and the customers' understandings of customer value. Service providers should analyze the reasons why a customer may not take advantage of certain potential experiences. Subsequently, efforts should be made to make such potential experiences more attractive for customers so that they can experience them in reality and then evaluate these services favorably for the service providers.

To conclude, customers have multiple app experiences, which we have labeled as the Ripple Effect of experiences in this chapter. Service providers and customers have different understandings of customer experiences. In addition to the experiences intended by the service providers, the customers also have unintended experiences. Additionally, a portion of the intended experiences by service providers are not even experienced by the customers in reality. Both unintended and not-experienced intended experiences have implications for service providers in the form of customer evaluations and obtaining ideas for innovations.

REFERENCES

Bellman, S., Potter, R.F., Treleaven-Hassard, T., Robinson, J.A. and Varan, D. (2011). The effectiveness of branded mobile phone apps. *Journal of Interactive Marketing*, 25, 191–200.

Dube, A. (2014). Becoming happy with "Angry Birds": Customers' phenomenological service experience of virtual games. In J. Kandampully (Ed.), *Customer experience management: Enhancing experience and value through service management*, (pp. 363–368). Dubuque, IA: Kendall Hunt Publishing Company

Grönroos, C. and Gummerus, J. (2014). The service revolution and its marketing implications: service logic vs. service-dominant logic. *Managing Service Quality,* 24(3), 206–229.

Grönroos, C. and Voima, P. (2013). Critical service logic: making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 41(2), 133–150.

Gummerus, J. and Pihlström, M. (2011). Context and mobile services' value-in-use. *Journal of Retailing and Consumer Services*, 18, 521–533.

Heinonen, K., Strandvik, T. and Voima, P. (2013). Customer dominant value formation in service. *European Business Review*, 25(2), 104–123.

Heinonen, K., Strandvik, T., Mickelsson, K. J., Edvardsson, B., Sundström, E. and Andersson, P. (2010). A customer-dominant logic of service. *Journal of Service Management*, 21(4), 531–548.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012). Characterizing value as an experience: implications for service researchers and managers. *Journal of Service Research*, 15(1), 59–75.

von Hippel, E. (1988). *The Sources of Innovation*. New York, NY: Oxford University Press.

von Hippel, E. (2001). Perspective: user toolkits for innovation. *Journal of Product Innovation Management*, 18(4), 247–257.

von Koskull, C. (2009). *Use of customer information: An ethnography in service development*. Helsinki: Hanken School of Economics.

Parmar, R. (2013). Quick-thinking doctor uses mentor's WhatsApp tips to save laborer's hand. *Times of India*. Available at: http://timesofindia.indiatimes.com/city/mumbai/Quick-thinking-doctor-uses-mentors-Whatsapp-tips-to-save-labourers-hand/articleshow/22933875.cms (accessed 1 October 2013).

Racherla, P., Furner, C. and Babb, J. (2012). Conceptualizing the implications of mobile app usage and stickiness: a research agenda. Available at SSRN: http://ssrn.com/abstract=2187056 or http://dx.doi.org/10.2139/ssrn.2187056 (accessed 29 September 2013).

Schembri, S. (2006). Rationalizing service logic or understanding services as experience? *Marketing Theory*, *6*(3), 381–392.

Skyscanner (2014). Skycanner: Download our apps. Available at: http://www.skyscanner.fi/mobile.html (accessed 6 November 2014).

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MIND THE GAP: A COMPARISON BETWEEN CUSTOMER EXPERIENCES FROM USING APPS AND APP DEVELOPER EXPECTATIONS ABOUT THESE EXPERIENCES

Purpose – In recent years, apps have emerged as one of the most popular service used with digital devices. During app design, developers create different app functionalities based on an understanding of how customers will use and benefit from an app. However, customers' use and experience of apps can be very different from what the app developers conceived them to be. Consequently, the purpose of this paper is to compare and explore the match between customers' experiences from using apps versus app developers' expectations of them.

Design/Methodology/Approach –The empirical data consists of (a) 23 semi-structured interviews that illustrate different types of customers' service experiences with using smartphone apps, and, (b) app store descriptions, provided by app developers, of apps used by the respondents.

Findings – The findings show different types of use experiences customers have with smartphone apps. They include direct use experiences (physical self-experiences) or indirect use experiences (imaginary use experiences or use experiences of other customers). Furthermore, customers may have experiences that were expected by app developers, as well as, experiences that were not. This paper identifies four types of experience combinations with smartphone apps.

Research Implications – This study contributes to service research by comparing and matching customers' experiences from using smartphone apps with the app developers' expectations of them. The study shows that in addition to direct use experiences, customers also accumulate indirect use experiences that may be either expected or unexpected for app developers

Practical Implications – The four types of experience combinations represent a versatile framework that app developers can use to map out all possible experience combinations customers may have while using their apps. It is vital for app developers/researchers to gain an understanding of these possible types, because they influence customers' final evaluations of the apps. In addition, the enhanced understanding will help app developers to refine their communications about apps to potential customers.

Originality/value –This research is one of the first attempts to combine customers' direct and indirect use experiences of apps with app developer expectations about such experiences.

Key words – Service experience, use experience, smartphone apps

Paper type – Research paper

1.0 Introduction

Apps are software programs that are downloaded and used on digital devices to provide customers an interface through which to perform various activities in their everyday lives (Dube and Helkkula, 2015; Kim et al., 2015). Use of apps can lead to customer value creation in diverse contexts, such as banking, shopping, news and information, entertainment, and exercise. In recent years, apps have emerged as one of the most popular services with digital devices. This popularity is partly attributed to customers' easy access to them, as well as to independence from time and place restrictions in using apps (Dube, 2014).

During app design, developers create different functionalities based on an understanding of how customers will use and benefit from the app. This understanding of customer use and possible benefits may emerge from market research or developers' own notions of possible app use. However, customers' use and experience of apps can be significantly different from what the app developers conceived them to be. This can occur because each customer uses the app in his/her own service context. Since value creation is embedded in customers' experiences (Vargo & Lusch, 2017, 2008), service experiences emerging from app use may have an impact on customer value creation. Therefore, it is vital for app developers/researchers to gain an understanding of the different possible types of experiences that customers may have, and that influence final evaluations of the apps. To explore this linkage, this paper investigates customers' service experiences in the empirical setting of their use of smartphone apps.

From service research perspective, apps can be conceptualised as service platforms that can be used by customers for value creation. Service use is a central phenomenon through which the service experience emerges (Pareigis et al., 2012; Helkkula, 2011). The term 'service use' is used to represent the actors' (in this paper, 'customers'') integration of resources for value creation (Vargo & Lusch, 2017; 2004) in a service system.

There is wide consensus in service research that service use leads to value creation as the outcome of such use (Ostrom et al., 2015). However, there is a missing link between service use and value creation. This missing link is the customer's interpretation of service use within their context. Such sense-making within the customer's own context is characterised as the service experience (Vargo & Lusch, 2008; Helkkulla, 2011), that results in value creation.

Moving the focus to the service provider, customers' service experiences are crucial in determining their evaluation of service. Service providers wish for customers to have service experiences that result in an ideal service evaluation. Therefore, service providers have a conceptualisation of an 'expected' or 'desired' experience that they anticipate customers to have. However, customers may have service experiences service providers do not expect

(unexpected experiences). Again, it is important to note that the labels 'expected' and 'unexpected' are referring to the service providers' expectations of customers' service experiences.

The two aspects of service experience – whether they emerge for customers out of direct or indirect use and whether they are expected or unexpected by service providers – have linkages to and implications for each other. Existing service research has, however, paid little attention to comparing these two aspects of service experience. Consequently, the purpose of this paper is to compare and explore the match between customers' experiences from using apps versus app developers' expectations of them. Apps and their service experiences are therefore chosen as the empirical context of this study as they offer a rich opportunity to investigate customer transformation in a non-intrusive and everyday life context.

This paper is structured as follows. First, a review of customers' experiences from using apps is presented. Use experiences are presented as components of the service experience and highlight two distinct types of use experiences – direct and indirect use experiences. Second, the paper describes the methodology and empirical data relating service experiences of smartphone apps used in this study. Third, the paper presents the four types of different service experience combinations that customers may have with smartphone apps. The findings illustrate the distinct experience combinations with excerpts from respondent quotes from the empirical interviews. Fourth, in the discussion section, the paper elaborates on the implications for service experience research and provides managerial implications. Last, the paper concludes with limitations and suggestions for future research.

2.0 Types of potential experiences customers' have from using smartphone apps

Researchers have broadly understood the consumption of service in terms of 'service use'. In traditional service research, service use was restricted to customer interactions with the service process. Initial focus on the customer-service process interaction was in the 'service encounter', where the customers 'experience' service through use (Solomon et al., 1985; Grönroos and Gummerus, 2014; Grönroos, 2006). In the service encounter, service providers can interact directly with customers and are able to influence the ways in which customers will use and experience service. However, putting the focus back on the customer as the subject of the experience, researchers have highlighted the importance of pre-purchase and post-purchase service use experiences (Hellen & Gummerus, 2013; Thompson et al., 2005). In pre-purchase use, customers may imagine potential service use and evaluate the perceived benefits of such use (see customer-perceived-value, Heinonen, 2004). On the other hand, post-purchase use involves service use that does not include interactions with the service provider,

but does include evaluation of the service as well as the decision to use it (Hellen & Gummerus, 2013).

Another classification that influences service use is based on direct and indirect interactions with the service provider (Grönroos & Ravald, 2011; Grönroos & Voima, 2013). In this suggested model, service interaction is divided into three spheres. First, the supplier sphere includes all the processes that are required to be able to provide service to customers, such as training, developing a software platform, technological readiness, and establishing payment systems among others. The second sphere, called the joint sphere, includes direct interactions between customers and service providers. In the joint sphere, customers and service providers can see each other's processes. The third sphere, called the customer sphere, is where customers continue service use outside of direct interactions with the service provider. Therefore, several customer processes in this sphere may be invisible to the service provider. In the app use context, the customer sphere is much more dominant than the joint sphere, as most of the interactions happen between the customer and the app. This classification of supplier sphere, joint sphere and customer sphere is based on the type of interactions between supplier and service provider, i.e. direct (joint sphere), or indirect (supplier and customer spheres).

Both these classification models, which influence service use, are based on focal points which are from the service providers' perspective e.g. the point of purchase or the type of interaction and visibility that service providers can have with customers and their value creating processes. This paper uses a third type of classification of service use and related use experiences (Dube & Helkkula, 2015). This classification is based on the realisation of service use, whether the use is physical, tangible and performed by the customer, or whether it is imaginary, mental and not physically performed by the customer. The two types of service use and use experiences that emerge from this classification are termed direct use (experiences) and indirect use (experiences).

2.1 Direct and indirect use experiences

This paper defines *direct use experiences as those service use experiences that occur with physical service use by the customer themselves*. This implies that such use experiences emerge via service use realised through interactions that involve physical and observable actions. An example of direct use experience is the experience of withdrawing money from an ATM machine. The direct use of the machine involves putting the bank card in, following the instructions, punching the code and then retrieving the cash. All these actions are performed physically by the customer as part of the service process.

In the context of app use, *direct use experiences are those that emerge for customers from personal and physical use of apps*. These include searching for an app in app stores, downloading apps, using apps by touching (or voice commanding, or other gestures) their various functionalities, as well as deletion of apps. In all these cases, customer must physically interact with their smartphone. Barr et al. (2015) have shown that users use smartphones to avoid burdening the brain with analytical thinking and treat them as part of the 'extended mind'. However, in these results, smartphone use refers to direct use, where users physically use smartphones to check the internet and access information.

In contrast to direct use experiences, customers may also undergo indirect use experiences. This paper defines *indirect use experiences as all those experiences that customers sense or are exposed to, but that do not emerge from personal and physical use by customers themselves*. Therefore, indirect use experiences include all such experiences that are not direct use experiences. There are two major dimensions of indirect use experiences: (1) non-personal experiences, which include all experiences not focused on the customer's own experiences, but instead on the experiences of other customers; and (2) imaginary experiences, which do not involve physical use, but are instead imaginary in nature. Extending the example of previous cash withdrawal, an example of an indirect use experience is when a customer is travelling to a foreign country, they may imagine that a foreign ATM might swallow their bank card , leaving them stranded without cash. Such an imaginary thought may be based on a past direct use experience or based on stories about such incidents happening with other customers. Alternatively, the customer may imagine cash withdrawal in the foreign country to be an effortless experience, and thus decide to carry no foreign currency, minimising risk of losing cash.

In the app use context, there are also two types of indirect use experiences. The first includes imaginary experiences that do not involve physical use of the app (i.e. the app is not searched, downloaded, interacted with through touch or other sensory gestures, or deleted. Imaginary experiences, however, may include thinking about a potential direct use experience (e.g. reminiscing about a past app use or envisioning a future app use). The second type includes non-personal experiences that encompass getting acquainted (by listening, reading, or watching) with other users' direct use experience.

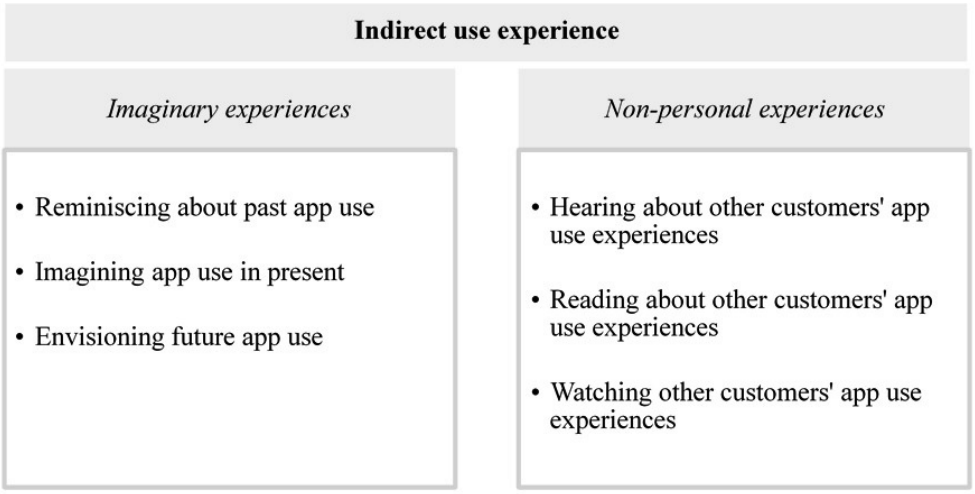


Figure 1 shows examples of direct and indirect use experiences with apps, based on the author's observations.

Table 1: Examples of direct and indirect use experiences of apps

Examples of direct use experiences of apps	Examples of indirect use experiences of apps
- ***Personal & physical experience***: Searching for an app in app stores	- ***Non-personal experience***: Hearing about the direct use experiences of other app users
- ***Personal & physical experience:*** Downloading an app from app stores to a personal app account	- ***Non-personal experience:*** Reading about the direct use experiences of other app users
- ***Personal & physical experience:*** Downloading an app from app stores/a personal app account on to a smartphone	- ***Non-personal experience:*** Observing other users directly using their apps
- ***Personal & physical experience:*** Opening an app on a smartphone	- ***Imaginary experience***: Thinking about an app, its download/deletion options, its pricing or its features
- ***Personal & physical experience:*** Checking out (by opening and using) the features of an app	- ***Imaginary experience:*** Imagining the experience of using an app yourself
- ***Personal & physical experience:*** Using the app by touching the smartphone screen, by voice commands or by gestures	- ***Imaginary experience:*** Imagining the experience of some other user using an app
- ***Personal & physical experience:*** Moving an app icon around from one location to another on the smartphone screen	- ***Imaginary experience:*** Reminiscing about a past app use experience
- ***Personal & physical experience:*** Deleting an app from a smartphone	- ***Imaginary experience:*** Envisioning the use of an app in the future

As described in Table 1, direct use experiences involve personal and physical use of an app, whereas indirect use experiences involve either imaginary use of the app or being informed of another user's experiences.

2.2 Expected and unexpected service experiences

Returning to the linkage between service use and service experience, it can be easily inferred that service experience has its roots in service use. This means that customers' experiences in a service setting originate from service use (which may be direct or indirect in nature).

Based on the above discussion, when comparing the service providers' and customers' perspective, service experiences may be expected (by service providers), or unexpected (by service providers) (Dube et al., 2015). Expected experiences are defined as those service experiences that occur for customers and were anticipated by the service providers. Expected service experiences may be favorable or unfavorable to the service providers, i.e. customers may like or dislike those experiences. However, such expected experiences are not surprising to service providers and concepts such as servicescape (Berry et al., 2006; Bitner, 1992) and customer experience modeling (Texeira et al., 2012; Patricio et al., 2011) largely focus on such experiences. The expected experiences concept has deep underpinnings in the notion of 'staged experiences' where the service provider is the director of the 'service theatre' in which experiences are enacted for the customer (see Grove et al., 1992; Grove & Fisk, 2004; Lindberg-Repo & Dube, 2015)

Unexpected service experiences, on the other hand, are those experiences that occur for customers, but were not anticipated by the service providers. Such experiences may often remain hidden from the service providers; however, they also play a crucial role in customer value creation (Dube et al., 2015). Therefore, the challenge for service providers is to uncover unexpected experiences to understand customer value creation holistically. Such unexpected experiences are beyond 'staging' by service providers, as they emerge from individual customers' everyday life contexts. Since only a narrow slice of this everyday life is visible and managerially relevant to service providers (Heinonen et al., 2015; 2010), a large number of unexpected service experiences are surprising for the service providers.

In the context of app use and experiences derived from such use, expected experiences are those the app developers had in mind when designing the app and its features. Therefore, expected experiences are those that originate from use of app features. The app developer's idea of expected experiences can be determined by reading the app descriptions and 'value proposition' for the potential app user while searching and downloading apps.

In contrast, unexpected experiences are those that originate from app use but may spread beyond what app developers had considered. Since app developers may be largely concerned with the experiences largely derived from the use of app features, such unexpected experiences

may be unanticipated by app developers. Such experiences cannot be read in the app descriptions, but become apparent in customers' descriptions of their own app experiences.

Table 2 presents several examples of expected and unexpected service experiences with the same apps used by respondents in this study.

Table 2: Examples of expected and unexpected app experiences with the same apps

App	Description in app store (experience expected by app developer)	Possible customer experiences unexpected by app developer
Talking Tom (iOS)	*Adopt Tom as a cute kitten and take care of him every day. Make sure he gets enough food and sleep, take him to the toilet, and keep him happy, smiling and laughing. You can pet and poke Tom, and even speak to him - he repeats everything you say in his cute, funny voice! Tom even has a collection of fun mini games to play - puzzle games, action games, adventure games, and even a sport game. There's something for everyone!*	**Negative unexpected** experience: Weakening relationships, as customer is deeply engaged in taking care of virtual pet while not giving enough time or engagement with actual relationships.
Tarla Dalal Recipe (Android)	*Whether you are an amateur or an expert, whether you are looking for Indian or international recipes, whether you are seeking indulgence or health-oriented cooking, the Tarla Dalal App is sure to meet your requirements.*	**Positive unexpected** experience: Customer gets nostalgic about making a childhood food using the app. To share the positive emotion, customer calls another customer to reminisce and tell them about the app. This word-of-mouth publicity, resulting from nostalgia, is a positive **unexpected** experience from the app developer's perspective.

Skype (iOS)	*Skype keeps the world talking. Say "hello" with an instant message, voice or video call – all for free, no matter what device they use Skype on. Video calls – Don't just hear the cheers, see them! Get together with 1 or 24 of your friends and family on a HD video call.*	**Negative unexpected** experience: Customer finds that app does not convey emotions effectively, leading to **unexpected** experiences of perceived deterioration in relationships.
Block Puzzle (Android)	*"Block Puzzle" is a fun and classic block game! And our Block Puzzle is not just that. It is more - simple and addictive! Once you start, you will not stop playing. Just have a try, you will love it!*	**Positive unexpected** experience: App is a favorite among family members, who play together with the app. This leads to **unexpected** positive experiences of strengthening family relationships.
Sudoku (iOS)	*Sudoku for beginners and advanced players alike, with unlimited grids on or offline, 6 difficulty levels ranging from "easy" to "diabolical," daily challenges, and a beautiful ergonomic design. Sudoku with no distractions. Fast: no lengthy intros or slow animations.*	**Negative unexpected** experience: Customer finds the app uninteresting and not beneficial, leading to the **unexpected** experience of them not using the app anymore.
Angry Birds (Android)	*Angry Birds features challenging physics-based gameplay and hours of replay value. Each level requires logic, skill and force to solve.*	**Negative unexpected** experience: Customer finds the app un-innovative and boring, leading to the **unexpected** experience of them deleting the app from their smartphone.

Temple Run (Android)	*Test your reflexes as you race down ancient temple walls and along sheer cliffs. Swipe to turn, jump and slide to avoid obstacles, collect coins and buy power ups, unlock new characters, and see how far you can run!*	**Positive unexpected** experience: Customer with a broken leg gets an unexpected pleasant feeling of imaginary exercise by playing the game.
WhatsApp (Android)	*WhatsApp uses your phone's Internet connection to let you message and call friends and family. Switch from SMS to WhatsApp to send and receive messages, calls, photos, videos, documents, and Voice Messages.*	**Positive unexpected** experience: Doctors in remote regions use the video call feature to conduct emergency surgery in consultation with a senior doctor in the city.
H&M app (Android)	*The H&M app – shopping made easier! Browse, shop and keep an eye on the latest trends anytime and anywhere with our new app.*	**Negative unexpected** experience: Customer finds the app redundant, as it does not fit their shopping behavior – an **unexpected** experience
CamScanner (Android)	*CamScanner helps you scan, store, sync and collaborate on various contents across smartphones, iPads, tablets and computers.*	**Positive unexpected** experience: Customer uses the app innovatively for office work when regular scanner is not available. Gets praised by boss and feels good – an **unexpected** experience

2.3 Key concepts and analysing service experiences from two different perspectives

The previous sections of this paper presented four key concepts: direct and indirect use experiences, and unexpected and unexpected experiences. All four reflect different ways to conceptualise customers' service experiences. However, there is a crucial shift in perspective when analysing direct/indirect use experiences as opposed to expected/unexpected experiences.

The classification of direct versus indirect use experiences is based on physical versus imaginary service use and one's own versus other customers' use. This implies that the distinction between direct and indirect use experience hinges on the customer's perspective, not the provider's. The customer can have both direct or indirect use experiences during interactions with the service provider or in their own sphere.

On the other hand, the classification of expected versus unexpected experience is based on the service provider's perspective. This distinction stems from the assumptions the provider makes about service experiences customers may have. Those experiences that match these assumptions are expected experiences, whereas those that do not are unexpected experiences. It is crucial to point out that in this paper, the terms 'expected' and 'unexpected experiences' refer to the app developers' expectations. For the customer, all such experiences emerge from the customers' everyday contexts.

Table 3 lists the key concepts, their definitions, whose perspective they adopt, and explanations for them in the context of app use.

Table 3: Key concepts and their explanations

Key concept	Definition	Whose perspective?	Explanation in app use context
Direct use experience	*A service use experience that occurs with physical service use by the customer themselves*	Customer	Derived from downloading, opening, using app functionalities, or deleting apps E.g. *use experience of watching a video on YouTube*
Indirect use experience	*An experience that customers sense or are exposed to, but that does not emerge from personal and physical use by customers themselves*	Customer	Derived from (a) imaginary experiences, or (b) experiences of other customers E.g. *listening to a friend's recommendation of an app and evaluating whether to use it or not*
Expected experiences	*Those service experiences that occur for customers, and were anticipated by the service providers*	Service provider/app developer	Those experiences that the app developers had in mind when designing the app and its features E.g. *experience of using the camera app to take pictures*
Unexpected experiences	*Those service experiences that occur for customers but were not anticipated by the service providers*	Service provider/app developer	Those experiences that originate from app use but may spread beyond what the app developers thought of E.g. *experience of using the camera app as a pocket mirror*

As described in Table 3, the concepts of direct/indirect use experiences adopt the customers' perspective, whereas expected/unexpected experiences are based on the service providers' perspective. This paper attempts to analyse these two perspectives in one framework by comparing and matching the four types of service experiences.

3.0 Methodology

This paper presents an empirical analysis of service experiences of smartphone apps. Investigation of contextual customer experience has been extensively used in marketing (Goulding, 2005) and consumer studies (Goulding, 1999), where the aim is to interpret self-descriptions of consumer experiences (Zahavi, 2008; Thompson et al., 1989). Consequently, this study is based on customers' self-descriptions of their service experiences with smartphone apps, with a focus on the contexts in which those customers experience smartphone apps as service platforms.

To understand customer service experiences with smartphone apps, the author interviewed respondents using a semi-structured interview format with a conversational style (Stokes & Bergin, 2006; Silverman, 2013). The interviewer used a printed interview guide for covering the key themes of customer transformation in their service experiences. The themes covered were: (a) type and brand of smartphone; (b) names of apps used every day; (c) customer contexts in which apps are used; (e) changes in app knowledge over time; (f) evaluation of apps based on their use experiences; and (g) reasons for download, use and deletion of apps.

To investigate customer transformation via their service experience, respondents were randomly selected to represent ordinary smartphone users. The interviews were conducted in India in November and December 2013, and all the respondents conversed in their mother tongue, Hindi, during the interviews. In total, 23 respondents were interviewed, and they represented a mix of different ages, genders, professions and family contexts. The interviews lasted from 16 and 43 minutes, and they were subsequently transcribed and translated into English by the author. It is to be noted that the author is fluent in both Hindi and English.

After transcribing, the interviews were color-coded and subsequently reread, first as a whole and then in parts. and compared with each other. Two distinct types of service use experiences emerged from this analysis: (a) direct use experiences that related to the factual and observable experiences of customers themselves; and (b) indirect use experiences that included imaginary experiences or experiences of other customers, as narrated by the respondents.

In the next step, the app store descriptions for the apps used by the respondents were read and compared with the reported experiences by customers in their narratives. Based on this comparison, two distinct types of experiences emerged from the data. These two types related to whether the reported experiences were anticipated in the app descriptions (expected experiences) or whether the reported experiences were not anticipated in the app descriptions (unexpected experiences). When these two types were matched with the above-mentioned categories of use experiences, four distinct groups of experience combinations emerged from the analysis of empirical data. These four groups are described in the findings.

Table 4 presents the respondent details for the empirical study.

