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The Use Values of Smartphone Apps

A qualitative study

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ABSTRACT

Smartphone applications are exploding in popularity, and people today assume there should be an app for everything. However, despite the vast amount of applications available, the average Swede only uses twelve during a regular month. For marketers, this makes it essential to know why some applications are used before others. Hence, to know what is the consumer perceived value in using smartphone applications. Consequently, the purpose of this study is to gain a deeper understanding of the consumer perceived value in using smartphone applications by studying how and why people use them. This is done taking a qualitative approach using in-depth interviews and self-observations, with users familiar with the technology. By focusing on the actual use, we highlight the users' views on what constitutes value, in contrast to the producers' views on the concept. Our conclusions are that six use values exist: *convenience, control, motivation & inspiration, monetary savings, entertainment, and knowledge*. These are connected to mainly functional and symbolic value dimensions, but also epistemic and conditional value dimensions. This knowledge will aid marketers in giving the application users what they want, when they want it.

Keywords: *Smartphone applications, Consumer perceived value, Value-in-use, Consumer behaviour*

INTRODUCTION

Smartphones have become extremely popular today, and the popularity is still growing. Smartphones are defined by Verkasalo et al. (2010, p. 243) as “devices that can be used both as a mobile telephone and as a handheld computer”. Thus, what separate smartphones from mobile phones are the features of a computer, such as the applications (apps), defined as “small programs that run on a mobile device and perform tasks ranging from banking to gaming and web browsing” (Taylor et al., 2011, p. 60), which make smartphones possible to use for more purposes than

calling and sending text messages. As Wagner (2011, p. 39) observes:

“On the one hand, consumers make use of smartphones en route by using well-established services and activities (such as email, browsing the web and social networks), but they also seem to develop new patterns of behaviour based on the ability to access almost limitless information anywhere and at anytime.”

Google¹ (2012, p. 6) states that a total of 51 % of the Swedes owned a smartphone in the first quarter of 2012. One year earlier, the smartphone penetration was 30%, a considerably lower percentage indicating a

rapid growth. According to an analysis using the tool “Our Mobile Planet” (Google², 2012), Sweden is one of the countries where the popularity of the device is the greatest, with the second highest smartphone penetration in Europe and the fifth highest in the world. As a result of the extension of the mobile phone into the smartphone, the power to control the apps in the phone has shifted from the manufacturer to the user (Verkasalo et al., 2010). The popularity of smartphone apps is exploding (Taylor et al., 2011), and people today have a vast number of apps to choose from. For example, iPhone’s AppStore offers more than 850 000 apps (Apple¹, 2013) and Android’s Google Play offers more than 450 000 apps (Google³, 2013). Only in Apple’s AppStore, a total of 50 billion apps have been downloaded (Apple¹, 2013), of which almost 20 billion were downloaded in 2012 alone (Apple², 2013). More than 800 apps are downloaded per second in Apple’s AppStore, at a rate of over two billion apps per month (Apple¹, 2013), showing the popularity.

According to Accenture (2012), people today assume there should be an app for everything. In other words, everything should be “appified”. However, the average Swede only uses twelve apps during a month (Google¹, 2012, p. 17), which makes it essential to understand why people use only them. As Wagner (2011, p. 28) states: “while the global smartphone market is growing rapidly, little is known about how consumers make use of smartphones”. There is a need for marketers to understand the consumer behaviour for smartphone apps and identify how and why they are used, in order to know how to best reach out to consumers through apps, as marketing channels, or as goods or services in themselves. Though, many smartphone apps seem to be developed without considerations to why and how people would want to use them. Hence, without knowing the consumer perceived value in using the apps. Chen and Mort (2007) claim that when a technology, such as an app, is voluntary to use, perceived value has a positive effect on technology readiness. This

means that for a person to use an app there must be consumer perceived value. The topic of consumer perceived value is becoming more important, attracting the interest of both managers and researchers (Parasuraman, 1997; Gounaris, Tzempelikos and Chatzipanagiotou, 2007; Chahal and Kumari, 2012). The interest in the topic of consumer perceived value, together with the assumption that many smartphone apps are developed without considerations to consumer perceived value, makes this an interesting combination to study.

A common view has been to look at value as inherent in the product or service at the time of exchange. However, several scholars (e.g. Normann and Ramírez, 1993; