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FLAWLESS DEVICES, FAULTY USERS

Finnish young adults' representations of smartphone usage

Master's Thesis
Stella Kallionpää
Aalto University School of Business
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Aalto University, P.O. BOX 11000, 00076 AALTO
www.aalto.fi

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Author Stella Kallionpää

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Abstract

Finnish smartphone users lead the global statistics of data usage. This makes them an ideal consumer group to research technology consumption practices. It has been estimated that consumers use their smartphones as much as one third of the time that they are awake. The device has become essential in everyday life as consumers have it always with them and it is always on.

Smartphone usage has been researched for example in terms of technology adaptation and desired functionalities, but the research on consumers' emotions towards technology is limited. The focus of this study is especially in the contradictions and paradoxes that Finnish young adults express in their narratives of their smartphones and smartphone usage. Past research on technology paradoxes, information technology development, postmodern consumption culture and social constructivism on technology serve as theoretical background for the study.

This study has been done by using qualitative research methods. The data consists of ten interviews and projective techniques including sentence compilations and autodriving. Young Finnish adults who live in big cities and have high education were selected for the interviews, as statistically they are heavy users of smartphones, thus making them interesting subject of technology paradox research.

The findings of this study outline the major mismatch in consumers' narratives: they perceive their smartphones as useful and capable devices but consider their own smartphone consumption as incapable and counterproductive, which results into feelings of distress, anxiety and guilt. This misusage appears in multiple forms, interpreted in four themes of guilt: using smartphones to procrastinate, damaging meaningful social relations with smartphone usage, misusing or overdosing the massive amount of content and not meeting the expectations to be available.

The narrative of flawless device and faulty user has implications both for consumer research and for management. The main contribution of this study is to widen the focus of academic legacy from the paradoxes of technology to the paradoxes of technology consumption. The study portrays the shift from consumers' perceptions of their smartphones as devices to perceptions of themselves as smartphone users. This offers a fruitful basis for further research on technology consumption, which is an inseparable part of postmodern life.

Keywords consumer narratives, smartphones, smartphone users, technology paradox, technology consumption, social constructivism on technology

Aalto-yliopisto
Kauppakorkeakoulu

Aalto-yliopisto, PL 11000, 00076 AALTO
www.aalto.fi

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Suomalaiset kuluttajat johtavat kansainvälisiä datankäyttötilastoja, mikä tekee heistä ihanteellisen kuluttajaryhmän teknologian käyttötapojen tutkimiseen. On arvioitu, että kuluttajat käyttävät älypuhelimiaan jopa kolmasosan valveillaoloajastaan. Älypuhelimesta on tullut olennainen osa jokapäiväistä elämää: kuluttajilla on se aina mukana ja se on aina päällä.

Älypuhelimen käyttöä on tutkittu esimerkiksi teknologian käyttöönoton ja siltä toivottujen ominaisuuksien näkökulmasta, mutta tutkimus teknologian herättämistä tunteista kuluttajissa on vähäistä. Tämä tutkimus keskittyy erityisesti niihin ristiriitoihin ja paradokseihin, joita suomalaiset nuoret aikuiset kuvaavat kertoessaan älypuhelimistaan ja älypuhelimen käytöstään. Aiempi tutkimus teknologiaparadokseista, informaatioteknologian kehityksestä, postmodernista kuluttajakulttuurista ja teknologian sosiaalisesta konstruktivismista luovat teoreettisen pohjan tälle tutkimukselle.

Tämä tutkimus on tehty kvalitatiivisin tutkimusmenetelmin. Aineisto koostuu kymmenestä haastattelusta sekä projektiivista aineistonkeruumenetelmistä, jotka sisältävät lauseentäydennykset ja kuvaharjoitukset. Haastateltavaksi valittiin korkeasti koulututtuja nuoria suomalaisia aikuisia, jotka asuvat isoissa kaupungeissa. Tilastollisesti he ovat älypuhelinten suurkuluttajia, mikä tekee heistä mielenkiintoisen teknologiaparadoksitutkimuksen kohteen.

Tutkimuksen löydös on merkittävä ristiriita kuluttajien kertomuksissa: he kuvaavat älypuhelimia hyödyllisinä ja kyvykkäinä laitteina mutta omaa kulutustaan hyödyttömänä ja tehottomana. Tämä aiheuttaa kuluttajissa ahdistuksen, levottomuuden ja syyllisyyden tunteita. Monin tavoin ilmenevä ristiriita on jaettu neljään teemaan: älypuhelimen käytön takia asioiden lykkääminen ja tärkeiden sosiaalisten suhteiden vahingoittaminen, älypuhelimen mahdollistaman loputtoman sisällön liiallinen tai haitallinen käyttö, sekä epäonnistuminen olemaan riittävän tavoitettavissa.

Kertomus täydellisestä laitteesta ja viallisesta käyttäjästä tarjoaa johtopäätelmiä sekä kuluttajatutkimukselle että käytännön sovelluksille. Tämän tutkimuksen merkittävin panos on laajentaa akateemisen perinteen fokusta teknologiaparadokseista teknologian kulutuksen paradokseihin. Siirtymä kuvaa muutosta kuluttajien käsityksistä älypuhelimista laitteina heihin itseensä älypuhelimen käyttäjinä. Se tarjoaa hedelmällisen pohjan jatkotutkimuksille teknologian kulutuksesta, mikä on erottamaton osa postmodernia elämää.

Avainsanat kuluttajakertomukset, älypuhelimet, älypuhelimen käyttäjät, teknologiaparadoksit, teknologian kulutus, teknologian sosiaalinen konstruktivismi

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1. INTRODUCTION

Technology has become inseparable part of the life of a modern consumer. In Finland, it has been estimated that there will be 3,8 million smartphone users in 2019 (Vesselkov and Hämmäinen, 2016). The first wave of mobile phones penetrating the consumer market happened in 1990's, when at best the amount of mobile telephone subscriptions doubled within a year (Tilastokeskus, 2008). The second turning point was in 2013, which was the first year when the majority of the phones in Finland were smartphones (Vesselkov, Riikonen and Hämmäinen, 2014). According to telecommunications company Ericsson (2016), in 2016 there were 7500 million mobile phone subscriptions in the world, and 3900 million of these subscriptions were smartphone subscriptions. The course of development seems to be explicit, as it is estimated that in 2022 there will be 6800 million smartphone subscriptions worldwide (Ericsson, 2016).

This wide penetration of consumer electronic usage has offered researchers a fruitful foundation to conduct consumer research. The research includes for instance consumers' drivers to use smartphones (Verkasalo et al., 2010), differences of telephone usage between different age groups (Ryan et al., 1998), desired technology product features (Thompson, Hamilton and Rust, 2005) and what kind of meanings people give to their mobile phones at work environment (Schlosser, 2002; Matusik and Mickel, 2011). However, the experiences of smartphone usage and the emotions that the usage wakes in consumers has been less explored. That is the field of consumer culture study that this study aims to contribute.

1.1. Research Problem

The purpose of this research is to find out what kind of experiences and emotions Finnish consumers have towards their smartphone usage. In addition to the fact that the consumer electronics have a significant role in the modern life, Finnish consumers form an exceptionally interesting user group to investigate because of their data usage. According to the research company Tefficient (2016), Finnish consumers are using data more than the citizens of any other country. Finnish consumers use twice as much data as the people of South Korea, who ranked second on the list. It can be argued that Finnish consumers utilize the core element of smartphones more than any other nationalities. This offers an interesting basis for consumer research in this particular context.

The academic focus of this research is to explore consumers' relation with their smartphones and more specifically outline paradoxes and contradictions that these consumers perceive in their smartphone usage. Technology paradoxes are consumers' perceptions that technologies cause opposite consequences simultaneously: for example, technologies fill the needs of consumers, but at the same time they generate new ones (Mick and Fournier, 1998).

The two research question of this study are presented next. The main research question is:

How do consumers negotiate their smartphone usage?

And the sub-question is:

How do consumers represent technology paradoxes in their narratives of smartphone usage?

The research questions are explanatory as the focus is on the discovery of insights. These two research questions are addressed in the Chapter 4 when the findings and interpretation of the study are outlined.

1.2. Theoretical background

The former research on paradoxes, information technology development, technology paradoxes and postmodern consumer culture serve as academic cornerstones of this study. The empirical part of this study builds on the past research on technology paradoxes conducted in the late 1990s by Mick and Fournier. Unlike this study, which is about consumers' mobile phone usage, Mick and Fournier (1998) did not limit their research to a certain technology. Instead the authors interviewed consumers talking about their experiences with e.g. telephone answering machines, lawn mowers and workplace computers. Later on, the paradox research has been continued for example in the context of mobile phones (Jarvenpää, Lang, and Tuunainen, 2005) and in terms of consumers' coping mechanisms with the perceived paradoxes (Jarvenpää and Lang, 2005), that is out of the scope of this research though. The objective of this study is to draw from the undisputable groundbreaking - but in 2017 to some extent outdated - research on technology consumption of Mick and Fournier (1998) and explore the narratives of seasoned mobile phone users.

1.3. Method

The empirical research is conducted by using qualitative methods. The underlying ontological and epistemological assumptions highlight the socially constructed, multiple and contextual nature of reality and knowledge. The methods of this study are open-ended interviews and projective

interviewing techniques including sentence compilations and autodriving. The data is collected from ten 23 to 26-year-old Finnish people living in the big cities of Finland.

1.4. Findings and contributions

The study offers insights into consumers' experiences, concerns and attitudes regarding topics such as undesirable and social aspects of smartphone usage, coded and interpreted through the narratives of young Finnish adults. Interestingly, more than just talking about their smartphones, the interviewees talk about themselves as smartphone users. The findings outline the relationship between modern consumers and their mobile devices. The findings underline the narrative of representational mismatch between the powerful and capable smartphones and their weak and incapable users. The four themes where the mismatch manifests itself are inability to concentrate, damaging social relations, wasting time and failing to meet responsibilities. All of the themes include several paradoxes and contradictions that build foundations for guilt that Finnish young adults feel about their smartphone usage.

The findings of this study contributes to consumer culture research by explaining and understanding the multiformity and complexity of smartphone usage. The study also shifts the focus of the research from consumers' narratives of their technology devices to cover also consumers' narratives of their technology usage. This shift in the focus reflects how information technology has become an inevitable part of modern consumers' life, thus affecting the consumers' perceptions and narratives of owning and using a technology device. This study and its findings have implications for all actors within the smartphone industry, such as mobile phone manufacturers and app developers, as well as consumer researchers.

1.5. Outline of the study

This thesis is divided into six chapters. This introductory chapter has outlined the basis and objectives for this study. Chapter 2 offers the literature review consisting of the history of paradox research, the development of information technology, technology paradoxes and the postmodern view on technology and paradoxicality. Here, the theoretical emphasis under which these themes are evaluated is on the cultural heritage on paradoxes and the theory of social constructivism on technology. Chapter 3 outlines the methodology of this study, including the suitable paradigm, research process and evaluation of the research. Chapter 4 presents the findings of this study in detail and Chapter 5 discusses their implications and broader significance. The Chapter 6 concludes this study by summarizing its main premises, purposes and contributions.

2. THEORETICAL FOUNDATIONS

In this chapter the main literature streams relevant for this study are reviewed. These streams include past academic research about paradoxes, development of the information technology, technology paradoxes and postmodern view on technology and paradoxality. These topics are all important in order to address the two research questions of this study.

This study aims to define and explain the paradoxical elements of smartphone usage that consumers experience when talking about their smartphone usage. Thus, understanding the definition, history and cultural heritage of paradoxes is essential. Furthermore, embracing the history of technology development, comprehending the main research streams within information technology usage as well as acknowledging the relation between humans and technology are important in order to understand what is the current status of information and communication technology within consumer research.

The two first themes build as the basis for the third one. The technology paradoxes introduced by Mick and Fournier (1998) serve as theoretical lens that this study is build on. Therefore, it is meaningful to understand the stream of technology paradox research as well as the relevant literature afterwards. Last, postmodern view on technology and paradoxality are discussed in order to set a basis for research settings of this study and furthermore, tie it to a larger philosophical movement.

2.1. Paradoxes

This study aims to describe and explain the narratives of technology paradoxes. Therefore, it is worthwhile to first introduce the definition and origins of the word paradox. According to Stanford Encyclopedia of Philosophy (2010, available online), paradox is "demonstration that a contradiction or absurd consequence follows from apparently reasonable assumptions". Quite similarly, Oxford Dictionary (2017, available online) defines paradox as "a seemingly absurd or self-contradictory statement or proposition that when investigated or explained may prove to be well founded or true".

The Oxford dictionary definition (2017, available online) is further explained with two sub definitions. First of them highlights the logical chain of deduction that results to absurd outcomes: (paradox is) "a statement or proposition that, despite sound (or apparently sound) reasoning from

acceptable premises, leads to a conclusion that seems senseless, logically unacceptable, or self-contradictory." For example, a simple paradox in a form of false statements like "impossible is not a word in my vocabulary" demonstrates this definition. However, the second Oxford dictionary sub definition (2017, available online): "a situation, person, or thing that combines contradictory features or qualities" is more close to the past technology paradox research: the example of the sub definition can be seen in the suggestion of Mick and Fournier (1998) that technology simultaneously fulfills and creates needs.

The cultural heritage of paradoxes

The origins of the concept of paradox can be found from the ancient philosophers. Zeno was a Greek philosopher estimated to be born roughly in 490 BC. He crated paradoxes as consequences of the criticism towards Plato's dialogue called Parmenides. In Parmenides, Plato painted the picture of world as unchanging reality without pluralism or change. (Stanford Encyclopedia of Philosophy, 2010).

In his critique towards Plato's dialogue, Zeno aimed to demonstrate how it is possible to result into two equally reasonable statements that made no sense when compared with each other. He drafted 40 "paradoxes of plurality" that aimed to show how "ontological pluralisms … leads to absurd conclusions". The original book of Zeno has not survived, and these paradoxes are quoted by other philosophers such as Aristotle later on. (Stanford Encyclopedia of Philosophy, 2010, available online).

The foundation of paradoxes is traced to the prominent figures of Western philosophy like Plato and Aristotle. However, the idea of paradoxality is indeed quite far from the traditional Western philosophy. Peng and Nisbett (1999) emphasize the legacy of Aristotelian logic within the Western philosophy. This Aristotelian logic embraces principles like the law of identity ("things are what they are and nothing else"), the law of non-contradiction ("no statement can be both true and false…"), and the law of the excluded middle ("any statement is either true or false, … there is no middle ground") (Williams and Aaker, 2002, p. 637).

The paradoxality and accepting that contradictions can exist simultaneously has more prominent foundations within the Eastern philosophy. One example demonstrating the differences of philosophical approach towards simultaneous duality in Eastern and Western culture are love songs.

American love songs tend to embrace only the positive or negative aspects of love, whereas in the Chinese songs love can be both negative and positive at the same time (Shaver, Wu and Schwartz, 1992). This study challenges these principles of Western philosophy and embraces duality as already the sub-research question 'how do consumers represent technology paradoxes in their narratives of smartphone usage?' suggests that consumers express contradictions in their narratives.

Paradoxes within organizational research

Later on, the concept of paradoxes has been applied also on academic fields outside philosophy. One of the main field is organizational research. Within organizational research, the term paradox is often used when describing "conflicting demands, opposing perspectives, or seemingly illogical findings" (Lewis, 2000, p. 760). The paradoxical themes within organization research include for example the contradiction between collaboration and control as well as questions of responsibility in terms of profit and social aspects (Smith and Lewis, 2011).

Lewis (2011) discusses the beginning of examining paradoxes within organizational research and refer to Cameron and Quinn (1988), who considered paradoxes as a powerful tool that help to understand the complex and diverse organizational life. Poole and Van de Ven (1989) suggest different styles for organizational researchers to approach paradoxes. Not surprisingly, Smith and Lewis (2011) claimed that research handling paradoxes has increased, as they investigated a sample of 360 articles of organizational studies covering paradoxes. Smith and Lewis (2011) also demand for more explicit definition when it comes to the researching paradoxes as the authors argue the popularity of paradox research has made it vague and ambiguous. Still, the future of paradox research within organizational research seems bright. Poole and Van de Ven (1989) claim that the continuum of paradox research seems endless as it seems that every time one paradox is theoretically resolved, another one emerges.

Another application of organizational paradox research is to explain the role that paradoxes play when organizations are going through transformations. Lüscher and Lewis (2008) introduced paradoxes in the context of organizational change. In these transformational situations managers feel that they face paradoxical expectations, e.g. they should give more responsibility to the employees but simultaneously manage their actions, or foster the sense of belonging and simultaneously highlight the employees' individual differences (Lüscher and Lewis, 2008). Fiol (2002) contributed to the field of organizational change research from the identity point of view.

Fiol (2002) claims that it might help keeping the organization tightly together during change if employees recognize strong identification to the organization, but simultaneously this identification might hinder the development in terms of sensitivity and openness for novel opportunities.

To conclude, the importance of paradoxes to this study lies in the presuppositions that guide the research. The hypothesis that serves a starting point of this study is that consumers express these "seemingly absurd or self-contradictory statements" (Oxford Dictionary, 2017) when talking about their smart phone usage. My task as a researcher is to decode these statements and explain if and how consumers prove them to be "well founded or true" (Oxford Dictionary, 2017). Furthermore, understanding the philosophical legacies of paradoxality in Western and Eastern culture is important for this study. It helps to grasp the relative novelty of paradoxality in Western culture, although paradoxes have been even quite common research subject of also more managerial literature, such as organizational research.

2.2. Information technology development

The development of technology has offered fascinating basis for consumer research. In order to understand the relevance of technology in the modern society, it is crucial to understand the development that has lead to the current state. Next I will provide a definition as well as short history of information technology and its influence especially to consumer research.

Defining technology

The term 'technology' itself has proven to be hard to interpret (Wahab, Rose and Osman, 2012). That is why it is useful to start with by defining the term "technology" and what does it mean in this literature review. The origins of the word technology are within Greek words 'technē' and 'logos'. 'Technē' stands for 'art' or 'craft' and 'logos' for 'word' or 'speech'. The word 'technology' was first introduced in English language in 17th century to describe the applied arts. (Buchanan, 2017). Later on, Wahab et al. (2012, p. 62) pinpointed two aspects of technology being "knowledge or technique" and "doing things". In order to narrow down these two aspects the authors summed up the various definitions for technology between the late 1960's to 2006. The definitions vary from "approach" to "knowledge or expertise" to "process", that is used to "solve well-defined problems", "manage a set of interrelated technical processes", and "develop products and services as well as

their production and delivery systems" Wahab et al. (2012, p. 70-71). All these definitions highlight the multiformity – that one could also call vagueness - of the term technology.

The history of technology development includes all sorts of equipment, devices and services. Gardner et al. (2000) categorizes technology products in terms whether they are 'high' or 'low' technology. The high technology products "employ turbulent technology in their use, manufacture and/or distribution, and are seen to require significant changes in usage patterns" (Gardner et al., 2000, p. 1056). The first part of the definition certainly leaves room for interpretation, but the second part is especially relevant for this study. The focus of this research is in smartphones, that are referred as connectivity technologies (Matusik and Mickel, 2011). Smartphones can be categorized as high technology products because of their fast development and tremendous affect in consumers' life.

This study is about consumers' narratives of their smartphone usage. Therefore, the emphasis is on information and communications technology (ICT). The Oxford dictionary (2017) defines ICT as "the study or use of systems (especially computers and telecommunications) for storing, retrieving, and sending information". One of the first ones to use the term "information technology" were Whistler and Leavitt (1958) in the late fifties. They define information technology consisting of three parts: the ability to process plenty of information in a short period of time, usage of mathematics methods like programming and utilizing computer programs to facilitate decision making. To simplify as well as outline the terminology used in this study, from now one the word 'technology' refers to information technology, that is defined above.

Acknowledging the possibilities of information technology

Information technology itself does not contribute much to the research of consumers and organizations. Indeed, it is the technology usage with all its originators, enablers, hindrance and consequences that have offered such a fruitful basis for consumer and business researchers. The first arena of information technology usage research was the Western workplaces, mainly in the United States of America.

The effects of ICT were discussed already in the dawn of the new technology. Whisler and Leavitt (1958) made a notion of 'a new technology' taking over the businesses in the US. The authors argue that information technology is the most topical within the field of management: as more

information would be processed faster and easier with the help of technology, it would enable further centralization and control by top management. Whisler and Leavitt (1958) anticipated that the effects of increasing use of information technology at workplaces would include automated decision making. Whisler and Leavitt (1958) also suggested changes in job descriptions like employees performing the tasks previously done by their superiors, as with the help of information technology these tasks would not require so much skills anymore. Snow (1966) made even bolder statement and argued that the development of information technology would affect humans more profoundly than any other progression seen before.

The predictions described above were authors' own anticipations and reflections of the state of that time. Therefore, they do not provide a strong research based justification. Still, they offer two aspects that are interesting for the purposes of this study. First, they provide valuable viewpoint from which to inspect the picture of the times: how the information technology was framed in the leading business magazine in the 1950's. The anticipations can also be mirrored to the predictions of today, like the Harvard Business Review's article '25% of CEOs' Time Is Spent on Tasks Machines Could Do' in February 2017 (Manyika, Chui and George, 2017). Secondly, these predictions highlight that information technology has truly affected people as it has always sparked humans' imagination and encouraged to make sometimes even quite wild prophecies of the future.

ICT spreading from workplaces to households

Since entering the workplaces, information technology has offered a fruitful basis for organizational studies. For example, ICT has affected the flexibility of working hours, meaning the time and location where the work is done (e.g. Kelly and Moen, 2007; Leslie et al., 2012; Matusik and Mickel, 2011). Already in the late 2000's half of American employees with at least 50 employees offered their employees the possibility to work outside the office (Galinsky, Bond and Sakai, 2008). The effects of flexibility to the work effectiveness and satisfaction have been widely researched (Gajendran and Harrison, 2007; Boswell and Olson-Buchanan, 2007; Fenner and Renn, 2010).

The major turning point in the development of the technology was when ICT found its way to private houses. In 1988, Joerges (1988) argued that the modern technology had quickly expanded from work usage to the everyday life of consumers. Respectively, in 1998, Mick and Fournier (1998, p. 123) referred to technology products as "unavoidable in contemporary life", and in 2000 Gardner et al. (2000) suggested that technology affects all parts of consumers' life, including work

and private life. One enabler for technology spreading from workplaces to households was that technology became cheaper. It was not earlier than 1980, when Dery (1980) declared that information technology is restricted only to companies and wealthy consumers because of its high price. Later on, the information technology has become considerably cheaper. The affordable prices have made information technology the everyday commodity of masses, thus making it interesting target for consumer research like this study.

ICTs effects on consumers: from information retention to behavioral changes

The wide penetration of internet access revolutionized the economic and social life of consumers, primary trough the massive amount of information that it provided. (Kraut et al., 1998; Murray, Liang and Häubl, 2010). The change in consumers lives has been relatively fast. It has been estimated that in 1998, around 40% of the households in the United States had a computer and around 30% of the households had internet connection (Kraut et al., 1998). Already after almost ten years in 2007 the majority of the households in the US had internet access.

The vast amount of information and its implications enabled by the broad access to internet has later been widely researched. When discussing postmodern consumption, Firat and Venkatesh (1995, p. 247) refer to the "Foucauldian framework" that underlines that in the modern society, market processes do not gain on the consumers but instead shape the consumers. This can be easily seen, as information technology has undeniable affected the way we learn (Brown, 2000; Handy, 1994), consume and share digital media like music (Cayari, 2011) or the news (Jenkins, 2004). Furthermore, Fogg (2002) highlights the effects of technology in human behavior by mentioning that technology can help consumers to quit smoking or join the army. The author also claims that besides the actual behavioral changes, technology also affects to consumers' attitudes (Fogg, 2002).

Since technology has entered the everyday life of consumers, the relation between the two has been investigated. Fournier (1998) mention the consumer's' tendency to affect human-like properties to technology. Reeves and Nass (1996) found that consumers in laboratory experiments were polite to computers just like people are polite to each others. Given the circumstances at the time, it is even more interesting than the authors claimed that they choose participants that were very familiar with computers in order to avoid the risk that test participants would think that computers would truly have human capabilities. (Reeves and Nass, 1996). These findings bring perspective to

understanding of human-technology relations and consumers' perception of technology at the time. Respectively, the findings of this study will offer insights of human-technology relations in 2010s.

Social construction on technology

The relation between humans and technology was briefly discussed above. In a broader picture, the nature of the relation between humans and technology has been discussed among the researchers over the time. Rybczynski (1983, p. 210) summed up the development of technology by stating that "the process is determined as much by the nature of the tool-user as by the nature of the tool". Pinch and Bijker (1984) introduced the theory of social construction on technology (SCOT) in their discussion paper in the early eighties. Social construction on technology highlight that technology does not objectively exist, develop or prosper, but instead "technological artefacts are to be understood as social constructs" (Pinch and Bijker, 1984 p. 399). This argument serves as a basis also for this study.

Pinch and Bijker (1984) argue that technology is "a socially constructed culture", basing their statement upon the sociology of scientific knowledge, the connection between science and technology and studies related to for example innovation theory. The argument means that technology development is not inevitable, rational and linear but instead guided by the shared meanings that relevant social groups give to the technological artifacts. Later on, the social construction on technology has been further developed within the social studies of science. Klein and Kleinman (2002) summarized the core components of SCOT being 1) interpretative flexibility (social contexts affect the technology development), 2) the concept of relevant social group (the concepts of shared meanings presented before: technologies does not objectively "work", but it works because relevant social groups reach the consensus that it works for them), 3) closure and stabilization (technology is accepted when the relevant social group accepts it) and 4) the wider context (the larger "sociocultural and political milieu" where the technologies exist and which offers the environment for the relevant social group's interaction).

However, the theory of social construction on technology has also gained critique, even from the original author (Pinch, 1996; Winner, 1993). Klein and Kleinman (2002) summarize the notes of other researchers and argue that the critique falls especially on the second concept of relevant social groups: all social groups are probably not equally relevant, like SCOT assumes. Furthermore, Klein and Kleinman (2002) point out that when Bijker (1995) leveraged SCOT to describe how bicycle

has been developed, he fails to adequately outline the aspects that lead to the the third concept: closure and stabilization. To summarize, theory of SCOT and its core assertion stated by Pinch and Bijker (1984) that surrounding environment has an effect to how technologies are understood serves as a basis for this study. However, I also embrace the statement of Winner (1993): there exists no meaningful theory of technology so the work must be continued.

To conclude, technology is not unambiguous to define as the term can cover variety of aspects from a specific technique to do something to a device utilizing mathematical coding. In order to outline the definition of technology in this study, the term is used to mean information technology. Information technology evolves fast (Keen, 1987) and changes the behavior and attitudes of consumers (Fogg, 2002). Past literature embraces the information technology development from the viewpoint of its effects to consumers' consumption practices and work. Echoing the idea of social construction on technology it is acknowledged that technology does not evolve in vacuum, but the surrounding social norms and groups affect both to how technology is developed but most interestingly how is it perceived and utilized.

2.3. Technology paradoxes

The research on paradoxes and technology development are united in a canon of technology paradox research. Next the overview of technology paradox literature is provided. The importance of this theme is indisputable, as this study draws from Mick and Fournier's (1998) notion and list of technology paradoxes. Also other relevant literature of technology paradoxes is introduced.

Overview of information technology usage research

Consumer technology acceptance and usage has been widely studied within the information systems research (e.g. Davis, 1989; Legris, Ingham and Collerette, 2003; Venkatesh and Davis, 2000). In the core of consumer technology acceptance and usage research has been investigating the reasons why consumers start to use technologies. It has been researched even to the extent that Venkatesh, Davis and Morris (2007) argue that the technology adoption research has come to its end in a sense that fairly prominent part of the latest research is just repeating the previous research without any valuable academic contribution.

However, research on user experiences at the post-purchase phase i.e. what happens after the user have adopted certain technology, is limited (Mick and Fournier, 1998). The breakthrough research on consumers' experiences and emotions towards consumer electronic products is done by Mick and Fournier (1998) in the late nineties. The authors researched "consumers' perspectives, meanings, and experiences in relation to a range of technological products" and the key finding was that the variety of technology products raised contradictory emotions in consumers (Mick and Fournier, 1998, p. 123). As a result, the authors outlined eight technology paradoxes that consumers need to cope with. These paradoxes are presented below in the Table 1.

Paradox	Description
Control/chaos	Technology can lead to order and to disorder
Freedom/enslavement	Technology can lead to independence or fewer restrictions and to dependence or more restrictions
New/obsolete	Technology offers the most recently developed benefits of scientific knowledge to user, and technology can be replaced by new soon after the user has acquired it
Competence/incompetence	Technology can lead to feelings of both intelligence or efficacy and to ignorance or ineptitude
Efficiency/inefficiency	Technology can lead to less effort or time spent in certain activities, and to more effort or time in certain activities
Fulfills/creates needs	Technology can lead to the fulfillment of needs or desires, and to the development or awareness of needs or desires previously unrealized

Table 1: Technology Paradoxes. Source: Mick and Fournier (1998, p. 126)

Later technology paradox research

The theoretical lens that this study leans on is Mick and Fournier's (1998) list of technology paradoxes. Ter Hoeven, van Zoonen and Fonner (2016, p. 240) use the definition of Smith and Lewis (2011) when arguing that paradoxes "consists of contradictory but interrelated elements that exist concurrently". The paradoxes underline the contradictory elements of technology, like its ability to create and satisfy needs at the same time or made its user simultaneously more efficient and inefficient. These kind of mixed emotions coexisting simultaneously have raised interest in consumer research literature (Williams and Aaker, 2002). The research on technology paradoxes that Mick and Fournier (1998) initiated has later on been further leveraged on by for example Järvenpää and Lang (2005) and Järvenpää et al. (2005). These studies have outlined the technology paradoxes in the context of mobile phones through focus group interviews.

The statement of Arnold (2003) resembles Järvenpää et al. (2005) in a way that he argues mobile phones as technological devices are paradoxical. However, Arnold (2003, p. 232) is taking more philosophical point of view and refers to mobile phones as "Janus", which is "a Roman Deity cursed and blessed with two faces". Juntumaa and Tuunainen (2006) came to the similar conclusion: paradoxically, consumers argued that visiting their corporate networks on mobile devices would results into saving time, but they also felt that the time they would have to spend to use these applications were barrier for the usage. Later on, the paradox research within the field of technology have been extended. Norberg, Horne and Horne (2007) came up with "privacy paradox" while researching the contradiction between consumers aims and actual behavior in terms of sharing personal information. It is important to note that these kinds of results regarding mobile phones and paradoxes has been made previously as the objective of this research is to research contradictions of smartphone usage within young Finnish adults.

It has been suggested that technology paradoxes are not stagnant and the cultural surroundings affect to their development. Chae and Yeum (2010) argue that as consumers use mobile phones for a longer period, their perceived technology paradoxes might change. Also representatives of different nationalities react differently to the co-existing contradictory. According to Williams and Aaker (2002) adults and Asian Americans can tolerate mixed feelings better than young adults and Anglo Americans. This finding builds on the notion made already in the chapter 2.1. about cultural heritage of paradoxes in terms of Eastern and Western acceptance towards simultaneous contradictory. This study researches the narratives of young adults that have used smartphones for several years, and embraces the point of view more prominent to Eastern philosophy that technology and its usage can raise contradictory emotions that exist simultaneously.

Technology paradoxes within organizational research

Technology paradoxes have profound effects to the technology users. The paradoxes of technology have especially been researched in terms of well-being at work. Ter Hoeven et al. (2016) argue that technology usage at work has positive effects such as accessibility and efficiency, but also negative consequences like interruptions and unpredictability. Leonardi, Treem and Jackson (2010) refer to "connectivity paradox", which highlights the fact that information technology solutions that are used for remote work can make employees feel that they are simultaneously liberated from the physical presence but also bound to be always connected.

Information technology seems to cause paradoxical outcomes also on a broader, organizational level. The term "productivity paradox" refers to the peculiar outcome that although information technology enables increasing computing power, the overall productivity of the economy does not relatively improve. Quite surprisingly, the productivity even declined within the service sector. The reasons have been searched for example within insufficient management and required longer time frame to verify the concrete benefits of IT. (Brynjolfsson, 1993). To summarize, the research within the field indicates that the results of information technology are complex and unpredictable.

Consequences of technology paradoxes: the coping strategies

Technology paradoxes have profound impacts to the consumers. Williams and Aaker (2002) claim that the consequences of coexisting opposite feelings within the consumers have not been properly researched. However, already in their initial research, Mick and Fournier (1998) outlined consumer's behavioral coping strategies triggered by the paradoxes. These coping strategies are briefly introduced next.

The coping strategies explain how consumers receive the contradictory consequences of technology usage. They can be divided to avoidance and confront strategies as consumers can leverage on coping strategies either before even buying the technology product or in the consumption phase. (Mick and Fournier, 1998). The research on coping strategies has since been taken further. For example, Chae and Yeum (2010) demonstrated that when consumers experience stress caused by their mobile phones, they tend to use confront strategies such as abandoning the device altogether. As this study is about paradoxical elements and consequences of technology and technology usage, it is important to understand the relevance of coping strategies. The coping strategies are natural continuum to the technology paradoxes and there exist wide literature stream about them. However, coping mechanisms are not in the core of this study.

To conclude, the paradoxical elements of technology have been researched within consumer and organizational research. This study concentrates on consumers' contradictory perceptions of technology. This field of research is widely affected by Mick and Fournier (1998), who originally crafted the list of technology paradoxes and coping strategies. Later on, the list of paradoxes has been revised many other researchers with different set of technological devices. The often interconnected other aspect of the technology paradox research is consumers' coping strategies,

which investigates how consumers cope with the technology paradoxes that they perceive. However, consumers' coping strategies are delimited from the empirical part of this study.

2.4. Postmodern view on technology and paradoxality

As stated earlier in this chapter, technology is an essential part of todays' consuming practices. In this chapter the technology consumption that is in the core of this study is tied to larger context of postmodernity and postmodern consumption. Next, the overview of postmodern worldview and its relation with information technology and paradoxes is presented.

Understanding postmodernism starts with studying modernism, that postmodernism was originally formed to oppose. Modernity embraced the idea of "absolute truths" in science (Goulding, 2003; Bertens, 1995) and aimed for using empiria in order to explain and generalize social phenomena. The modernity wells from the Enlightenment of the eighteenth century when modernists challenged ancients by aligning themselves with the universal laws, rationality and objective knowledge (Turner, 1990; Hall, Held and McGrew, 1992). The icons of this stream of philosophy include Darwin, Marx and Freud (Bertens, 1995). However, the modernists world view of rationality was challenged in turn in 1970s, when profound examples of irrationality such as concentration camps of Second World War and pollution accelerated the resistance towards authority and "the establishment" (Brown, 1993). Later on, the postmodernity has emerged in variety of academic fields varying from politics through psychology to geography and media studies (Brown, 1993).

Consumption plays a pivotal role in postmodernity, which in turns makes postmodernity as noteworthy element of this study. The postmodern consumption practices rise from the fragmented nature of reality. In the core of the postmodernists world view is the statement of everything becoming more fragmented. Goulding (2003) gives examples of the fragmentation covering markets and media, whereas Firat, Dhokalia and Venkatesh (1995) claim the fragmentation extending also to experiences and societies. This fragmentation shakes the formal institutions and leaves people to build and convey their identity through consumption (Goulding, 2003). Firat and Shultz (1997) even invented an incisive term "homo consumericus" to describe this species that can be qualified by its consumption habits.

Postmodernity and technology

It is argued above that for the purposes of this study it is important to understand postmodern world view because of its links to consumption. In addition to consumption, postmodernity has been argued to have notable links to technology, which is also the major element of this study. Mick and Fournier (1998) argue that technology has build a foundation for modernity as well as for postmodernity. In the core of this argument is how technology affect consumers. Gergen (1991) suggest that new technologies like mobile phones offer so much freedom of choice to the consumers, that it leads to "multiphrenia", which means that consumers get confused with all the possibilities and responsibilities. Likewise, Featherstone (2010) suggest that information technology such as videos has heavily affected how consumers perceive body image, which in turns affects how consumers perceive the social acceptability of others as well as themselves.

Furthermore, information and technology have been found to accelerate the foundations for postmodernity (Gitlin, 1987; Kellner, 1990). Although these statements were bound to studies that were about watching television, it can be argued from the point of view of this study that in the 2010s smartphones have in many cases redeemed the position of a television, thus increased the fragmentation of media and audiences. Firat et al. (1995) even suggest that it is indeed the modern technologies enabling so many alternatives and opportunities, that lead to the core of postmodern: fragmentation. Supporting this statement, Sherry (2000) argue that understanding technology is one of the core aspect that consumer culture as a field needs to confront in the dawn of new millennia.

Postmodernity and paradoxality

In addition to having clear links to consumption and technology, postmodernity has been associated with paradoxality in the earlier research. Goulding (2003) states that consumers' ability to freely express themselves through consumption might also lead to alienation or manipulation. In other words, the liberating power of consumption often results into simultaneous negative consequences. Other researchers support this idea. Harvey (1989) claims that postmodern view of world is bidirectional. These representations of postmodernity bounds back to paradoxality, duality and janus faceted perspectives of consumption. Indeed, it is stated that the paradoxical nature is one of the defining themes of postmodernity (Brown, 1993; Firat and Venkatesh, 1993).

Firat and Venkatesh (1993, p. 237) sum up a long line of previous research when stating that postmodernity is characterized by its paradoxical nature, manifested by for example by "exhibiting opposing emotions (love and hate, contempt and admiration) and cognitions (belief and doubt, reverence and ridicule) simultaneously". In order to confirm the statement Firat and Venkatesh (1993) present a list of practical examples, such as advertisement where the product is simultaneously promoted and made a fool of. Rose and Wood (2005) researched reality television and concluded that viewers of the shows need to deal with paradoxes of authenticity: how to negotiate the conception that reality television is simultaneously improvised and scripted, authentic and non-authentic? These paradoxes consist of situations that reflect the context, the characters and the production of the show. The authors suggested that those viewers who accepted and even embraced the paradoxical elements of reality television also enjoyed the shows the most. However, to some consumers, coping with these paradoxes might be so overwhelming that they give up on the consumption altogether. (Rose and Wood, 2005).

To conclude, postmodernism is a philosophical movement that adds interesting viewpoints to examining both technology and paradoxality. Postmodernity was a counter movement established to question absolute truths, rationality and the "establishment". In the core of postmodernity is fragmentation, and consumption is argued to serve as a tool for identity building and making sense of all the surrounding fragmentation. Postmodernity is important to this study as the surge of technology development and information can be tied to the postmodernity. Furthermore, postmodern view of world is described to be contradictory and paradoxical, which is in line with the underlying presumptions of this study. Mutually, the focus of this study: modern consumption habits and all the meanings that consumers give to them, offer an interesting insight to evaluate postmodernism.

3. EMPIRICAL RESEARCH

This study examines the consumers' emotions about and experiences of their smartphone usage. Empirical research is carried out in order to answer the two research questions outlined in the Introduction. Next the context of Finnish smartphone usage, the research paradigm and the methodology of this study are presented as well as the method, research process and evaluation of this study are covered.

3.1. Context of the study

The focus of this research is on 23-26-year-old Finnish smartphone users living in big cities of Finland who have completed or currently conducting studies in university or in university of applied science. This group of consumers use more internet via mobile phone than any other user group in Finland, thus making them as skilled mobile phone users and building basis for a very interesting group to research.

Finland has been in the forefront of the mobile technology manufacturing, but more interestingly to the purposes of this study, also in mobile technology usage. For the first time in 2013, the majority of phones (53%) in use in Finland were smartphones (Vesselkov et al., 2014). The share of smartphones continued to grow: in 2014 the share was 60% and in 2015 67%. Also the size of display screens has been growing, mainly because of the popularity of touch screen (58% of the all Finnish phones in 2014 and 65,5% in 2015). 36% of the smartphones in use in Finland can connect to LTE-network, which enables faster data transfer speed. It has been estimated that in 2019, there will be 3,8 million smartphone users in Finland. (Vesselkov and Hämmäinen, 2016).

Finnish consumers use smartphones significantly more than the consumers in other countries. During January-September in 2016, Finnish smartphone owners had the top place in rankings measuring data usage with a mobile phone. Finnish smartphone users used almost twice as much data than the people of South Korea, that were second on the list. The reason is the pricing of Finnish teleoperators, as in June 2016 almost half of Finnish mobile phone subscriptions include unlimited data usage. (Tefficient, 2016). From this perspective, Finnish market is leading the development, and undoubtedly an interesting market to research.

The age, education background and place of residence affect how much Finnish citizens use their smartphones. In 2015, 74% of 16-24-year-old and 72% of 25-34-year-old Finnish citizens have used internet via their phones at least once in a week. These two age groups peak in the statistics: out of 25-44 year-old respondents 71% said that they have used internet with their phone at least once in a week and within the 45-54 year olds the percentage is 56%, and further declines within the older respondents. (Tilastokeskus, 2008). Furthermore, young Finns have shifted the traditional consumption to online more than any other user group. In 2016, Finnish citizens that were under 30 years old used 65% of their total media following time online, resulting into online media consumption of almost five hours a day (TNS Atlas, 2016).

Also the educational background and the place of living affects the smartphone usage. Out of those Finns that have completed the comprehensive school (nine years of studies between the age of 7-15) as their highest degree, only 38% responded that they have used smartphone at least once in a week, whereas the percentage within university alumni is 58%. Also, 59% of Finns that live in metropolitan area responded that they had used smartphones at least once in a week whereas only 43% of Finns living in the countryside had done the same. (Tilastokeskus, 2008).

There exists previous research on smartphone usage in Finland. However, most of this research concentrate to the very basics of mobile usage such as what do consumers do with their phones and where and for how long sessions at the time (see e.g. Verkasalo, 2007; Verkasalo, 2009; Soikkeli, Karikoski and Hammainen, 2011). From the academic point of view, consumer research within Finnish smartphone users have been conducted on the topic of mobile application adoption (Verkasalo et al., 2010) and technology paradoxes within mobile phone users (Jarvenpää et al., 2005). Verkasalo et al. (2010) build their research on technology adoption by widening the TAM (technology adoption model) research originated by Davis (1989) by emphasizing the special characteristics of mobile application adoption within over 500 Finnish smartphone users. Furthermore, Järvenpää et al. (2005) interviewed more than 200 Finnish, Japanese, American and Hong Kong mobile users about their mobile phone usage in order to identify technology paradoxes.

The focus of this study is to research the contradictory elements of smartphones and smartphone usage perceived by the Finnish young adults. Indeed, also the potential negative consequences of Finnish consumers' smartphone usage have been raised in the Finnish media. The main concerns are whether the smartphone usage has become an addiction that hinders studying, working or social

relations (Vatanen, 2016, Hoikkala, 2016, Lehtonen 2016). Nevertheless, these articles refer to the expertise of psychiatry, psychology and social psychology, whereas the aim of this study is to explore narratives, personal experiences and emotions of consumers.

To conclude, the target group of this research is young Finnish adults that live in big cities and are highly educated. The target group is selected because of they use more data in Finland than any other consumer groups, thus making them seasoned and substantial smartphone users. In academia, Finnish smartphone users have been researched in terms of their technology adoption. Also, some research on technology paradoxes within Finnish mobile phone users has been concluded. The subject of smartphone usage and its negative and contradictory elements have been also present in nation wide media. However, this study aims to increase the understanding of Finnish smartphone users' perceived paradoxes by shedding light on the personal experiences and subjective narratives of the selected group of consumers.

3.2. Methodology and paradigm

This study is done used qualitative research methods to explore smartphone users' emotions and experiences. Understanding and interpreting the socially constructed reality are profound in qualitative research, which is exploratory by its nature, and used to give "a critical and reflexive view about the social world" (Eriksson and Kovalainen, 2008, p. 3).

Kuhn (1970) defined paradigms as something that successfully balance between creating something distinguishable and simultaneously being extensive enough to leave room for exploring different kind of questions. The paradigm of existential-phenomenology sees world as contextual, focuses on first-person experiences and aims at thematic description (Thompson, Locander and Pollio, 1989). The authors bound the paradigm of existential-phenomenology to the contextualism, meaning that it "focuses on the life-world of the individual" and aims to portray individual experience 'as it is lived' (Thompson et al., 1989 p. 136)). The authors claim that existential-phenomenology is suitable for consumer research. Indeed, researchers have taken phenomenological approach to study consumers emotions, especially the negative ones (Fischer, 1989).

The ontological assumptions that this research leans on is constructivism, as it highlights how the social encounters and cognitive actions shape our perception of the reality (Eriksson and Kovalainen, 2008). The collected data is subjective and tied to the context, and the researcher's

interpretation is undeniable in qualitative research (e.g. Alvesson and Willmott, 2003 cited by Eriksson and Kovalainen, 2008). Thus the approach of gaining knowledge in this research is interpretative, which considers reality as multiple, contextual and socially constructed (Hudson and Ozanne, 1988).

3.3. Method

The aim of this study is to research the narratives of young Finnish consumers about their smartphones and smartphone usage. In order to access this social reality in all its complexity the combination of free flow conversation, facilitated sentence compilations, asking interviewees to complete a picture exercise and explaining the pictures they choose are adopted. Next the data collecting methods of this study are further explained.

Interviews

Open-ended interviews were the main course of data for this research as Kvale (1983) suggested that the world we are living in is formed by the language and interviews are a gate to this world. The research relationships between the interviewer and the interviewee is bound to the interpretive, that sees the relationship as interactive and cooperative (Hudson and Ozanne, 1988). The objective of phenomenological interviews is to appear more as a conversation than set of questions and answers. (Thompson et al., 1989). Thus, there existed pre-made questions and topics for the interviews, but the latter one guided the interview more. Open conversation was encouraged, and supporting questions were used to guide the conversation back to the topics relevant to this study.

The interview data for this study was collected according to 'the law of diminishing returns' (Kvale, 1983), meaning that the interviews were conducted until there were no unique content in the interviews. Guest, Bunce and Johnson (2006) argue that the data in in-depth interviews tend to saturate after 12 interviews, although themes could be identified already after six interviews. However, Eriksson and Kovalainen (2008) argue that the amount of required interviews is completely up to the research question. Altogether ten interviews were made for this study. At that point, the topics, themes and discourses were repeated on a satisfactory level.

Projective interviewing: Sentence completion

In addition to the open ended interviews, interviewees were asked to complete pre-selected sentences. These kind of sentence completions are one form of projective technique. Projective techniques are used within marketing research to investigate consumers' subjective reaction, contrary to objective product characteristics (Haire, 1950). Furthermore, sentence completions are used to research "hidden and sensitive topics" (Mick and Fournier, 1998, p. 127). This data collection method is suitable to properly leverage on the multifaceted and multi-level topic of smartphone and smartphone usage. Mick and Fournier (1998) also used sentence completion technique in their initial research, and the results underlined consumers' paradoxical perception of technology. As a part of this study, the interviewees were asked to complete sentences such as "smartphones are…" and "my smartphone usage is…" (see Table 3 on page 34 for the results).

Projective interviewing: Autodriving

The third method of data collection was projective interviewing in the form of autodriving. Interviewees were asked to freely scan a pile of Finnish and international magazines and select three to six images or pictures that remind them of their smart phones or smartphone usages (see Appendix for these picture collages). After the selection the interviewees were asked to explain why they choose the selected pictures. Heisley and Levy (1991) suggest that autodriving encourages the interviewees to explain themselves and involves them into the research process. That is why this form of data collection was done at the end of each interview, after the interviewees had spent already 40-50 minutes discussing the topic of smartphones and smartphone usage. Photographs can be seen as 'medium of communication' within qualitative research and analyzing how the interviewees explain the selected photographs is an important part of this technique (Schwartz, 1989).

3.4. Research process

To capture the first-person description of smartphones, smartphone usage and the emotions that they raise in consumers, ten phenomenological interviews were conducted for this study (Thompson et al., 1989), enriched with sentence completions and projective interviewing techniques including sentence compilations ad autodriving. Next I further explain the conducted research process.

The initial target group of this research explained in the chapter 3.1. were young consumers aged between 16-24 year who were completing or had already competed university degree and living in metropolitan area. The target group was selected as these consumers use the most internet on their smartphones, thus categorized as highly skilful smartphone users. As seen in the Table 2, the consumers interviewed for this study reflected the aimed target group on a satisfactory level. The ten interviewees were from 23 to 26 years old, lived in the big cities of Finland (majority of them in the capital city, Helsinki) and eight out of ten were currently studying or already completed university degree. Five of the interviewees were men and five of them were women. Myself as a researcher had some sort of existing - although varying - relation with the interviewees. They were all friends, friends of friends or family members of mine. The interviewees were given pseudonyms in order to protect their privacy.

Pseudonym	Gender	Age	Educational background	Residence
Johanna	Female	25	B.Sc.	Helsinki
Petteri	Male	25	B.Sc.	Turku
Meri	Female	23	Student (university)	Turku
Saara	Female	23	Student (university)	Turku
Sakari	Male	25	Double degree graduate (high school and vocational school)	Helsinki
Eino	Male	26	B.Sc.	Helsinki
Maria	Female	25	B.Sc.	Helsinki
Johannes	Male	25	B.Sc.	Helsinki
Niklas	Male	25	M.Sc.	Helsinki
Susanna	Female	23	University of Applied Science graduate	Helsinki

Table 2: Consumers interviewed for this study

Altogether ten semi-structured and open ended interviews were conducted. The length of each interview varied between 40-50 minutes, followed by the projective techniques consisting of sentence compilations and autodriving exercise, where interviewees were asked to choose pictures that they felt described or manifested their perceptions of smartphones and smartphone usage and afterwards explain why did they choose these pictures. In order to make the interviewees feel

relaxed and encourage them to speak freely the interviews were conducted in non-official surroundings such as cafeterias, bars and the interviewees own houses. The interviews were recorded and later transcribed into 102 pages of text.

The transcripts were then read carefully through and the data were analyzed and interpreted. In qualitative research the aim of the analysis is to "dissect, reduce, sort and reconstitute data" (Spiggle, 1994, p. 492). The data was analyzed with qualitative coding and recurring topics and themes were founded. Spiggle (1994) defined interpretation as understanding the analyzed data in the larger context and outlining the aspects most important in it. Out of the recurring topics and themes the interpretation of the interviewees' emotions of guilt welling from their perception of smartphones as a capable device and themselves as incapable users was identified. The detailed result of analysis and interpretation is further explained and discussed in the forthcoming Chapters five and six.

3.5. Evaluation of the study

This study is completed with intention of using reasonable and comprehensive research methods, conducting convincing analysis and aiming for high ethical research standards. However, it is worthwhile to critically evaluate this study and its potential restrictions, also because qualitative research has been criticized for being biased, unreliable and too person-dependent due to its grounds in subjectivism and social construction (Kvale, 1983). Next the evaluation of this study is presented.

The three classic aspects to evaluate the quality of research are reliability, validity and generalizability (Eriksson and Kovalainen, 2008). However, their suitability for qualitative research have been questioned as the repeatability attached to reliability and the certainty of the results attached to validity are problematic within the qualitative research (Eriksson and Kovalainen, 2008). Eriksson and Kovalainen (2008) suggest to use the criteria of originally presented by Lincoln and Guba (1985) including dependability, transferability, credibility and confirmability whereas Spiggle (1994) suggests that qualitative research should be evaluated by its (1) usefulness, (2) innovation, (3) integration, (4) resonance and (5) adequacy.

Next this study is evaluated based on the criteria of Spiggle (1994). Three of the five aspects are somewhat interlinked. (1) Usefulness means whether the research contribute to the larger discussion

within the field and build opportunities for the future research, (2) innovative research introduces meaningful new point of views to the existing concepts and (4) resonance assesses whether the findings help to understand phenomena alike (Spiggle, 1994). This study can be argued to be valid in terms of usefulness, innovation and resonance, and justification for these is further outlined in the discussion section in the Chapter 5, in the part of contribution statement and suggestions for future research.

The two other aspects have to do with the quality of analysis and interpretation of the study. (3) Integration assesses whether the research build a 'holistic framework' of the data (Spiggle, 1994). This result of this study is not a framework par excellence. However, all the outlined themes are within the same topic of guilt and proper integration also stands for 'unifying idea (or) concept' (Spiggle, 1994). (5) Adequacy describes the relation between the data and the analysis and especially the process of conveying the data into the analysis (Spiggle, 1994). Like Spiggle (1994, p. 501) suggests: "… we evaluate the quality of the ideas and to extent to which we trust them as representations". In terms of adequacy, as a researcher, I have certainly concluded a subjective interpretation that is also affected by my own experiences. It is worthwhile to mention that I also match the selection criteria of the researched target group, and perhaps therefore I could significantly relate to the experiences and emotions that the interviewees expressed, which might have affected the analysis.

In addition, three aspects related to the selected focus group, interview settings and analysis should be critically evaluated. First, researching primary university students has gained critique within the consumer research. Sears (1986) argued that especially undergraduate students are characterized by their search for peer approval, undeveloped social attitudes and the fact that they have gone through sometimes thorough pre-selection. However, it is important to point out that this critique lies with the context of heavily researching undergraduate students in the United States, and researching undergraduate students being more as automation or standard than theoretically justified decision (Wells, 1993). In this research, the university students (and graduates) has been selected as a research objective because of their high usage of smartphones, like thoroughly outlined in the Chapter 3.1.

Second aspect of evaluation has to do with the interview settings and myself as a researcher. I might have personally affected the interviewees via leading questions (Kvale, 1983). As all the interviews were recorded, I sometimes caught myself asking the interviewees to reason their statements by

using ‘why’-questions. Posing these kind of questions that easily force interviewees to rationalize or defend their emotions and narratives should be avoided in phenomenological interview settings (Argyris, 1982). In order to overcome this misconduct in the interpretation part, the answers followed by these ‘why’-questions were intentionally left outside of the analysis.

Thirdly, the analysis and interpretation of this study can be critically assessed, as qualitative research practitioners admit that there exists no standardized model to describe consumer experiences (Goulding, 2003). Thompson et al., (1989) point out that consumers tend to highlight some events and not to mention others when talking about their experiences. This notion admittedly holds true, although the interviewees were encouraged to talk freely and enough time were reserved to enable unhurried discussion. Furthermore, like mentioned in the Chapter 3.4., myself as a researcher had an existing relation with all of the interviewees. This can be argued to add trust but on the other hand might also lead to somehow define and affect to the interviewees’ narratives. Nevertheless, the researcher is bound to make the analysis with the data that they have.

4. FINDINGS AND INTERPRETATION

In this chapter the data collected through interviews is outlined and the interpreted findings are presented. The research question **how do consumers negotiate their smartphone usage** is addressed alongside with the sub-question **how do consumers represent technology paradoxes in their narratives of smartphone usage**. The collected data is coded in meaningful sub themes that emerged during the interviews. Interpretation is conducted by explaining the data by taking the data to more abstract level (Spiggle, 1994).

4.1. Context: Smartphones have become evident part of the interviewees' lives

"Phones used to be purely a tool for communication, now they are so much more" (Johanna)

In order to understand how do those young Finnish adults that were interviewed for this study negotiate their smartphone usage, it is meaningful to first understand the role of smartphones in their lives on a broad level and to what purposes they use their smartphones for. These topics were discussed during the interviews and presented next.

There emerged no major differences into what purposes the interviewees used their mobile phones for. The interviewees were asked five activities that they have used their smartphone for and the answers greatly resembled each others. The interviewees use their smartphones to: a) communicate e.g. via Facebook messenger and WhatsApp, b) post and browse content in social media channels e.g. Instagram, Snapchat, Jodel and Twitter and c) consume content e.g. podcasts, videos, news or music d) find information e.g. navigate or check public transportation timetables. Other functionalities of their smartphones that interviewees often use included calendar, alarm clock, address book, banking services and Google Drive documents. Couple of the interviewees had also made phone calls and/or sent text messages as their five most recent activities that they did with their smartphones, however interestingly pointed out that it is not part of their typical usage.

The interviewees acknowledged the importance of smartphones in their everyday life. They told how they have replaced the use of laptop with the use of smartphone and how smartphones increasingly support everything they do. They describe their mobile phone usage as comprehensive:

the phone is always with them and always on, and it 'supports all areas of their life'. Also the users' expectations and demands towards the smartphone have increased over the time they have owned such a device. As one of the interviewees pointed out: *"In 2012 I was all excited when I had Google maps and WhatsApp groups on my phone, but today I demand that for example also my calendar has to work, it truly has to remind me"* (Johanna) As the features and capabilities of smartphones have evolved over the course that the interviewees have owned mobile phones, also the requirements that these young adults pose to these devices and smartphones significance in their life have increased - like Johanna signaled in the quote in the beginning of this chapter.

The interviewees tie their smartphone usage patterns behavior to how their peers use the device: *"If I would have some super weird hipster friends who would all have old school Nokia phones, I guess I would have some shittier phone and I would never use Facebook, WhatsApp or Instagram…"* (Maria). The interviewees also have strong perceptions of how other people use smartphones and how is their own usage in relation with other people. For example, they supposed that they were the most active smartphone user amongst their friends, described how their partners used smartphones or told about a friend who did not use a smartphone at all and how that felt a bit weird for them. Other things the interviewees mentioned to affect their mobile phone usage is the current phase of life (e.g. being a member of board of student organization) or personal characteristics like interest in following news in real time.

To conclude the context in which this study was carried through, young Finnish adults perceive smartphones as inevitable and significant part of their life. Many of them tend to compare their current life to their life before smartphones, because all of the interviewees have earlier owned a phone without an internet connection. The fierce smartphone usage of the interviewees is the result of what is perceived normal within their social surroundings.

4.2. Narrative of flawless smartphone in the possession of a faulty smartphone user

Interviewees acknowledge the wide benefits of smartphones. The device makes life easier by providing vast opportunities in terms of information retrieval, being connected and making it possible to take care of so many things necessary for everyday life faster and easier. The interviewees feel that their smartphones are useful, handy and sophisticated devices, but the way they use these devices is excessive, irresponsible and short sighted. This mismatch of capable device and their incapable usage of it makes consumers feel guilty, anxious and overwhelmed.

The representations of mismatch between interviewees perception of smartphones / living with a smartphone and their own smartphone usage was present throughout the interviews, but especially manifested itself through the sentence compilations. In the end of each interview, the interviewees were asked to complete the following sentences. The most outstanding finding of the sentence compilation is that interviewees use mainly positive (marked with green color) words to describe smartphones and life with smartphones, but mainly negative (marked with red color) or neutral (marked with yellow color) words to describe their mobile phone usage.

Pseudonym	Gender	Age	Smartphones are…	Living with a phone is…	Living without a phone would be…	If my phone would be taken away from me, I would feel…	I don't like when my phone…	My phone usage is…
Johanna	Female	25	useful	easy	boring	stressful	make noises	too time consuming and addictive
Petteri	Male	25	great	contradictory	lonely	disordered	does not work	substantial, excessive
Meri	Female	23	handy	nice	boring	bad	rings	time consuming
Saara	Female	23	burden	handy	difficult	very lonely	is taken away from me	time consuming
Sakari	Male	25	for good	addictive	harder	distressed, although I'd like to feel relieved	screen is too small	compulsive
Eino	Male	26	important	easy	hard	naked	battery ends	substantial
Maria	Female	25	annoying, but important	nice	liberating	naked	keeps me as a prisoner	obsessive
Johannes	Male	25	wonderful	easier than without	liberating	liberated	fingerprint unlocking does not work	fierce
Niklas	Male	25	handy	mainly pleasant	surprisingly ok	bad	screen breaks or battery ends	very frequent
Susanna	Female	23	handy	easier	quite ok as well	helpless	battery ends	daily

Table 3: Results of the sentence completion

This mismatch between the device related opportunities and resulted undesired usage can be further divided in four: 1) using the smartphone in a way that it hinders the user's ability to concentrate, 2) using the smartphone in a way that it damages the user's' social relations, 3) using the smartphone in a way that it is waste of time to the user, and 4) not using the smartphone enough to meet the availability expectations set by the others and the user him/herself. All these four themes highlight

the contradictory or paradoxical element of smartphones that emerge when these devices described as ‘wonderful’, ‘handy’, ‘great’ and ‘useful’ get to the hands of these consumers that use them ‘excessively’, ‘obsessively’ and ‘compulsively’.

4.2.1. Using smartphones to procrastinate

Interviewees acknowledge that smartphones help them in many ways with their primary tasks in life, that being studying for most of them. With smartphones, they can easily check for example when the library is open, how to get there or translate foreign words while studying. However, their smartphone usage distracts or interrupts them while they are trying to do the things that they value. Thus, although interviewees acknowledge that smartphones help in the task they want to achieve, e.g. information retrieval for studying or alarm clock for waking up, inconsistently they use smartphones to hinder these objectives.

Interviewees felt that they use smartphones to distract themselves from the things that they consider that they really should do, whether it is studying, waking up, going to sleep or leaving the house. In all cases, the alternative for smartphone usage is considered more valuable than the smartphone usage itself, which causes the guilt of using the device. *”I just thought about my bad habit of not eating breakfast. Like if I would not have spent 20 minutes lying on the bed, scrolling on Facebook and reading what happened in the U.S.A - probably nothing that affects my life at 7:30 am - I could learn healthy habits and eat breakfast”* (Saara).

Alongside distraction and procrastination, their smartphone usage also interrupts the thing that the interviewees were originally doing. This ‘checking habit’ is linked to the themes of damaging social relations, overdosing the content and expectations of being available introduced later in this part. In this context of using smartphones to procrastinate, the device is described to be on the interviewees mind all the time and they feel that they need to check it. *“Even if it does not make a sound, I feel like I need to check it in case I have received messages. Like when I go to the library and I decide to concentrate. Then all of a sudden I feel that I need to check my phone, and I don’t like when I feel like that”* (Johanna).

The checking habit offers a somewhat explicable reason for interrupting the task that might be challenging and tedious, like studying. Perhaps this is why in the interviewees’ narratives these interruptions caused by the smartphone usage is described to happen to some extent unconsciously.

Smartphones seem to stole their attention in a way that could be framed as a short study break in the beginning, but ends up spending hours consuming content that is considered irrelevant. *"If I'm about to start doing something, like studying, and then I just open the Facebook … and then I just drift into reading all sorts of news and things. The news might be interesting but then sometimes I just end up watching cat videos"* (Sakari). The topic of irrelevant content is further discussed later in the chapter 4.2.3.

This drifting into using smartphone more than originally intended described above was present in a several interviews. The interviewees described the process of this counterproductive consuming as floating from one piece of content to another. Often times the interviewees have a selection of social media channels listed in the chapter 4.1., that they browse through. Still, they do not have any fixed goal or roadmap when using smartphones to procrastinate. *"If I want to find out something with my smartphone, I might get interested in some other stuff along the way, and then I open a news article and another news article and I might spend enormous amount of time, and I end up figuring out some stuff that I was not even interested in the beginning …"* (Johanna).

Drifting into spending more time that they planned and doing something that they did not planned to do in the beginning describes the interviewees perceptions of ***lack of self control*** and ***failing to meet their original objectives*** in terms of for example studying intensively or going to sleep early. The interviewees acknowledge that their smartphone usage harms their objective to do what they were originally supposed to do or what they know that they should do. They are nerve-rackingly conscious of this element in their usage and it makes them feel guilt. The contradictory or paradoxical element of technology usage lies within the notion, that although smartphones help them to do things faster and easier, interviewees use smartphones to distract themselves from the things they need to concentrate on, thus making their primary work slower and harder.

4.2.2. Damaging meaningful relations with smartphone usage

The diverse social aspects of smartphone usage were one of the recurring themes during the interviews. Major part of the interviewees smartphone usage has to do with direct communication e.g. sending and reading WhatsApp messages, or broader identity or community building e.g. posting pictures to Instagram or being a member of a certain Facebook group. Many interviewees told that group chats make them feel being part of something. To some of them, being able to join

the WhatsApp group consisting of new friends was even one of the main drivers to originally purchase the smartphone several years ago.

Interviewees acknowledge many good aspects that their smartphone usage has to with their social relations, e.g. in terms of building up new relations. The most recurring themes were keeping in touch with old friends, especially with those who physically live in other countries and cities. The interviewees told how social media but especially group chats in Facebook Messenger and WhatsApp help them to maintain the relationship once established mostly offline. For example, Saara believes that they would not be as close with her high school friends without the ability to communicate in WhatsApp group chat. Furthermore, smartphones assist in building new social relations. For example, Johannes reckon that smartphone has accelerated the formation of his current relationship as smartphones enable people to be in touch with each other more often and in multiple channels.

However, there are two recurring underlying tensions that has to do with smartphone usage and social relations. The first aspect builds on the distinction between the interviewees meaningful relationships - family members, dearest and oldest friends: those people, that the interviewees truly want to keep part of their life - and casual acquaintances or even obsolete relationships. The smartphone usage has shifted the focus and way to be in contact with the members of these two groups. One interviewee stressed out that her smartphone and especially social media usage leads to the state where she knows a lot about the lives of those people that she does not feel meaningful or relevant to her:

"... Some weird things that you know about people you don't even know! It is completely unnecessary. And it makes me think that I would not even remember that these people exist, I would not remember their names, I would not be interested in what they do. Maybe if I would see them on the street I would recognize them and say hello. But I would not think about these people, that you now see every day on Facebook" (Maria). Smartphones brings the casual acquaintances closer to the smartphone users that they would ever be without these devices. Maria experiences this as an excessive noise in her life that she would be happy to live without. Because more than knowing what is going on in the lives of old classmates and people they met once at a party five years ago, the interviewees end up spending time thinking these people and their lives. This leads to ***the exhaustion caused by wasting energy on irrelevant social connections.*** As the interviewees are not

even interested in the lives of these distant people, they feel the extra information - that can sometimes be also very personal - as a burden.

It is indeed the closer look to interviewees perception of their social relations and especially the division on relevant and irrelevant relations that sheds more light to the narratives of their smartphone usage. Another interviewee described the division of irrelevant and relevant social relations and how smartphone usage affects to maintaining these relations. In the following example Niklas describe how smartphones enable him to stay contact with multiple people regardless of their physical location, but the possibility of virtual relation snatches the time for meaningful offline encounters.

"I think that (smartphones) might enable some sort of a risk that I maintain those relationships that I find meaningful a bit lazier. Like now I can be artificially in contact with these people. If I wouldn't have that possibility, I would have to see them face-to-face every time I have something to say to them"
Interviewer: "What do you mean by 'artificially'?"
"I think that if I see my friends face-to-face it is sort of a bigger commitment. In that situation you are present in a different way and you are genuinely interested in that other person ...." (Niklas).

The key insight is that although the virtual communication is seen as a tool to maintain and build relationships, interviewees still consider offline encounters more meaningful. Niklas describes how virtual communication reduces the time he spends with the people that are most meaningful to him in real life. The interviewee expresses ***passivity***: he does not have to devote himself into fostering these meaningful relations in real life because he can easily communicate with them by using his smartphone. However, as the virtual communication does not require so much effort it clearly bothers him that smartphones discharges him from the efforts to foster his meaningful relationships.

To conclude the previous, the interviewees express exhaustion on spending time to learn about people that they don't find relevant. At the same time, although virtual relations make it easier to be in touch with people, the easiness leads to passivity: young adults that were interviewed feel that they do not devote time and energy to those relationships that matter most to them. This type of consumption enabled by smartphones: burning energy to people that the interviewees do not find meaningful and passivity towards people that the interviewees consider dear to them leads to guilt.

The second aspect of damaging offline relations is using smartphones while interacting with people in real life. Many interviewees recalled the time when somebody in their presence simultaneously used a smartphone, which made them feel annoyed. Interestingly, many of the interviewees told they do the same thing themselves, although they consider it as harmful. *"Like if if I see a friend I have not seen for a long time and at the same time there is my phone on the table and I receive a message, I automatically check the message … Every time I realize this I get really distressed. Like how addicted I am to this thing that I cannot be fully in the presence of my friend but at the same time I need to be funny online?"* (Meri). In the example, Meri describes that she nurtures her social relationships both online and offline. However, just like Niklas, the offline encounters are usually reserved for more meaningful relationships. Meri acknowledges that she values the face-to-face meeting with an old friend, and strongly expresses anxiety and even astonishment of her own smartphone usage in their presence, which is against the commonly known good behavior.

The other major recurring example of damaging offline relations has to do with the interviewees using smartphones in the presence of their partners. Saara tells about her boyfriend, who hates her smartphone usage: *"… he claims that I don't listen to him because my attention is on my phone. And I heard comments like 'come on, concentrate on this' so often that although I always pass them like 'yeah yeah, I am listening to you' I still process it."* (Saara). Also Eino tells that his smartphone usage bothers both him and his girlfriend: *"There are those moments, that I don't even realize that I'm using it ... And then I receive these comments like 'oh you are again on your phone'. … And in a way it bothers me. Not the fact that I own a phone, but my own inability, my lack of situational sensitivity."* (Eino).

Smartphones has become such a dominant part of their every day life, that it easily the most established social relations – like partners – who suffer most from the smartphone usage. What is notable in these quotes is that both Saara and Eino do acknowledge that their smartphone usage is excessive. They express regret and guilt welling from their ***inconsideration and rudeness towards the people they care for***. Again, the difference between the smartphone as a device and the interviewees inability to use it is present in the narratives. The interviewees take fully responsibility for their inconsiderate behavior towards their loved ones.

On the contrary, another interesting example when the interviewee felt that his smartphone usage hinders the offline encounters has to do with relationships that has only just started or about to start. Petteri tells about a time when his smartphone usage was a way to escape from challenging offline

interactions: *"If I'm in sort of a socially awkward situation, like there are some half-acquaintances and things don't go smoothly, then it is so easy to disappear into your phone. But it is not a good thing, I should put it away and be with people, build something out of the situation"* (Petteri). This narrative underlines the ***passivity, lack of initiative*** and ***cowardice*** in fostering social relations, although unlike above this example is not about fostering already existing meaningful relations, but about forming potential new ones. Petteri clearly values the potential gains that throwing himself into new social situations enables. However, smartphone usage offers an easy way out from these situations that often require stepping outside of one's comfort zone and tolerating social awkwardness.

To conclude, interviewees felt that their way of using smartphones is simultaneously fostering their social relations and damaging them. Often the damaging effect of smartphone usage has to do with offline encounters, which the interviewees consider more meaningful, because of the amplitude and easiness of virtual communication. The paradox lies in the contradiction that smartphones enable communication with multiple people and more often, but the smartphone users damage their offline encounters by using their smartphones and diminish their meaningful relations by making them more superficial and investing less in them.

4.2.3. Misusing of overdosing the massive amount of content

Throughout the interviews the interviewees note that the phone itself does not do much and emphasize that it is indeed the internet connection that constitutes the heart of the device. They acknowledge the inexhaustible well of information that they carry with them all the time. Still, the effects of it are multifaceted and ambiguous.

First of all, the interviewees are well aware of this endless amount of information vary tremendously in terms of its quality, trustworthiness, usefulness and personal meaning to the receivers. Furthermore, interviewees feel that they consume this type of content that is not intelligent, productive or pleasant: *"It is very rare you find anything elevating from Facebook feed, Jodel, Snapchat, Instagram or Twitter. Maybe I could be happier if I would spend significantly less time using them."* (Niklas). Still, part of the content is interesting or entertaining in turn, which makes the interviewees returning to these channels. *"There is some sort of a temptation to go and see if I can find something interesting amongst that crap"* (Niklas).

The recurring aspect related to the content consumed via smartphones has to do with the distinction of good and bad content. The theme of interviewees valuing the variety of content provided by smartphones differently was very present throughout the interviews. *"For example in the morning when I wake up I usually read Helsingin Sanomat newspaper and that is sort of a same thing that I would read the physical paper. I don't see that as a problem, because I focus on reading about facts and issues instead of just hanging around in Facebook"* (Sakari) When talking about their smartphone usage, the interviewees justified some of the content like news to be acceptable to consume. Already Sakari's world choice "see that as a problem" describes that consuming some of the content is more accepted than the other.

The other part is the content that the interviewees perceive non-acceptable, at least when consumed excessively. Petteri describes his use of Facebook: "*... I do nothing there, I just scroll the newsfeed, 'like' some stuff. Actually Facebook has created its own genre of humor consisting of videos that last from 10 seconds to a minute. And I just keep bumping into shittier and shittier representatives of this genre."* (Petteri). The distinction between the acceptable and non-acceptable was made based on what the interviewees considered relevant. The interviewees frame e.g. podcasts, news and fact based articles as acceptable consumption, whereas e.g. browsing social media feeds, blogs and entertainment are non-relevant content, that the interviewees consume, but feel bad about it.

The other aspect of information misuse is the negative emotions caused by the fast pace and the endless amount of the information. The eternal amount of information that is available around the clock and updated constantly serves as the foundation of information overdose. One explanation is that the content that the interviewees consume via smartphone has become more entertainment-based when it earlier used to be more need-based. Also the interviewees describe the shift in the media format: what used to be just text is now also pictures, videos and audio. The endless amount of entertainment and other content has increased the smartphone usage to the point that the interviewees feel that they cannot handle all the information that they receive.

The access to constantly updated content makes the interviewees feel that they receive so much information that it causes a state that could be described as overheating. *"Maybe it could decrease excessive stress if I could be without (a smartphone). But well, at least I know plenty of things now"*
Interviewer: "How does mobile phone usage cause you stress?"
"It is not the mobile phone usage, but the information surge that stresses me. It would be good to just calm down and empty my head." (Johannes). Interviewees express exhaustion for all the

information that they receive through smartphones, including for example constantly updated newsfeed. In the quote above, Johannes expresses appreciation towards retreat and concentration and feels that receiving constant updates on world burns his reserves of energy.

This leads to broader notion of using the smartphones in a way that is not meaningful for the interviewees. Often the more pleasant alternative for smartphone usage was present during the interviews: *"If I practice how to play a song on the piano, even though I would never play it anywhere, I still feel it is more useful if I concentrate on practicing instead of scrolling Facebook"* (Sakari). This notion points back to the interviewees perceived division of good and bad content: there are some things that the interviewees consider as more acceptable than other things. Like Sakari, who value playing piano more than browsing social media applications. However, he acknowledges that he can easily spend time scrolling Facebook, because he can found content that he finds interesting enough. Still, he values playing piano more.

Interestingly, often times interviewees highlight that the better alternative of their smartphone usage could be doing absolutely nothing: *"I easily use smartphones to pass spare time, when I could just do nothing, but instead I dull my brains with information"* (Johannes). The next comment highlights the guilt of using smartphones to procrastinate, like mentioned in above. However, the interviewee again recognizes that it would be better to do nothing instead of using her smartphone: *"Sometimes I feel like 'why I don't just wake up in the morning right away?' Or if I don't want to wake up yet, why I could not just sit on the bed and think about my life. Why I need to scroll Instagram at the same time?"* (Maria). These narratives reflect the state where the interviewees have no pauses consisting of silence or even boredom in their life, as they always fill in the pauses with smartphone usage.

The notion of doing nothing rather than consuming smartphones in a way that does not feel meaningful for the user is certainly an interesting founding. The broader topic emerges in the aspired self-imaged that the interviewees would like to pursue: *"These doses of dopamine that highlight fast rewards makes people do other things that gives them fast rewards. That is a bad thing because meaningful things require perseverance"* (Johannes). This type of comment suggests that consumers would value some silence and boredom in their life, or at least liberation from the "doses of dopamine", the short sighted pleasures enabled by endless amount of content in their smartphone.

Interviewees recognize change in their behavior that relates to ***inability to concentrate***, ***immense themselves into something*** and ***work patiently towards something***. Often times the interviewees described how the smartphone usage has changed their media consumption practices. *"When I watch a movie I still scroll my phone at the same time, which is very annoying"* (Meri). Many of the interviewees highlighted how they used to read more physical books before and how online articles have replaced that consumption: *"... I used to read much more book before, smartphone has replaced that. I read nowadays probably more than back then but the reading is different. I read short articles online, it's not persevering in a way"* (Eino). These narratives radiate nostalgia and paint a picture of past when the interviewees worked more patiently towards something, whether it be reading youth novels or concentrating on the music they listened.

Overdosing the massive amount of content manifested itself differently within the interviewees. One interviewee outlined how her attitude towards music has changed along with her smartphone usage: *"... It feels like I couldn't live without Spotify, so probably it (smartphone) is more of a good thing. As musician, it helps me a lot. If I need to find a particular song I'll find it immediately. But when thinking of a time when I listened CDs that I borrowed from library with my iPod, perhaps I then had a different relationship with music. It became more of my own, I listened to it maybe more in-depth and over a longer period of time."* (Susanna). Contradictory, Susanna prefers to have the endless amount of music available through streaming services, as it helps her professionally as musician. Simultaneously, she feels that her relationship with music has become more superficial and greedy because of its high availability. Susanna's narrative describes music consumption more authentic when she had to go to more trouble to get access to the records. Smartphone has made her music consumption more straightforward and easy, but also more superficial and disposable.

To conclude, smartphones provide access to endless amount of content, which interviewees consider a great thing, but simultaneously they feel that they are misusing this information. The contradiction emerges from smartphones providing all the information in the world, and the interviewees feeling the responsibility and burden to find and spend time with consuming the "right" kind of content, and often times feeling that they fail in this conquest. The interviewees describe that they consume content that does not lead them to the direction that they would like to see themselves developing. The interviewees feel guilt of falling down to short sighted pleasures instead of concentrating on more profound things that they value.

4.2.4. Not meeting the expectations to be available

Smartphones make information flow and communication faster, as consumers can read the messages instantly as they receive them. It can be stated that smartphones liberate consumers of being dependable of a certain location or time. Interviewees considered fast information flow as a positive thing, but the other side of the coin is the pressure to utilize the phone and being available continuously.

Many of the interviewees traced their heavy mobile phone usage to their feeling that they need to be available all the time: *"If you start to think of it, like for real, that your life is dependent on that one thing, that is a device, it is completely insane. Why it has become such a big thing to me? I don't know when it happened, it was not like that before. Like sure it would have bothered me then if my phone would have broke but I did not had to have it all the time right next to me. It has such a great power, that I need to be available all the time, be online all the time. It is very disturbing"* (Maria). Like stated in the previous chapter, the interviewees feel stressed and overwhelmed for their smartphone usage, that they consider excessive and often unnecessary. Maria expresses strong frustration and unease of her relationship with her smartphone, that she considered to be too attached, but then gives her reason for it that she *needs* to be available all the time.

The need to be available drives from interviewees own expectations towards others. Interviewees want that their messages are answered right away, and mutually expecting that they need to do the same themselves: *"Maybe sometimes I think whether I should be less attached to my phone. But I can be without it if I am in company, I don't have to check it all the time. Just if I receive a message I'd like to reply fast, because I know how much it bothers me if people do not reply to messages"* (Sakari) and *"I feel that I'm the only person in the world who is all the time on her phone, answering the messages right away. And somehow I expect it from everyone else as well"* (Maria). The data points out that unlike stated before, the interviewees do not just trace their excessive mobile phone usage with the need to be available: they also justify the usage by it.

Interestingly, the data also points out examples when the interviewees are the ones who are expected to be available, and not enjoying it: *"(When I was a member of board of our student organization) people sort of expected that I work all the time, and it provoked me because I'm very bad at answering to messages and I acknowledge it, but if I don't answer right away, I get annoyed*

if people get annoyed by it." (Saara). This insight verify that the interviewees do not imagine the need to be available, but it truly expresses itself in many forms in the lives of young adults.

The portrayed requirements for availability create a loop of the interviewees feeling that they need to be available because they require other people to be available, who (they believe) require them to be available. *"... like if I want to reach out for a person, for example whether it would be ok for s/he to meet on a proposed day. Before it was fine to me if I could not get the answer right away. But nowadays I feel that s/he needs to answer me during the same day, preferably during the next couple of hours."* (Johanna). Again, the data points out the other side of the coin. The interviewees also express feeling of failure in the requirements to be available: *"I'm not sure if I am as available as I should be. With smartphone you get all the messages and emails instantly, which makes me feel that I should be available immediately"* (Susanna).

To conclude, being available has become ***a sense of duty***, and failing to meet the availability expectations of others makes the interviewees feel ***distress*** and guilt. The focus is again on what happens when technology meet its user. Susanna pointed out, that the need to be available comes from smartphones ability to pass the information instantly. These technological characteristics in turn build basis for consumer behavior and expectations. The contradiction emerges as although smartphones should make communication faster and easier by liberating its users of time and place, the interviewees feel that they need to be available all the time, thus being bound to the place where they need to be reached constantly.

4.3. Data gathered via autodriving supporting the four themes

Like discussed in detail in the methodology section, autodriving techniques were used for data collection alongside with the interviews. After the open ended interview, the ten interviewees were asked to scan through a pile of magazines and using intuition pick three to six pictures or headlines that speak to them when they were thinking about their smartphones and smartphone usage. After the selection the interviewees were asked to explain why they pick the specific pictures that they did. Altogether 10 sets of pictures, including altogether 45 pictures were selected and explained, of which three described the characteristics of internet, 10 described the phone as a device, and 32 described the phone usage. The results of the two most interesting compilations are presented next.
Johannes selected the following five pictures. The first one is man lying under a globe. The interviewee described how the man *"reads loads of painful information about the bad state of the*

world in Twitter" and how he has *"the problems of the whole world on his shoulder"*. The two bottom pictures describe how smartphone usage affect the social relations. Two men jogging represent the interviewee how *"not matter what the moment is, there are always people involved that are not physically there*". The two figures embracing represents to the interviewee how smartphone usage affects his relationship with her girlfriend: *"although you would have this kind of intimate moment with your partner, you still use your smartphone every now and then ... the mind is somewhere else although you are physically present"*.

The two pictures located in the right top corner of the paper describe the characteristics of smartphone and internet to the interviewee. The captain with phone in his hand reflects how smartphones liberate the user from time and space, that *"smartphone enables listening to music or other media or booking the movie tickets even if you are captain on the island of Pacific Ocean"*. The disappearing women writing on the chart board reminds the interviewee from the characteristics of the internet: *"world is based partly on reality and actual people and partly it is even completely artificial ..."*.

Picture 1: Selected pictures by Johannes, 26-year-old male

The second collage of pictures is by Johanna. The division to the characteristics of smartphones and smartphone usage is not as clear as with Johannes. Instead, the pictures that Johanna choose blend these two aspects. The picture of a woman on a phone reminds her how she uses her smartphone to keep in touch with her mother living in a different city. The headline "melkoinen paketti" ("quite a package") admirable describes her smartphone (*"smartphone has almost everything I need"*) and the lock symbolizes how much private information she keeps on her smartphone (*"It is important for me that my phone is locked and I use a password that is hard to break"*). The picture of people in the circle reminds her the social aspects of smartphone usage: *"I feel that I'm closer to my exchange friends, I know how they are, I can be in touch with them all"*.

Some of the selected pictures represent the contradictory and negative aspects of smartphone and smartphone usage. The photo of people standing in the circle she feels that she is the one standing in the middle of the crowd and mentions the contradictory aspects of the effects of a smartphone usage to social relations: *"I can be simultaneously in contact with all the people, I do not need to concentrate anymore…"*. The photo of a bookshelf reflects the amount of information that smartphone provides access into, but she also feels that *"smartphone takes time from edifying, self-development actions like reading a book"*. She selected the powerful photo of a bird in the cage as she feels that her smartphone has *"made her an addict"* and *"keeps her a prisoner of her own life"*.

Picture 2: Selected pictures by Johanna, 25-year-old female

To summarize the findings of autodriving data collection, the four themes of 1) inability to concentrate, 2) damaging social relations, 3) wasting time and 4) failing to meet responsibilities were present through the selected pictures. The interviewees selected pictures that reminded them both of their smartphones as a device and themselves as users. Just like during the open ended interviews, the interviewees negotiated the mismatch of smartphone as a good device and themselves as bad smartphone users.

4.3. Summary of the narratives: Finnish young adults' representations of guilt in their smartphone usage

In the previous chapter the four themes were discussed in detail. To summarize the findings, the research question **how do consumers negotiate their smartphone usage** is addressed on the following page. The Table 4 on page 49 presents the four themes of 1) inability to concentrate, 2) damaging social relations, 3) wasting time and 4) failing to meet responsibilities. These themes are further outlined in terms of the topics of guilt, fictional example of negotiating the usage and the results of the misuse. Furthermore, the sub-question **how do consumers represent technology paradoxes in their narratives of smartphone usage** is addressed by summarizing the represented paradoxes within the each theme.

To conclude, consumers' express guilt in their narratives of their smartphone usage. This guilt is caused by the feeling of misuse that covers various of topics related to the interviewees' perceptions of themselves and their relations to others. The represented paradoxes (see Table 4 on page 49) within the topics are often build on the interviewees' understanding that their mobile phones are useful and for good, but themselves as users are counterproductive and weak. The findings underline that the smartphone usage and its effects extend to all areas of interviewees' lives.

Topic	Theme	Negotiating the usage (fictional example)	Results of the misuse that build the foundation for guilt	Represented paradox
Guilt of using smartphones to procrastinate	1. Inability to concentrate	*I should have studied, but then I quickly had to check at what time the movie would start and after that somehow ended up spending an hour in Wikipedia, reading about the movies of Tarantino*	Lack of self control, failing to meet the original objectives	Smartphones help users in their objectives (info retrieval for studying, alarm clock for waking up), but it is also used it in a way that mislead the users to reach their objectives
Guilt of damaging meaningful relations with online smartphone usage	2a. Damaging social relations	*I know that my elementary school classmate I have not seen in 15 years just got engaged, but I don't know how my best friend is really doing, but I feel that we are kind of in touch, because I liked her latest picture on Instagram*	Passivity on fostering meaningful social relations, exhaustion caused by wasting energy on irrelevant social connections	Smartphones help users to foster their social relations (to keep in touch with people) but it is used in a way that hinders the relations that are considered the most valuable
Guilt of damaging meaningful relations with offline smartphone usage	2b. Damaging social relations	*I'm neglecting my friend who is sitting next to me by using my smartphone. I can't have fun with him right now because I have to use my smartphone to have fun with my friends online*	Inconsideration and rudeness towards people	Smartphones help users to foster their social relations (to keep in touch with people) but it is used in a way that hinders the relations that are considered the most valuable
Guilt of misusing the massive amount of content	3a. Wasting time	*I have all the information in the world on my fingertips, but I drawn myself into irrelevant rubbish like cat videos*	Wasting time to irrelevant content	Smartphones enable massive amount of information, but the users feel that they use it recklessly and short-sightedly
Guilt of overdosing the massive amount of content	3b. Wasting time	*I drawn myself into reading more and more news and articles and watching more and more pictures and videos to the extent I feel nauseous*	Hyperactivity, inability to concentrate	Smartphones enable massive amount of information, but the users feel that they use it excessively and greedy
Guilt of not meeting the expectations of being available	4. Failing to meet responsibilities	*I feel I should not use my phone so often, but I'm obligated to answer all the messages right away, because that is what I expect from the others*	Distress, anxiety, frustration	Smartphones liberate users of time and location, but the users feel that they are bound to be available all the time

Table 4: Summary of the represented topics, themes and paradoxes

5. DISCUSSION

The aim of this study is to decode, interpret and explain how young Finnish adults negotiate their smartphone usage and represent technology paradoxes within it. The focus was on the interviewees narratives of their experiences with smartphones. The objective of this chapter is to further discuss the findings of this study and to evaluate their theoretical and managerial contributions.

5.1. The rise of technology and the change in consumption practices

This study examines consumers' narratives about their smartphone consumption. It draws from the Western philosophical heritage about paradoxes and simultaneous contradictions, combined with postmodernism and social constructivism on technology. The study is build on the foundation of consumer research of technology paradoxes, initiated by Mick and Fournier (1998). However, alongside with the development of technology, the results of this study highlight the evolvement of consumers. In order to understand this evolvement, it is worthwhile to examine the technological development that have shaped the modern consumption practices.

The most profound leap of development of personal technology usage has been the rise of the internet. It has been predicted that internet will become as transformative as electricity, telephones and television at the time they were invented (Brown, 2000; Kraut et al., 1998). Looking back now in 2017, this prediction could not have been more right. Furthermore, the wide penetration of smartphones has made internet accessible to masses. Indeed, Matusik and Mickel (2011) argue that smartphones set their users free from physical locations and enable them to easily withdraw information and communicate with multiple people. All of these are elements were very present also in this study and formed the basis for the results.

Internet access via smartphones shake the very core of many of consumers' basic, everyday functions. These activities include purchasing behavior as well as communication and information retrieval, to name a few distinctive ones. Alongside with the possibilities enabled by technology comes the changes acquired by the users. Finnish smartphone users increased their usage of multimedia and browsing and decreased the amount of phone calls between 2005-2007 (Verkasalo, 2007). Although these results are already ten years old they point out the direction for smartphone usage development, which in turn offers an interesting basis for consumer research within Finnish smartphone users.

5.2. Contribution statement: what does the narrative of flawless devices and the faulty users tell about consumers' relationship with technology

This study is founded on consumer culture theory research and draws from technology paradox research initiated by Mick and Fournier (1998). Arnould and Thompson (2005) also refer to Mick and Fournier (1998) when stating that consumption practices have been under the microscope within the CCT research. The CCT research acknowledges that reality is "neither unified, monolithic nor transparently rational" (Arnould and Thompson, 2005, p. 875). In the core of this study is the narratives of what happens when technology meets its user, and interestingly, the theme of rationality was very present. Consumers perceive the technical device very rationally, and perhaps that is why they demand rationality also from their own usage. Consumers feel overwhelmed when using a technological device that is always performing, never tired and full of endless amount of discovery, as they perceive that their own usage does not accomplish the same extent of rationality.

The findings conceal a variety of contractions such as rationality versus feelings, performance versus pleasure and productivity versus laziness. Smith and Lewis (2011, p. 382) note that paradoxes consist of "underlying tensions", which means that there are aspects that solely make sense but become "inconsistent and even absurd" when combined. Many tensions related to smartphones and smartphone usage has been noticed earlier within the literature. Kraut et al. (1998) note that although internet can be labeled as a social technology characterized by communication, contradictory, it causes reduced social involvement. Middleton (2007) in turn highlight that BlackBerrys allow employees to work whenever and wherever but because of the very same thing make employees feel that they need to work whenever and wherever.

The results of this study updates the changes in smartphone users' consumption practices described in the previous chapter to the theoretical understanding of the relationship between technology and its users. In the past literature, technology itself has gained a lot of attention. The technology paradoxes describe the characteristics of technology and how they affect consumers' life. For example, Mick and Fournier (1998) researched new owners of technology devices like telephone answering machines. Looking at the results of this study, it seems that as information technology has become such a dominant part of modern life, consumers don't feel much about the technology itself. They can rationally evaluate these devices or describe why they chose to purchase a certain model, let it be because of the technological capabilities, price or personal preferences.

However, this is not a study of how consumers perceive the characteristics of smartphone, it is a study of how consumers feel while they consume these devices. This study follows the viewpoint of Orlikowski (2000) that underlines the importance to understand the technology usage contrary to solely the technology itself. The basis for the significance of this study is that modern consumers acknowledge that technology itself does nothing, it is the consumer's own actions (certainly enabled by technology) that causes the bipolar emotions and contradictions that were in the core of the findings of this study. To conclude, whereas the contribution of Mick and Fournier (1998) was about how consumers understand technology and what kind of emotions technology wakes in them, the results of this research describe how consumers experience technology and what kind of emotions their technology usage wakes in them.

Certainly, one viewpoint to the discussion about consumers' perceived technology paradoxes is to question whether paradoxes even exist. Green, Goldman and Salovey (1993) argue that consumers cannot truly feel two conflicting emotions at the same time, or their ability to do so is limited at least. On the other hand, Larsen, McGraw and Cacioppo (2001) noted results of consumers reporting to be both sad and happy at the same time, for instance when they were graduating, although the authors label these feelings as 'bivariate' rather than 'bipolar'. Indeed, the findings of this study reflect the continuum of emotional scale like 'pleasure – guilt' and 'enjoyment – anxiety' rather than representing or expressing the pure opposites simultaneously.

The last contribution of this has to do with consumer identity research, which is elemental for consumer culture theory (Arnould and Thompson, 2005). The findings of this study state that the contradictions - the way interviewees describe that they use their smartphones versus how they suggest is should be used - makes the interviewees feel guilt. Cambridge dictionary (2017) defines guilt as "a feeling of worry or unhappiness that you have because you have done something wrong". It is worthwhile to note that the definition of 'wrong' usage is up to interviewees own experiences and interpretation of myself as a researcher. On the contrary, where is it stated or who is there to state what is the 'right' usage of smartphones? The narratives of young adults paint a picture of ideal consumer or person as sensible and productive, with high self-control and ability to concentrate. From this point of view, the results of this study can be linked to the broader discussion on 'rational consumer' and further to consumer's identity project research, in which also contradictions have been earlier under the microscope within CCT research (Arnould and Thompson, 2005).

5.3. Four themes of misusage that cause consumers to feel guilt

The findings of this study outlined four emerging topics of smartphone usage that makes the smartphone users feel guilt. These themes are using smartphones to procrastinate, damaging meaningful relations with smartphone usage, misusing or overdosing the massive amount of content and not meeting the expectations to be available. Next these four topics are discussed and linked to earlier research on the field.

5.3.1. Using smartphones to procrastinate

One of the four themes that emerged from the interviews was using mobile phones for procrastination. Instead of doing what the interviewees originally planned, like studying, they drifted into scrolling their phones without a specific purpose. Steel (2007, p. 7) defines that to procrastinate is to "voluntarily delay an intended course of action despite expecting to be worse off for the delay". The interviewees use smartphones to deceive themselves from the tasks they need to do although they know they had to suffer from the consequences later. This type of harmful, yet practiced consumption is discovered earlier by consumer behavior scientists. For example, Rook (1985) researched consumers shopping behavior and noted that often times shopping resulted into feelings of pleasure and feeling that the behavior is financially harmful.

In terms of information technology usage, similar results of spending time in internet and feeling bad about it have been found (Reinecke, Hartmann and Eden, 2014; Panek, 2014). Panek (2014) investigated college students using social media sites and watching online videos to postpone other tasks, although being aware that they replace long-term goals with short sighted pleasures. Also Mick and Fournier (1998) address the topic with the paradox of efficiency/inefficiency, that suggests that technology simultaneously eases and hinders completing tasks (see Table 1 on page 17). The feeling of smartphone overuse and its unwanted effects on the productivity is not a new phenomenon either within more commercial self-help literature. Perlow (2012) even wrote a book 'Sleeping with your smartphone. How to break the 24/7 habit and change the way you work'.

The interviewees narratives suggested search for explanation for this sort of behavior. During the interviews they used the word 'addictive' or stated they are 'addicted' to their smartphones. Tossell et al. (2015) gave iPhones to around 30 consumers that have not used smartphone before. After a year of usage, 62% stated that they were addicted to their smartphones. These consumers also used

the device more than the respondents that did not consider themselves addicted. The difference of usage was increased usage of messaging applications, email and Facebook, but to the researchers' surprise, the users that evaluated themselves to be 'addicted' did not play more mobile games that their 'non-addicted' counterparts. (Tossell et al., 2015).

Some criticism towards the chosen vocabulary needs to be raised, as the diagnosis of 'addiction' should not be loosely exploited. Indeed, Kubey (1996) claim that better term for 'addiction' would be 'dependence' when talking about extensive media usage. However, the results of this study provide similar sot of finding than Tossell et al. (2015): these young Finnish adults that consider themselves as heavy users (and the data usage statistics in Finland support the claim) use their smartphones mainly for communication. Also, most examples of 'addictive' behavior or harmful interruption of the original activity were about checking if they have received any messages or what is happening in the social media sites.

This checking habit has also gained attention in the mobile phone research. Oulasvirta et al. (2012) argue that the major part of the smartphone usage consists of sessions that last less than 30 seconds. Andrews et al. (2015) conclude that consumers use their smartphones five hours per day, consisting of 85 checks per day. Digital agency Tecmark claimed that smartphone users check their phone even 221 times every day (Tecmark, 2014). What is notable is that consumers self-evaluate checking their phones half less than what was subjectively measured (Andrews et al., 2015). Oulasvirta et al. (2012) claim that smartphone usage develops into habit that occurs with specific triggers, such as reading e-mail when sitting in a bus. The interviewees of the study expressed that checking their smartphones have become a strong and often recurring habit and it bothers them.

5.3.2. Damaging meaningful relations with smartphone usage

The findings of this study point out that the interviewees feel that they use their smartphones in a way that simplifies maintaining and nurturing their social relations, but also leads to exhaustion for using energy to less important social relations as well as guilt caused by neglecting the more important social relations.

One of the main findings under the theme of social relation has to do with young adults' perceptions of their more relevant and irrelevant social relations, and how does their smartphone usage effect to these relations. In the past literature, the notion of 'strong' and 'weak ties' in terms of social

relations has been made, but the division is based on whether the foundation of the relationship has been made online or offline and assuming, that social relations established in real life are the stronger (Kraut et al., 1998).

However, based on the results of this study, there are no longer pure offline and online relations. Instead, the relation that have started offline might continue online. The fundamental shift in this categorization has to do with the rise of the social media, which allows interacting with many people - ranging from the close friends and family members to the person you have met once at a party five years ago - at the same platform. Thus, smartphones facilitate social relations but also increase the amount of them. Regardless, no one can have over 600 close friends, which is still not an exaggerated amount of Facebook friends that these young adults have. The consumers' attention and energy resources in terms of social relations is divided into many direction, which leads to exhaustion.

Another notion has to be made in terms of maintaining social relations offline and online. Kraut et al. (1998) concluded that increased internet usage causes declined social participation. Based on the results of this study, the statement oversimplifies the multifaceted phenomena of social relations and internet connection (in the context of this study, via smartphones). Consumers who are active in social media platforms, sharing content, inviting and involving other people to the conversation, can indeed perceive themselves as high social involvement.

On higher level, the authenticity of social involvement online and offline can be further discussed. Sherry (2000) refers to the belief of technology alienating consumers from nature, which can be interpreted as distancing from what is tangible. The contradiction between existing meaningful i.e. authentic social relation and nurturing it via non-authentic information technology causes anxiety and guilt in consumers. The results of this study point out that consumers still consider seeing people offline as more meaningful than being in contact with them via smartphones, which they see as somewhat artificial. However, this impression is just a snapshot of consumers' perceptions in 2017 – as the information technology and the social norms related to it continue to develop, consumers need to constantly re-negotiate how technology affects their understanding of authenticity in terms of social relations.

The other outstanding finding of this study has to do with damaging offline relations with smartphone usage. The interviewees told that they do not pay attention to the people next to them in

real life but instead use their smartphones. Also stories of other people doing the same while being in the presence of the interviewees were shared. This smartphone usage caused guilt because of the inconsideration and rudeness towards other people. Similar findings of devices interrupting social situations has been made earlier. Middleton (2007) concluded that BlackBerry users liked the device because it allowed them to work more flexibly, but their friends and family disliked it because the device was always on. Similarly, Mick and Fournier (1998) outlined the paradox of assimilation/isolation, referring to technology's characteristics of facilitating both togetherness and separation between its users (see Table 1 on page 17).

The course of development seems inevitable, as Palen, Salzman and Youngs (2000) argued that people tolerate other people using phone in their presence better as they become more experienced mobile phone users. Schlosser (2002) suggests that consumers are following a code of conduct in terms of usage of technology devices. The topic is very relevant to smartphone users today: what is considered socially accepted smartphone usage? One by one the locations and situations where the usage has earlier been unacceptable has become a norm. Instagram made it socially acceptable to use a phone in the restaurant to take pictures of the food. Airline companies are now providing free wifi connection to the contrary when people used to switch off their phones for the flight. Now even the venue that can be described as the last fortress of smartphone-free zone might be soon conquered when the movie theatres will start providing complementary sockets for their customers to load the smartphone batteries. According to social constructivism on technology presented in the chapter 2.2. relevant social groups affect to the development of technology, but in the light of the examples below it can be also stated that they affect the development of technology usage.

5.3.3. Misusing or overdosing the massive amount of content

The findings of this study suggest that young adults feel that they are misusing the endless amount of content provided by smartphones either by consuming too much unnecessary content or by overdosing the content. In the core of the struggle is the categorization of their device: the interviewees contemplate whether their smartphone is a device for information or for entertainment. Moreover, the young adults interviewed still remember the time when phones were used mostly for information retrieval. Nowadays the device is clearly both for information and for information and the responsibility to balance the usage appropriately is left to the user.

The first finding is consumers' perception of consuming too much poor quality content, to which the interviewees often refer as "cat videos". Cat videos cover all sort of content with minor or non-existent value, not only just videos about cats. The relation between entertainment media usage and well-being stays complex, as results has been gained that entertainment media leads to both stress relief and enjoyment as well as depression and frustration (Reinecke et al., 2014).

Also, similar to the results of this study it has been noted that consuming more 'quality' content like documentaries and art films make consumers feel better about the content (Oliver and Bartsch, 2010), whereas media appealing to more hedonistic needs makes the consumers feel guilt (Panek, 2012). Myrick (2015) adds a more lightweight tone to the discussion by researching consumers viewing actual cat videos. Comfortingly, Myrick (2015) concluded that although cat videos were often watched for procrastination, they still made the respondents feel more enjoyment than guilt.

The other finding of this study has to do with the interviewees' perception of overdosing the massive amount of information. Schlosser (2002, p. 416) suggest that portable wireless technology users face "power struggle for control". Indeed, the paradox of control and chaos, mentioned also by e.g. Mick and Fournier (1998) (see Table 1 on page 17) and Järvenpää et al. (2005), was visible in the results: the interviewees were uncertain how to maintain the control of the information that they have access to. This notion supports the findings of this study: the interviewees feel that they loose the control of their smartphone usage and overdose or misuse the content available. Smartphones truly challenge the limits of modern consumers by testing how much information a human can handle, and whether they recognize these limits.

5.3.4. Not meeting the expectations to be available

The findings of this study suggest that young adults expect high availability from others and feel that they need to be mutually available. This founding links to topic of guilt of using smartphones in the presence of others, that was mentioned earlier. Schlosser (2002) suggested that people considered impolite to check pager when being in the presence of other people. Today, 15 years later and in the light of this study, the statement is not so explicit anymore. Based on the results of this study, young adults consider it rude to check their mobile phone when being in the presence of somebody, but they still did it, partly because of the pressure of being available.

The smartphone users pressure to be responsive has been noted earlier in the literature (e.g. Matusik and Mickel, 2011), also within the organizational research (e.g. Schlosser, 2002). Schosser (2002) state that employees consider being available as an advantage, but also suggest that especially younger employees feel the pressure to constantly respond e-mails. Similarly, Fonner and Roloff (2012) conclude that the connectivity paradox lies within the finding that although internet liberate employees to work remotely, they feel the need to be constantly available, which causes interruptions to their work. Furthermore, Middleton (2007) suggest that employees' constant availability fosters organizational culture that blurs the line between work hours and free time.

This study suggests similar results within consumer research. However, many of the interviewees use their smartphone in work-like environments that require responsiveness, like as a member of board of a student organization. Although the interviewees were young adults that had not yet started their full time professional career or were at the early stage of it, this study suggests that the workplace demands in terms of responsiveness have spread to cover also the private usage. Middleton (2007) also pointed out the confusion of professional and private usage of smartphones.

The topic of availability is lightly mentioned within the earlier technology paradox research. For example, Järvenpää et al. (2005, p. 35) discussed the paradox of empowerment-enslavement as the consumers felt that they were "forced to respond to the technology". This is linked to Mick and Fournier's (1998) paradox of technology simultaneously fulfilling and creating consumers' needs (see Table 1 on page 17). However, the insights of this study suggest that the question might be wider than merely the relationship between the technology and its user. The narratives also reflect consumers' perceptions of how other people expect that they should consume, and in this case more specifically: what is the standard speed of consumption.

This study leans on the theory of social constructivism on technology, presented in the chapter 2.2. and highlighting the technology as socially constructed culture (Pinch and Bijker, 1984). Winner (1993, p. 376) claims that both academics and consumers need to cope with "ways in which our technology centered world might be reconstructed". Smartphones indeed reconstruct the norms of consumption. One interviewee explained that she would like to take a short break of her smartphone usage, but she feels that she would have to notify people about it beforehand. That is because personally she would feel unease if she could not reach her friends and family for one day. This serves as an example of how technology have changed consumers' expectations of consumption: the speed of consumption and standard for availability has become more demanding.

5.4. Reflections on postmodern era: self-regulation as an ideal and abstaining from the high-tech

The debatable term ‘smartphone addiction’ was discussed earlier in the chapter 5.3.1. LaRose, Lin and Eastin (2003) suggested that more suitable term for ‘internet addiction’ would be ‘deficient self-regulation’. The incapacity of consumers to resist the internet usage leads to development of consumption habits, in this context related to smartphone usage. The term deficient self-regulation matches very well to what the interviewees describe: lack of self-control and inability to concentrate to the original task.

The fact that the interviewees discuss these topics clearly underline that these topics are something that they value. At the same time than the narratives of these young adults can be interpreted what they see themselves being, they can simultaneously be seen as what they would like to be. High self-regulation, ability to concentrate and high self-control is something that the interviewees value, and the source from it does not have to be traced further than the values and trends of our postmodern society. The trend of high performance and concentration for example by practicing mindfulness that highlight the ability to focus on what is meaningful instead of wasting time to triviality characterize the time that we are living. This ideal puts consumer into challenging situation where all the quick rewards are right in front of them, but the ideal forbid them to act on their desires.

Future consequences of these findings are hard to predict, but some evidence of it might be already present. Rose and Wood (2005) researched reality television viewers and suggested that if consumers fail in negotiating the paradoxes on consumption, they might abandon the consumption altogether. Indeed, the course might be parallel within technology consumption. There can be already seen practical examples of the rise of ‘low tech trend’, including celebrities like actor Eddie Redmayne and artist Rihanna giving up for their smartphones for old-school mobile phones might give a hint to what might be ahead of us. Interestingly, Redmayne waived his iPhone because he felt the he “tried to keep up in real time, at the expense of living in the moment”, but as he ended up replacing the time of not using smartphone with using laptop, the actor switched back to his iPhone and now tries to “master a healthier relationship with it" (Jamieson, 2016). It seems that not even celebrities are safe from the guilt of perceived misuse of a smartphone.

5.5. Managerial implications

The results of this study offer useful insights for smartphone manufacturers and application developers. The paradoxical relation between the smartphone user and their device is something that all actors within the industry should understand and potentially benefit from. To begin with, it offers a lens to understand the wellbeing of consumers. Chae and Yeum (2010) highlight the importance of 'sustainable mobile technology usage. Alternatively, understanding contradictions and paradoxicality offer a basis for commercial springboard. Williams and Aaker (2002) mentions advertising that exploit mixed emotions, like insurance company illustrating the family of a late husband and show how the family simultaneously expresses sadness and security.

Williams and Edge (1996) demand involving social science to technology development, as the user experiences play such a dominant part in adoption of technology. However, this study widens understanding of user involvement in smartphone and application development. The manufacturers and application developers should widen the focus from usability and technical characteristics to the relation between the device and the user. This study evaluated the significant distress that consumers express when talking about their smartphone usage. In order to respond to this anxiety companies could introduce for example content filters, notifications after a certain time period of usage or even usage limitations.

After all, Finland is known for its pioneer technological achievements. For example, Nokia presented the first smartphone already in 1996 (Ziemann, 2016). In Finland we carry a national heritage of understanding how to build revolutionary technology devices. This study contributes to the noble endeavor to be in the forefront to understand and commercially exploit the way that consumers perceive the usage of them.

5.6. Suggestions for the future research

The findings of this study exceed the traditional technology paradox research by shedding light to consumers' duality and contradictory emotions towards their smartphone usage. The potential implications for the future consumer research can be divided at least in two. First, to better understand the phenomena of paradoxicality of smartphone usage, the study could be revised with different group of interviewees. The data of this study was retrieved from young Finnish adults aged between 23 and 25. However, Labouvie-Vief, DeVoe and Bulka (1989) argued that people's

ability to describe especially their complex and contradictory feelings as well as understand and cope them evolves as they age. Therefore, it might be useful to research the narratives of smartphone usage of an older user group or complete a longitudinal study over a several year time period.

Secondly, the research could be revised in another cultural setting. All the interviewees of this study were living in big cities of Finland. Williams and Aaker (2002) noted that people that represent cultures in which duality is strongly represented are more willing to accept coexistence of conflicting feelings. Like discussed in chapter 2.1., paradoxicality is more prominent part of Eastern philosophical heritage as well as popular culture representations. It can be argued that the globalization enabled by rise of the internet have blurred the cultural lines and created a situation where two urbanites with different nationalities but with the same age, education and socioeconomic background might have more in common than two randomly selected citizens of the same country. Still, it might be beneficial to study if representatives of different cultures perceive their smartphone usage differently in terms of paradoxicality and duality.

The main contribution of this study to the research on technology paradoxes has to do with the consumers changed relation with technology. The paradoxicality manifests itself in the contradictions of technological features and users misuse of this features. Although smartphones are very insightful devices to research because they are so excessively used and they combine so many functionalities, this type of technology paradox research could be leveraged on other consumer technology devices like wearable technology, tablets or laptops. On a higher level, the finding of flawless devices and the faulty users offers interesting insights and inspiration for further research to consumer culture practitioners. How is it possible that consumption, that is aimed to serve consumers, makes them feel diminished, incapable and guilty?

To conclude, the further consumer research within smartphone usage is highly encouraged. Mick and Fournier (1998) initiated the consumer research on technology, and the second decade of the 21 century has most definitely more into it. Smartphones have completely changed the way consumers retrieve information, build and maintain social relations, spend time and complete tasks of everyday life. Consumer researchers cannot miss the opportunity to research something that modern citizens consume about one third of the time that they are wake (Andrews et al., 2015) as researching smartphone users enable endless amount of discovery - just like the device itself.

6. CONCLUSION

The objective of this study was to research the narratives of Finnish young adults about their smartphones and smartphone usage. The study is based on acknowledging paradoxes and duality, the perception of world initiated by the Greek philosophers several centuries before the Common Era. The literature stream of technology development, the shaping nature of relation between consumers and technology as well as technology paradoxes is addressed. The study explains the consumers' perceptions and emotions that their smartphones and their smartphone usage invoke. The pioneer research of technology paradoxes done in late 90s by Mick and Fournier (1998) is justified to update to 2010s within the device that consumers constantly use: smartphone.

The results of this study explains the contradictory perceptions of smartphone users between the characteristics of smartphones as a devices and consumers as users of these devices. The mismatch occurs as consumers describe their smartphones and life with smartphone with positive adjectives like 'handy', 'wonderful' and 'easy' but their personal smartphone usage with negative adjectives like 'compulsive', 'obsessive' and 'addictive'. The consumers display themselves as incompetent smartphone users, which manifests within four themes: inability to concentrate, damaging social relations, wasting time and failing to meet responsibilities. Under all of the themes lies several contradictions and paradoxes, but the overall contradictory theme is that the young adults describe smartphones as a device that enables and restricts, empowers and drains and helps and hinders them simultaneously, and they are blaming themselves for it, thus feeling guilt.

This study sheds light to the complex elements of smartphones and smartphone users. While doing so, it contributes to both academic research as well as provides insights for managerial implications. The major contribution to both fields is the finding how the daily and constant use of technology has changed consumers' perception of it. Mick and Fournier (1998) shed light to the emotions that technology wakes in consumers. However, the findings of this study explain the emotions that using the technology wakes in consumers, and also how they perceive themselves as smartphone users, thus offering more personal perspective that is also more sensitive for contradictory emotions. These results build a foundation for forthcoming consumer research on technology usage. Furthermore, the results offer interesting point of view to smartphone manufacturers and application developers about consumers' perceptions of consumption, self-image and ideals.

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APPENDIX

Picture collages by the interviewees

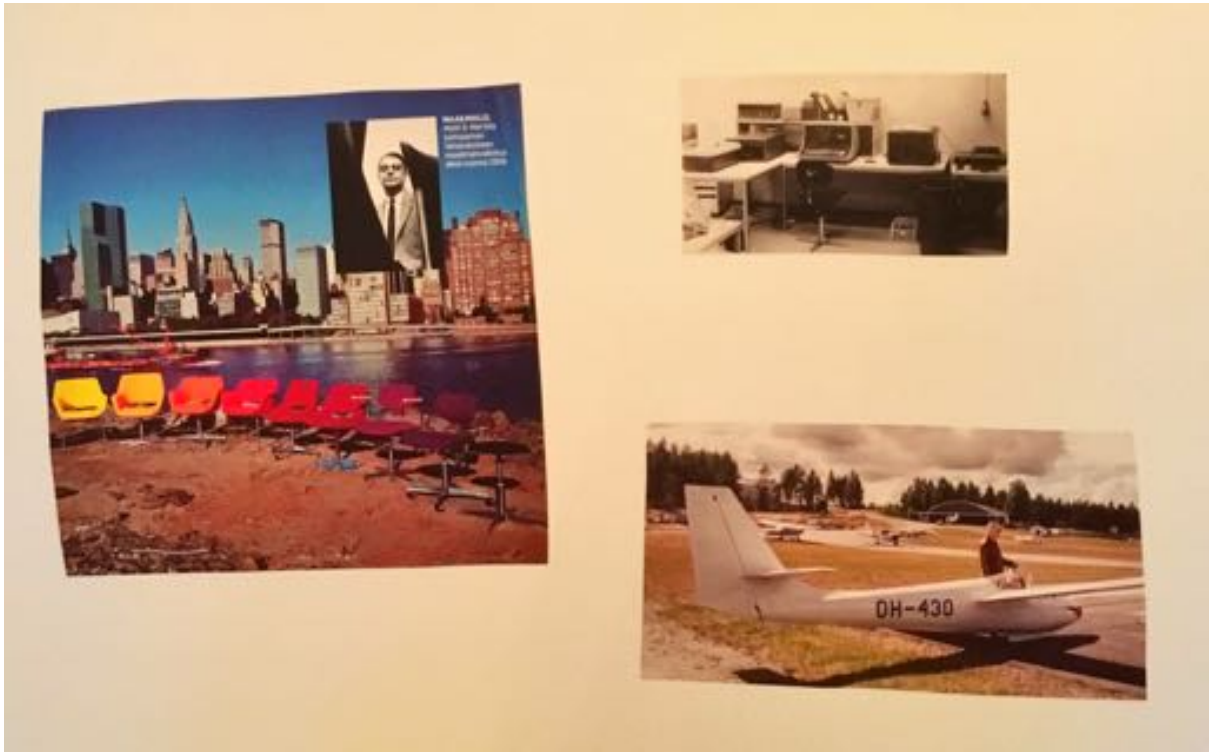
Johanna, 25-year-old female:

Petteri, 25-year-old male:

Meri, 23-year-old female:

Saara, 23-year-old female:

Sakari, 26-year-old male:

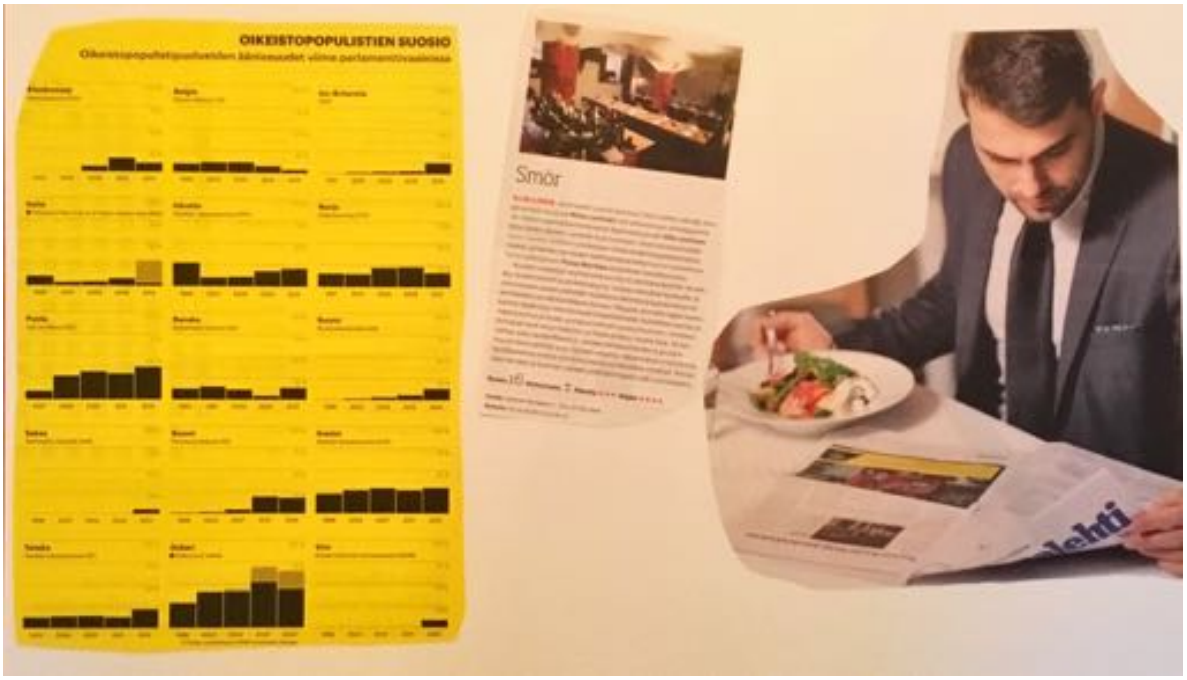


Eino, 25-year-old male:

Maria, 25-year-old female:

Johannes, 26-year-old male:

Niklas, 26-year-old male:



Susanna, 23-year-old female