Table 4. App service experience interview respondents

#	Name*	Gender	Age	Phone Brand	App Platform	Education	Profession	Family Situation
1.	John	Male	20	Samsung Galaxy Grand	Android	Bachelors (pursuing)	Student	Single
2.	Alex	Male	29	Google Nexus 4	Android	Bachelors	Innovation Manager	Married
3.	Tajel	Female	26	Samsung Galaxy S3	Android	Masters	Industrial Designer	Engaged
4.	Monica	Female	60	Samsung Galaxy Note	Android	Bachelors	Homemaker	Married, Grandmother
5.	Phoebe	Female	31	iPhone 5	iOS	Bachelors	IT Engineer (Mobile UI Designer)	Single, Mother
6.	Jacob	Male	35	Samsung Note 2	Android	PhD	Manager (Environmental)	In a relationship
7.	Ann	Female	26	Sony Xperia Neo	Android	MBA	Manager (Manufacturing)	Single
8.	Carl	Male	33	Xolo Q800	Android	Masters	Lecturer (Mathematics)	Married, Father
9.	Joseph	Male	30	Nokia Lumia 910	Windows	Masters	Computer Programmer	Married, Father
10.	Tom	Male	17	Samsung Galaxy Ace S5830I	Android	School	Pupil	Single
11.	Ben	Male	16	Samsung Galaxy Mega	Android	School	Pupil	Single
12.	Luke	Male	15	Samsung Galaxy Grand	Android	School	Pupil	Single
13.	Silvia	Female	42	Micromax Canvas	Android	Masters	Research Officer	Married, Mother
14.	Betty	Female	38	Samsung Galaxy Grand	Android	Masters	Lecturer	Married, Mother
15.	Mark	Male	27	Samsung Galaxy	Android	Bachelors	Assistant Teacher	Single
16.	Mike	Male	24	Samsung Galaxy 4, Akash Tablet	Android	Bachelors	Assistant Teacher	Single
17.	Harry	Male	23	Karbonn A4 plus	Android	Bachelors	Undergoing teaching training	Single
18.	Kevin	Male	25	Samsung Galaxy 4	Android	Bachelors	Undergoing teaching training	Single
19.	Cecilia	Female	24	Nokia Lumia	Windows	Masters	Undergoing teaching training	Married
20.	Victor	Male	71	Karbonn Titanium, iPhone 4	Android, iOS	Bachelors	Retired Pharma Sales Manager	Married, Grandfather

21.	Adam	Male	29	Samsung gt19000	Android	MBA	Business Journalist	In a relationship
22.	Diana	Female	58	Micromax Phone, Samsung Galaxy Tab & Phone	Android	Masters	Senior Lecturer	Married, Mother
23.	Amy	Female	28	iPhone 4S	iOS	Masters	Researcher	In a relationship

*Names have been changed

4.0 Findings

Respondents' empirical narratives revealed that they experienced smartphone apps through direct use (physical and personal use). This involves opening apps on their smartphones, and interactions in the form of touching (or voice commanding) apps to perform some functions. In this paper, we classify direct use as including at least opening an app on a smartphone.

In addition to these direct use experiences, customers also experienced smartphone apps without physically using the apps, i.e. without opening the apps on their smartphones. Experiences that occur outside of direct use are called indirect use experiences. Customers can have indirect use experiences by utilizing other app users' experiences. In this case, customers observe other customers' use experiences by either hearing/reading about them or by watching them (in person or on media channels).

During their use experiences, customers also make sense of their experiences, where they evaluate the apps and the consequences of using them. This evaluation relates to both (a) features of apps relating to novelty, innovativeness, aesthetics and/or technology, and (b) value outcomes of app usage, which are embedded in customers' own everyday life contexts.

From the service provider (app developer) viewpoint, these experiences may be (a) anticipated or expected (customers should have these experiences), or (b) not anticipated or unexpected (customers should not have these experiences). It is important to note that the experiences are not expected or unexpected for the customers, as all the experiences emerge from their own contexts and app use.

4.1 Four types of experience combinations in smartphone apps use

Different combinations of use (direct or indirect) experiences and customer experiences (expected or unexpected) result in four distinct groups of experience combinations.

Next, each group is described in detail, with descriptions enriched with respondent quotes.

4.1.1 Type 1: Direct and expected experiences

Customers in this service experience group have direct use experiences with apps that lead to expected experiences resulting from an evaluation of direct use experiences. These can include customers evaluating the novelty features of the apps, as intended by the app developers.

Direct use experiences emerge from customers' own concrete app use experiences, where customers use their first-hand, personal experience to grasp the app features. An illustration of this was provided by Monica, a 60-year-old female, who described her enjoyment of the

novelty features of a gaming app, Block Puzzle, played by her. She took pride in showing that she had learned to move ahead in the game through her experiences. However, she also displayed her fear of finishing all the stages of the game and thus exhausting its novelty features.

> *'I enjoy playing Block Puzzle a lot. I have moved many stages ahead in the game; it's good entertainment. Each stage brings new challenges, and I feel a sense of achievement when I finish a stage. I wonder how I will get this much fun once I finish all the stages of the game?'*
>
> --- Monica, 60, direct and expected experiences

Monica evaluated her direct use experiences of playing the game as leading to entertainment and a sense of achievement. It is to be noted that these experiences were in line with what is expected by the game developers. Such expected experiences occur as a result of customers evaluating their direct experiences with respect to the novel and intriguing features of apps that interest them.

Another example of direct and intended experience was provided by a 58-year-old female, Diana, who described the experience of her office colleague. Diana worked in a government office and identified two types of workers. The first type avoid work and the second type learn from others' experiences. Diana identified her colleague as the second type of worker, who got inspired by Diana's smartphone app experiences. As a consequence, he bought his own smartphone and had direct use experiences of apps. These direct use experiences led to a positive and desired (by app developers) evaluation where the colleague found apps to be beneficial in everyday office work.

> *'There are two types of people in government jobs. One type are the ones who shirk work. The other type of people is those who are eager to learn! There is a new guy in my office; he is a good lad, willing to learn! He has been observing my smartphone and how I use it for a year now, and he recently told me that he has also bought a smartphone and realised that the apps provide many benefits in daily office work.'*
>
> --- Diana, 58, describing her colleague having direct and expected experiences

In a similar vein, Betty, a 38-year-old female, had direct use experiences of novelty features of apps that led to an expected experience. Betty, like Diana's colleague, was inspired by observing the app use experiences of her officemate Silvia. Therefore, she decided to visit a

smartphone shop and had direct use experiences of apps. Betty was fascinated by the features of smartphones she observed in the phone shop.

> *'I bought my smartphone after observing Silvia and her phone; I thought, 'This looks good.' I had to get a new phone anyway, so I bought a Samsung smartphone. When you go to the shop to buy a phone, you can try the example models and use the apps on them. You see so many dazzling smartphones and apps that you will never feel like buying a normal phone again.'*
>
> --- Betty, 38, direct and expected experience

Betty's smartphone adoption decision is noteworthy as it illustrates the two dominant factors in the adoption process: direct use experiences and 'designed' novelty features of smartphones. For both Betty and Diana's colleague, the outcome of the indirect concrete experiences, the decision to start using smartphones and apps, was anticipated and desired by app developers.

The three examples of app users noted above show cases where app users used their direct, concrete experiences to grasp and consequently reflectively evaluate those that were expected by app developers. Next, the paper presents examples of experience combinations where app users had direct use experiences of apps that led to experiences not expected by app developers.

4.1.2 Type 2: Direct and unexpected experiences

Customers in the second group also had direct app use experiences. In contrast to group 1, however, direct use experiences in this group led to customer experiences unexpected by app developers.

Jacob, a 35-year-old male, actively experimented with apps, thus creating direct use experiences for himself. He evaluated the apps based on his direct use experiences and did not think that all apps were valuable.

> *'I don't think that all apps are valuable. Take the example of Sudoku. When I search for Sudoku on the App Store, more than 180 Sudoku options come up. Now I don't know which one to take. Now I wanted to have Sudoku on my Android phone too, but the ones I found there were bad. I was so addicted to the one I have on my iPhone, that I found the new one bad! How long will you search to find the right one?"*
>
> --- Jacob, 35, direct and unexpected experiences

Jacob experimented with different Sudoku app options, but he evaluated the value of each one of them according to his direct use experiences. Furthermore, he lamented the lack of guidance in his evaluation of Sudoku apps and displayed little interest in continuing his active experimentation with those apps. Such an outcome is unexpected by app developers, highlighting the need for their apps to stand out among numerous similar app choices. Importantly, Jacob demonstrated the typical behavior of app users of not using apps anymore either when they do not continue to find the apps useful or once the novelty features of the app become routine and mundane.

Similarly, Alex, a 29-year-old innovation manager, experimented with apps and had direct concrete experiences focusing on innovative app features. He downloaded and deleted apps based on his evaluation of novelty features of apps during his concrete experiences.

> *'I have deleted Angry Birds and Temple Run from my phone. I know these are very popular apps. I downloaded them and played with them but then I got immensely bored so I deleted them. They were exciting in the beginning, but soon they get boring once you use them a lot.'*
>
> --- Alex, 29, direct and unexpected experiences

It is important to note that Alex's app experimentation included not just download, but also deletion behavior based on the novelty features of apps. This type of behavior is shared by many app users who download apps based on novelty features. The novelty wears off after repetitive concrete experiences of the app, and users may therefore stop using or even delete the app.

A more nuanced unintended outcome was experienced by Amy, a 28-year-old female. She had direct use experiences of apps; however, her experience evaluation was unintended by the app developers. Amy's direct use experience is composed of her personal experience of the Skype app and a subsequent evaluation of the experience wherein she deduced that the app provided her little benefit; rather, it negatively affected her relationships.

> *'I see a difference in using Skype on my phone compared to my laptop. In fact, I used to chat much more with my mother on Skype through the laptop. Now, when I send smileys on Skype through my phone app to my mother, who is chatting on Skype on her laptop, she can't see the smileys. I think the format for the smileys is different on the two systems, what she only sees is empty boxes. I feel I can't convey my emotions properly!'*
>
> --- Amy, 28, direct and unexpected experiences

Amy had concrete experiences of using communication apps such as Skype on her phone. Based on her reflective observation, Amy learned that use of Skype app has degraded her relationship quality with friends and family, specifically her mother. Amy critically evaluated the smileys that she types through her Skype app versus the smileys that her mother received on her laptop while text-chatting through Skype. As the smileys were not the same, she learned that she was unable to convey her emotions to her mother correctly through the Skype app. It is to be noted that such an outcome, although emerging from Amy's everyday life context, was probably unexpected by the Skype app developer.

In contrast to Amy's unexpected experience of a deterioration in relationship quality, Phoebe, a 31-year-old female, recounted a positive unexpected experience. An encounter with a food app recipe made her reminisce about her childhood in her grandmother's home, and she enjoyed the experience, even taking further action.

> *'I use this Tarla Dalal Recipe app and check out the recipes often. They have very good home recipes. Last week, I stumbled upon the recipe for making buknoo – a traditional spice mix that my granny used to hand-grind at home. While reading the recipe I fondly missed my granny – and decided why not relive her memory? So, I made the spice-mix and then called up my cousin, whom I have not talked to for a long time. We had spent so many delightful summer afternoons playing in the kitchen with our granny grinding this spice-mix. My cousin was so happy to chat and got excited to try out this app to make other delicacies from our childhood.'*
>
> --- Phoebe, 31, direct and unexpected experience

The food app developers and recipe content providers may have envisaged that the traditional home recipes they provide would evoke nostalgia in users. However, as this example shows, the extent of nostalgia can be deep and may lead to subsequent physical actions by a user seeking to further immerse themselves in the experience. Thus, the direct experience of using the food app for reading a recipe further triggers rekindling of childhood memories and leads to good word-of-mouth publicity. This publicity is a positive unexpected experience from the app developer's perspective.

The examples above describe direct use experiences of apps that result in unexpected experiences. Some such unexpected experiences, such as stopping use of or deletion of apps, may be visible to app developers. Other unexpected experiences, such as perceived effect on relationship quality, may be more hidden from app developers. Crucially, hidden unexpected

experiences also form part of customers' experienced value creation, and may in turn influence their evaluation of apps.

4.1.3 Type 3: Indirect and expected experiences

Customers in the third group of experience combinations had indirect app use experiences leading to expected experiences. In this case, customers do not have app use experiences arising out of direct use. Instead, customers may observe or get access to other customers' app use experiences, which are therefore characterised as indirect use experiences for them. Such indirect use experiences can be sourced from other customers with whom they are close, such as friends or family, or from impersonal venues such as advertisements in print, television or digital media.

Silvia, a 42-year-old female, observed the direct app use experiences of people around her. She described the state of today's society in an environment dominated by smartphones and apps.

> *'Because of smartphones, we have become e-social now! Nowadays nobody has to go and visit someone for 2-3 days or even in the evening. I am amazed to see even kids talking to each other through apps sitting in adjacent rooms. There was this nice term they told us at the workplace… ICT…. yes, because of all this ICT through smartphones, people have become e-social.'*
>
> --- Silvia, 42, indirect and expected experiences

Silvia conceptualized the state of social relations as being e-social (through smartphone app experiences) and, on reflection, identified information and communication technology (ICT) as the driver for the change. Although Silvia was amazed by the e-social development, there was an undertone of nostalgia for physical social interactions in her remarks. This nostalgia, however, was not a hindrance for Silvia, who was excited about the new technological developments, which may potentially push her to being a smartphone user. Such creation of awareness and excitement among new potential customers is an expected experience for app developers.

Going further from creation of excitement, Diana described her husband's indirect use experience, which led to the favourable and expected outcome of smartphone purchase. The husband had seen Diana's use experiences with WhatsApp, and then experimented with the app himself.

> '*My husband doesn't know much about smartphones. He sees me using WhatsApp and that convinced him to buy a smartphone too. I gave him some tips on WhatsApp in the beginning, but then this is such a thing where you learn by yourself. It's auto-learning: you practice more and you learn more.'*
>
> --- Diana, describing the experience combination of her husband, Indirect and expected experiences

Diana's husband learned through his experimentation with WhatsApp after watching his wife's experiences with it. Furthermore, the outcome of Diana's husband buying a smartphone and experimenting with WhatsApp, based on the concrete experiences of Diana, is an expected experience from the perspective of app developers, who have envisaged that more users will experiment with their apps when they have indirect experience of those apps through other users.

Amy described the expected experience of her father's indirect use experience, which was similar to Diana's husband's. Amy's father downloaded the Talking Tom app when Amy showed him how she used the virtual cat app:

> *'I have shown Talking Tom to everyone because I like it, and my father is quite amused by it. He finds it so ingenious and ridiculously funny. Even he downloaded Talking Tom on his Nokia phone after seeing my Tom. Sometimes we open both our Toms and let them mimic each other; it's so funny.'*
>
> --- Amy describing her father's experience combination, indirect and expected experiences

In this example, Amy's father experimented by downloading Talking Tom app (an intended outcome for app developers) upon seeing Amy's experiences with her app. Moreover, he shared his app experience with his daughter, whose concrete experience was the reason behind him downloading the app in the first place.

The above examples show customers observing direct use experiences of other customers, such as friends, family, and/or colleagues, in the form of indirect app use experiences for themselves. In this group, such indirect use experiences lead to experiences that are expected by app developers. This is a strong growth mechanism for app developers to influence and attract potential users to their apps.

4.1.4 Type 4: Indirect and unexpected experiences

The fourth and final group in this study consisted of customers having indirect app use experiences (through the direct use experiences of other customers). As in Group 3, the sources of indirect app use experiences may be the use experiences of other customers such as friends, family, colleagues, or unknown customers observed in media. In contrast to Group 3, however, such indirect app use experiences lead to experiences that are unexpected by app developers.

Victor, a retired app user included in this study, demonstrated indirect app use experiences when he observed that other customers could perform numerous tasks through apps. This observation, however, led Victor an experience outcome that was not favorable for app developers. Victor concluded that use of such apps would reduce his movements, and that would not be good for his health. Therefore, he decided to use only those apps that did not reduce his bodily movement.

> *'I have seen that people do many tasks nowadays through apps. You can book tickets, buy books, clothes, and do online banking through apps. But, if I do everything online, then how will my body get any exercise? I need to go out minimum 2-3 hours every day. For that, I collect small tasks, e.g. going to the bank, some grocery shopping, some visit to a government office. That is why I don't use these apps that cut my exercise; I only download those apps that will not replace my daily walk.'*
>
> --- Victor, 71, indirect and unexpected experiences

Victor foresaw the negative influence of having app experiences of certain apps that might reduce his mobility. Therefore, he only experimented with those apps that would potentially not impact his daily exercise, which he valued. Victor's conclusion about using only selected apps, derived from his observations of other customers, was a noteworthy unintended outcome for the app developers, with crucial ramifications for app download and usage by elderly users.

Another example of indirect use experience leading to unexpected experiences was exhibited by Monica, who evaluated her personality trait of being a hoarder. She extended this conceptualisation of herself to her app experiences as well, and blamed hoarding for her not deleting apps she never used. She ascribed her not deleting apps to a potential imaginary use through which she could derive some benefit in future.

> *'There are apps I have downloaded when somebody told me about them – but I never use them. I have never deleted any app, but why should I delete*

them? It feels they might be potentially used in the future; others seem to use them all the time! Maybe it also has something to do [with the fact] that I don't like to throw stuff away. I am quite a hoarder!"

--- Monica, 60, indirect and unexpected experiences

Strikingly, evaluation of self-identity (of being a hoarder) is an experience that app developers may not expect the app users to have. With her indirect use experiences, Monica could reflect on herself with reference to her not using the apps. It is to be noted that Monica did not delete apps because of potential value creation; novelty features were not relevant in her decision to keep apps in her phone. For app developers, such an experience and subsequent reflection is unexpected; however, it may not be negative if the customer does not delete the app.

If a customer downloads an app and subsequently does not actively use it, customer is not having direct use experience of the app. If the customer does not remember and does not think about the dormant app, they are also not having an indirect use experience of it. The challenge for app developers in these cases is to motivate the customer to start using the app and not let it stay dormant on the smartphone.

In another example, Cecilia, a working woman, suggested to her boss an innovative use of a scanner app to avoid the inconvenience of travelling for business at late hours. She described a situation where she came up with an innovative use of scanning app (based on hearing about others' use experiences) that achieved the desired value outcome. In addition, there was the unexpected experience of Cecilia feeling admired and appreciated by her boss for her intellect.

'*We were once returning from a business meeting to my hometown. After travelling around 45-50 kms, a business colleague (who I had met in the meeting) called and informed us that we had forgotten to give him certain business documents. We got so worried, because we had travelled quite a bit out of the city. I came to the rescue! I had heard about the Camscanner app, but had never used it myself. So, I suggested my boss download the app, scan all the pages, and e-mail them while travelling. We didn't have to go back and since then, my boss has become my deep appreciator – she says, "Wow, this app was very good; you saved the day!*"'

--- Cecilia, 24, indirect and unexpected experiences

It is important to note that Cecilia's indirect use experience of observing other customers' previous use of Camscanner app not only resulted in the immediate desired value outcome (scanning of pages), but also resulted in a long-term benefit. The phenomenon of Cecilia

feeling appreciated and proud of her app use idea was a positive unexpected experience that may not have been envisaged by the app developers.

To sum up, experience combinations in this fourth and final group were characterised by indirect use experiences leading to unexpected experiences.

4.2 Summary of findings

The findings show that customers have four different combinations of use experiences. These combinations may result from customers' using apps themselves, or from them observing/hearing about the use experiences of other customers. Those use experiences may be expected, as well as, unexpected by app developers. Table 5 shows the four groups of experience combinations, their characteristics and the type of use experience

Table 5: Experience combination groups of service experience of smartphone apps

Group	Respondent	Description of service experiences combination
Group 1: **Direct & expected experiences**	Monica	**Direct** use experience of playing gaming app leading to the **expected** experience of entertainment and a sense of achievement
	Diana's colleague	**Direct** use experience of using office apps leading to **expected** experience of finding them beneficial in everyday office work
	Betty	**Direct** use experience of trying out smartphone apps in a shop leading to **expected** experience of buying a smartphone for the first time
Group 2: **Direct & unexpected experiences**	Jacob	**Direct** use experience of Sudoku gaming apps. Absence of interesting and beneficial features led to the **unexpected** experience outcome of stopping searching for/using apps anymore
	Alex	**Direct** use experience of gaming apps. Over time, absence of new and interesting features led to the **unexpected** experience outcome of deleting the apps from the smartphone
	Amy	**Direct** use experience of Skype app. After repeated use, the realisation that the smartphone app failed to convey emotions as effectively as the desktop program, leading to the **unexpected** experience of perceived relationship deterioration
	Phoebe	

		Direct use experience of reading traditional recipes from a food app. This use experience triggered childhood nostalgia and led to further action of calling a cousin to reminisce and tell her about the app. This word-of-mouth publicity, triggered through a desire to indulge in nostalgia by sharing, was a positive **unexpected** experience from the app developers' perspective
Group 3: **Indirect & expected experiences**	Silvia	**Indirect** use experience of observing the general use of communication apps of other customers led to creation of awareness and excitement about new technology potentially pushed Silvia to be a smartphone user (**expected** experience for app developers)
	Diana's husband	**Indirect** use experience of observing the WhatsApp use experiences of his wife resulted in **expected** outcome of purchasing a smartphone and starting to use WhatsApp
	Amy's father	**Indirect** use experience of observing his daughter's use experiences of a virtual cat app of resulted in the **expected** outcome of downloading and starting to use the app
Group 4: **Indirect & Unexpected experiences**	Victor	**Indirect** use experiences of observing other customers' use experiences of utility apps such as online banking and ticket booking. Realization that such apps restrict daily walking and are not beneficial, leading to the **unexpected** outcome of not using these apps.

Monica	**Indirect** use experiences of observing others using some apps resulted in her downloading those herself, but never using them. On critical reflection she identified herself as a potential hoarder (**unexpected** experience for app developers) because she did not want to delete apps, as they might be useful in the future.

5.0 Discussion

The purpose of this paper is to compare and explore the match between customers' experiences from using apps versus app developers' expectations of them. The findings illustrate that app developers have a mental model of what experiences customers will have with their apps (as reflected in app descriptions in stores). However, customers have different types of experiences, only some of which match this mental model. This study shows that there are customer experiences which do not match the mental model and can be unexpected/surprising for app developers, both positively and negatively. It is crucial for app developers/researchers to try to tap and understand such unexpected experiences, as they play substantial role in app evaluation and value creation.

The two continuums described above, i.e. direct and indirect use experiences and expected and unexpected experiences, form four experience combinations. Therefore, this study contributes to service research by comparing and matching service use experiences with the service providers' expectations of them.

Customer value emerges irrespective of the nature of use experiences (direct versus indirect, or expected versus unexpected). It is to be noted that both direct and indirect use experiences are components of the service experience embedded in the customers' everyday life context (Dube & Helkkula, 2015). The distinction between 'direct' and 'indirect' use is based on whether the service was physically used or not. In a similar vein, both expected and unexpected experiences are happening for customers, irrespective of whether app developers (service providers) anticipated them or not. In the customers' sense-making, all types of use experiences are realised and influence customers' evaluation of service (Jaakkola et al., 2015; Tumbat, 2011; Schembri and Sandberg, 2002).

The findings highlight the subjective nature of service experience (Sandström et al., 2008; Helkkula et al., 2012; Lipkin, 2016) in putting forth four types of distinct experience combinations that customers may have with smartphone apps. Service providers often tend to overlook the subjective aspect of service experience and consider customers as a homogenous set for whom service experiences can be 'staged' or managed. From the service providers' perspective, customers' service experiences may be expected i.e. service providers have anticipated the customers to have those experiences. On the other hand, customers may also have unexpected experiences i.e. service providers did not anticipate customers to have such experiences (Dube et al., 2015). The unexpected experiences are also instrumental in customer value creation and consequently service (in this case, app) evaluation, along with the intended experiences (Dube et al., 2015). Since service experiences arise from the everyday life context of customers (McColl-Kennedy et al., 2015; Helkkula and Kelleher, 2010), researchers and

service providers must focus on understanding the customer everyday life context to minimise the unexpected experiences.

It is to be noted that several respondents (e.g. Monica) displayed more than one experience combination in their smartphone app use. Therefore, the occurrence of any experience combination is not determined by the intrinsic properties of the customer (such as attitude, innovativeness, ability to learn) as the subject of experience. These intrinsic properties influence the choice of experience combination; however, the same customer can adopt a different experience combination depending upon the context and type of service.

The individual everyday life contexts are thus a determining factor in whether customers will have direct or indirect use experiences, or whether they will restrict themselves to expected experiences or move beyond these to unexpected experiences. It is crucial to highlight that all these types of experiences are embedded in customer context; therefore, none of these experiences are outside the sense-making framework of the customer. However, service research has paid extensive attention to type 1, i.e. to direct and intended experiences (e.g. experience staging, experience management, service encounter management). Further advances in service research have highlighted the need to focus on type 2 (i.e. indirect but expected experiences) by advocating for imaginary experiences (Jaakkola et al., 2015; Meyer & Schwager, 2007), but existing studies are still restricted to the expected experiences.

It is crucial for service providers and researchers to also consider types 3 and 4, because these experience combinations still occur for the customer and are also vital in determining value creation. Unintended experiences frequently reveal the hidden needs that customers have but that are not yet anticipated by service providers. Therefore, by understanding unexpected experiences, service providers may also get innovative ideas to improve the functionality of their service platforms (e.g. app features) to encompass these experiences as well.

Figure 1 shows the 4 distinct types of experience combinations.

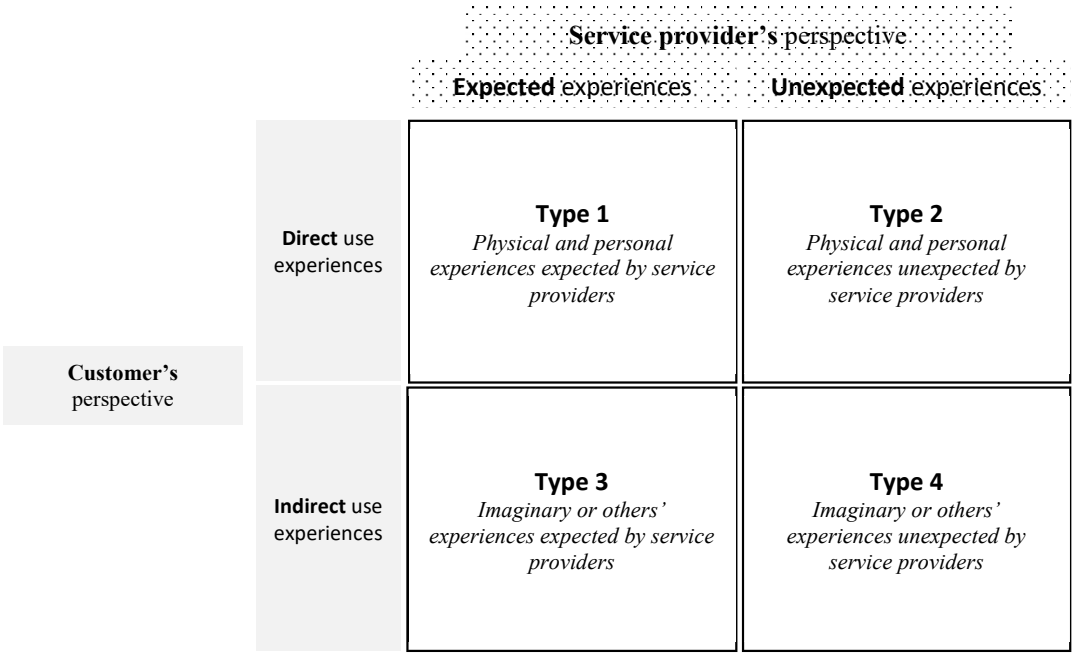


Figure 1: 4 groups of service experience combinations

With the advancement in technology, most of these direct use experiences are traceable, and can be monitored by service providers or app developers. It is to be noted that the fields of app design and app development focus on such direct use experiences with the aim to make them as intuitive, effortless and pleasing to the user as possible.

Indirect use experiences also reflect the growing calls to shift the focus of service experience research from the customer-company dyad to the customer in a social context (Alexander et al., 2018; Caru & Cova, 2015; 2003). As viewed through the social prism, customers may have indirect use experiences by interacting actively with or gaining knowledge about other customers' use experiences (Edvardsson et al., 2011). Such customer-to-customer exchange (both offline and online) is outside of the control of service provider; however, it is influential in customer service evaluation and value creation (Verhoef et al., 2009; Wu, 2007). Since indirect use experiences, by definition, are not physical or tangible, they are much more difficult for app developers to track and monitor

5.1 Managerial Implications

The four types of experience combinations can be used as a versatile analytical framework by app developers to evaluate potential service experiences that different customers will have with apps. This framework points out towards a need for broader managerial understanding of customer experience and a requirement for variety of methods to collect information about app use in the customers' contexts. It can be used by app developers to map out all possible experience combinations customers may have while using their apps. Mapping will be based on the type of use experience (direct or indirect) and whether the experience was expected or unexpected by app developers. This can vary according to individual customer characteristics as well as the service context and type of app. Consequently, app developers can classify their apps based on the type of use experience and develop apps that are specifically targeted to trigger specific kinds of experiences.

The experience combination of indirect and unexpected experiences with apps is largely unnoticed by app developers, as it is the most challenging to observe. Uncovering and understanding unexpected experiences can be a tricky process for app developers, as it involves going beyond the traditional ways of gaining customer insight. Here, app developers must expand their mental models (Vink et al., 2019) and go beyond the mere physical use of the app (which buttons were pressed, where the finger moved, etc.) to explore the meaning of the use and interpretation that the user gives to their experience. It is to be noted that this does not mean that app developers should not use latest technologies to uncover the physical use – instead the technologies go hand in hand, and in some cases augment the efforts to explore the user experience more holistically (see *virtualization of value systems*, Sebastiani & Paiola, 2010). Using research techniques that can aid app developers to discover the indirect experiences, specifically those that were unexpected by them, will help create a deeper understanding of the ways in which apps can be used. This enhanced understanding can then be communicated to customers (in app descriptions) to expand the attractiveness of apps to potential customers.

It is vital for app developers/researchers to gain an understanding of the four possible type of experience combinations, because these influence customers' final evaluations of the apps. Specifically, the four types of experience combinations pinpoint reasons for download to as well as deletion of apps from, customers' smartphones. As shown in the findings, the reasons for keeping or deleting an app are not limited to its features. Instead they are determined by the experiences (direct or indirect) of customers, and the same customer can either keep or delete the app depending upon the experience. Similar findings have been shown in the case of service innovations adoption where the same customer can either adopt or not adopt the

service innovation depending upon their experience (Edvardsson and Tronvoll, 2019; Corsaro et al., 2016; Witell et al., 2015)

Specific customers using a specific experience combination are more prone to app download, use and delete behaviour than others. The findings show direct use experiences influence whether customers will delete apps once they find that those apps are no longer useful (value outcomes) or when the novelty features of the apps wear off and the app experience decreases from extraordinary to ordinary. The wearing off of the novelty may also give rise to frustration as a negative emotion. While this may lead to complaints in other service contexts (Tax et al., 1998; Tronvoll, 2011), in the app context it may lead to deletion of an app.

On the other hand, indirect app use experiences may influence whether a customer will download apps because of awareness and curiosity. It is to be noted that downloading and use are expected experience outcomes, whereas deletion is an unexpected (and business unfriendly) experience outcome for app developers. Thus, an analysis of the type of app that is being offered and characteristics of potential customers who will use the app will be beneficial in anticipating the app download and deletion behavior of customers. This has huge implications for app development industry where the revenue streams are aligned with app downloads (in the case of paid apps) and continuous use of apps without deletion (in case of free apps where the revenues are generated through ad spends).

Furthermore, the four experience combination groups can be used to investigate service experiences in other service contexts as well. Although the model has been developed with app use as the context, its key features are based on customers' service use, making it versatile. The key elements of the model are based on the ways in which customers use service experiences to grasp different phenomena (either through direct or indirect use experiences) and transform them into outcomes (either expected or unexpected for service providers). Moreover, the direct versus indirect experiences and expected versus unexpected experiences categorisations are valid for all service contexts that provide ease of use and flexibility of access to customers. Therefore, future service contexts, e.g. in the fields of virtual reality and artificial intelligence, are also suitable for analysis under the service experience framework presented in this thesis.

5.2 Limitations and Further Research

The paper is based on a study of ordinary customers from a specific geographical area. Since the experience combinations are influenced by personal contexts, further studies are recommended to investigate service experiences with other types of customers and with other types of innovative service contexts that enable the emergence of indirect use experiences as well as unexpected experiences for service providers.

Furthermore, we suggest further research to explore in deeper detail the app download and deletion behavior of customers as linked to their experience combinations.

References

Alexander, M., Jaakkola, E. & Hollebeek, L. (2018), "Zooming out: Actor engagement beyond the dyadic", *Journal of Service Management*, Vol. 29 No. 3, pp. 333-351.

Barr, N., Pennycook, G., Stolz, J. A., Fugelsang, J. A. (2015), "The brain in your pocket: Evidence that Smartphones are used to supplant thinking", *Computers in Human Behavior*, Vol. 48, pp. 473-480.

Berry, L.L., Wall, E.A. and Carbone, L.P. (2006), "Service clues and customer assessment of the service experience: Lessons from marketing", *Academy of Management Perspectives*, May 2006, pp. 43-57.

Bitner, M.J. (1992), "Servicescapes: The impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 April 1992, pp. 57-71.

Carù, A. and Cova, B. (2015), "Co-creating the collective service experience", *Journal of Service Management*, Vol. 26 No. 2, pp. 276-294.

Carù, A. and Cova, B. (2003), "Revisiting consumption experience: A more humble but complete view of the concept", *Marketing Theory*, Vol. 3 No. 2, pp. 267–286.

Corsaro D., Sebastiani R., Mele C. (2016), "Practices of Service Innovation Diffusion", in Russo-Spena T., Mele C. and Nuutinen M. (Eds.), *Innovation in Practices: Perspectives and Experiences*, Springer, Switzerland, pp. 159- 179.

Dube, A. and Helkkula, A. (2015), "Service experiences beyond the direct use: indirect customer use experiences of smartphone apps", *Journal of Service Management*, Vol. 26 No. 2, pp. 224-248.

Dube, A., Helkkula, A. and Strandvik, T. (2015), "The Ripple Effect: Intended and Unintended App Experiences" in Gummerus, J. and von Koskull, C. (Eds.), *The Nordic School - Alternative Perspectives on Marketing and Service Management*, Hanken School of Economics, Helsinki, pp. 273-281.

Dube, A. (2014), "Becoming happy with "Angry" Birds: customers' phenomenological service experience of virtual games", in Kandampully, J. (Ed.), *Customer Experience Management: enhancing Experience and Value through Service Management*, Kendall Hunt, Dubuque, IA, pp. 363-368.

Edvardsson, B. and Tronvoll, B. (2019, in press), "How platforms foster service innovations", *Organizational Dynamics*, forthcoming.

Edvardsson, B., Tronvoll, B., and Gruber, T. (2011), "Expanding understanding of service exchange and value co-creation: a social construction approach", *Journal of the Academy of Marketing Science*, Vol. 39, pp. 327-339.

Goulding, C. (2005), Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research, *European Journal of Marketing*, Vol. 39 No. 3, pp. 294 – 308.

Goulding, C. (1999), Consumer research, interpretive paradigms and methodological ambiguities, *European Journal of Marketing*, Vol. 33 No. 9/10, pp. 859-873.

Grove, S.J. and Fisk, R. P., (2004), "Service theater: An analytical framework for services marketing" in Lovelock, C.H. and Wirtz, J. (Eds.), *Services Marketing: Text, Cases, and Readings*, 5th Edition, Prentice Hall, pp. 78-87.

Grove, S.J., Fisk, R. P., and Bitner, M. J., (1992), "Dramatizing the Service Experience: A Managerial Approach", in Swartz, T. A., Bowen, D. E. and Brown, S. W. (Eds.), *Advances in Services Marketing and Management*, Vol. 1, JAI Press, pp. 91-121.

Grönroos, C. and Gummerus, J. (2014), "The service revolution and its marketing implications: service logic vs service-dominant logic", *Managing Service Quality*, Vol. 24 No. 3, pp. 206-229.

Grönroos, C. and Voima, P. (2013), "Critical service logic: making sense of value creation and co-creation", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 133–150.

Grönroos, C. and Ravald, A. (2011), "Service as business logic: implications for value creation and marketing", *Journal of Service Management*, Vol. 22 No. 1, pp. 5-22.

Grönroos, C. (2006), "Adopting a service logic for marketing", *Marketing Theory*, Vol. 6 No. 3, pp. 317–333.

Heinonen, K. and Strandvik, T. (2015), "Customer-dominant logic: foundations and implications", *Journal of Services Marketing*, Vol. 29 No. 6/7, pp. 472-484.

Heinonen, K., Strandvik, T., Mickelsson, K.J., Edvardsson, B., Sundström, E. and Andersson, P. (2010), "A customer-dominant logic of service", *Journal of Service Management*, Vol. 21 No. 4, pp. 531-548.

Heinonen, K. (2004), "Reconceptualizing customer perceived value: The value of time and place", *Managing Service Quality*, Vol.14, No. 2/3, pp. 205-215.

Helkkula, A. (2011), "Characterising the concept of service experience", *Journal of Service Management*, Vol. 27 No. 3, pp. 367-389.

Helkkula, A., Kelleher, C. and Pihlström, M. (2012), "Characterizing value as an experience: Implications for service researchers and managers", *Journal of Service Research*, Vol. 15 No. 1, pp. 59–75.

Helkkula, A. and Kelleher, C. (2010),"Circularity of customer service experience and customer perceived value", *Journal of Customer Behaviour*, Vol. 9 No.1, pp. 37-53.

Hellén, K. and Gummerus, J. (2013), "Re-investigating the nature of tangibility/intangibility and its influence on consumer experiences", *Journal of Service Management*, Vol. 24 No. 2, pp. 130–150.

Jaakkola, E., Helkkula, A. & Aarikka-Stenroos, A. (2015), "Service experience co-creation: conceptualization, implications, and future research directions", *Journal of Service Management*, Vol. 26 No. 2, pp. 182-205.

Kim, S., Wang, R. and Malthouse, E. (2015), "The effects of adopting and using a brand's mobile application on customers' subsequent purchase behavior", *Journal of Interactive Marketing*, Vol. 31, pp. 28–41.

Lipkin, M. (2016), "Customer experience formation in today's service landscape", *Journal of Service Management*, Vol. 27 No. 5, pp. 678-703.

Lindberg-Repo, K. and Dube, A. (2015), *Titans of Service: Building strategic service leadership*, 2nd ed., Brand Audit Group, Helsinki.

McColl-Kennedy, J., Gustafsson, A., Jaakkola, E., Klaus, P., Radnor, Z., Perks, H. and Friman, M. (2015), "Fresh perspectives on customer experience", *Journal of Services Marketing*, Vol. 29 Nos 6/7, pp. 430-435.

Meyer, C. and Schwager, A. (2007), "Understanding customer experience", *Harvard Business Review*, February, pp. 117–126.

Ostrom, A., Parasuraman, A., Bowen, D., Patrício, L. and Voss, C. (2015), "Service research priorities in a rapidly changing context", *Journal of Service Research*, Vol. 18 No. 2, pp. 127-159.

Pareigis, J., Echeverri, P. and Edvardsson, B. (2012), "Exploring internal mechanisms forming customer servicescape experiences", *Journal of Service Management*, Vol. 23 No. 5, pp. 677–695.

Patrício, L., Fisk, R.P., Falcão e Cunha, J. and Constantine, L. (2011), "Multilevel service design: From customer value constellation to service experience blueprinting*", Journal of Service Research*, Vol.14 No. 2, pp. 180-200.

Sandström, S., Edvardsson, B, Kristensson, P. and Magnusson, P. (2008), "Value in use through service experience", *Managing Service Quality*, Vol. 18 No.2, pp. 112–126.

Sebastiani, R. & Paiola, M. (2010), "Rethinking service innovation: four pathways to evolution", *International Journal of Quality and Service Sciences*, Vol. 2 No. 1, pp.79-94.

Schembri, S. and Sandberg, J. (2002), "Service quality and the consumer's experience: towards an interpretive approach", *Marketing Theory*, Vol. 2 No. 2, pp. 189-205.

Solomon, M.R., Surprenant, C., Czepiel, J.A. and Gutman, E.G. (1985), "A role theory perspective on dyadic interactions: the service encounter", *Journal of Marketing*, Vol. 49 No. 1, pp. 99-111.

Silverman, D. (2013), "Issues in research design", in *Doing Qualitative Research: A Practical Handbook,* SAGE publications, Inc.*,* Thousand Oaks, CA, pp. 43–68.

Stokes, D. and Bergin, R. (2006), "Methodology or 'methodolatry'? An evaluation of focus groups and depth interviews", *Qualitative Market Research: An International Journal*, Vol. 9 No. 1, pp. 26-37.

Tax, S.S., Brown, S.W. and Chandrashekaran, M. (1998), "Customer evaluations of service complaint experiences: Implications for relationship marketing", *Journal of Marketing*, Vol. 62 April 1998, pp. 60-76.

Teixeira, J., Patrício, L., Nunes, N.J., Nóbrega, L., Fisk, R.P. and Constantine, L. (2012), "Customer experience modeling: from customer experience to service design", *Journal of Service Management*, Vol. 23 No. 3, pp. 362-376.

Thompson, D.V., Hamilton, R.W. and Rust, R.T. (2005), "Feature fatigue: when product capabilities become too much of a good thing", *Journal of Marketing Research*, Vol. 42 No. 4, pp. 431-442.

Thompson, C., Locander, W.B. and Pollio, H.R. (1989), "Putting consumer experience into consumer research", *Journal of Consumer Research,* Vol. 16 No. 2, pp. 133–147.

Tronvoll, B. (2011) "Negative emotions and their effect on customer complaint behaviour", *Journal of Service Management*, Vol. 22 No. 1, pp.111-134.

Tumbat, G. (2011), "Co-constructing the service experience: Exploring the role of customer emotion management", *Marketing Theory*, Vol.11 No. 2, pp. 187-206.

Vargo, S.L. and Lusch, R.F. (2017), "Service-dominant logic 2025", *International Journal of Research in Marketing,* Vol. 34, pp. 46–67.

Vargo, S.L. and Lusch, R.F. (2008), "Service-dominant logic: Continuing the evolution", *Journal of the Academy of Marketing Science*, Vol. 36, pp. 1–10.

Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1–17.

Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M. and Schlesinger, L.A. (2009), "Customer experience creation: determinants, dynamics and management strategies", *Journal of Retailing*, Vol. 85 No. 1, pp. 31-41.

Vink, J., Edvardsson, B., Wetter-Edman, K., & Tronvoll, B. (2019), "Reshaping mental models – enabling innovation through service design", *Journal of Service Management*, Vol. 30 No. 1, pp. 75–104.

Wu, C. H-J., (2007) "The impact of customer-to-customer interaction and customer homogeneity on customer satisfaction in tourism service—The service encounter prospective", *Tourism Management*, Vol. 28 No. 6, pp. 1518-1528.

Witell, L., Anderson, L., Brodie, R., Colurcio, M., Edvardsson, B., Kristensson, P., Lervik-Olsen, L., Sebastiani, R., Andreassen, T.W., (2015) "Exploring dualities of service innovation: implications for service research", *Journal of Services Marketing*, Vol. 29 No. 6/7, pp.436-441.

Zahavi, D. (2008), “Phenomenology”, in Moran, D. (ed.), *Routledge Companion to Twentieth-Century Philosophy*, Routledge, London, pp. 661-692.

Apramey Dube

Service Experience in Customers' Everyday Contexts

An Investigation of Customers' Experiences from Using Smartphone Apps

Smartphone apps have become the new universal language through which customers interact with service providers. We are in an app economy in which most everyday service experiences are mediated through apps. The devices that started this revolution, smartphones, have become deeply embedded in the lives of customers with little restrictions on time and place regarding their use. If a reader today pauses to check his or her mobile phone, it is likely to be a smartphone filled with various apps, some of which are used many times daily, whereas others are never used.

Never before has technology facilitated such a close and widely varied availability of service to customers, regardless of time and place. However, extant research remains highly influenced by traditional restraints of time and place in service provision. Specifically, a gap exists in investigating service experiences with an empirical service context that offers wide flexibility of time and space.

To address this research gap, this thesis presents an evolved conceptualisation of service experience derived from customer use of smartphone apps. Apps are conceptualised as service platforms without any time and space constraints and their ubiquitous presence in customers' everyday lives helps to illustrate the role of the everyday life in influencing service experiences.

The research design employed for this thesis comprised of three studies. In the pilot study, respondents were asked to write auto-narratives of their service experience with a particular smartphone app (BBC World News app). In the main study, 23 semi-structured narrative interviews were conducted in which respondents narrated their service experience with multiple apps in their everyday lives. In addition, a third source of empirical data included collection and analysis of app store descriptions of smartphone apps that respondents experienced.

The findings of this research contribute in expanding the prevailing understanding of service experience. They show that customers' service experiences include both direct use experiences (that require direct app use), as well as indirect use experiences (that do not require direct app use). Furthermore, customers have service experiences that were intended or unintended by service providers and several unintended experiences are hidden from them. These four types of service experiences form combinations that differ from each other in exhibiting different app download, use and deletion behaviour.

The indirect and unintended components of service experiences highlight an underutilised and scarcely investigated part of holistic service experiences. Although originating from app use, these findings are also applicable to newer service platforms that provide flexibility of time and place and ubiquitous ease-of-use. Therefore, the thesis recommends that service providers must keep in mind the potential indirect and unintended service experiences that customers may have with their service platforms.

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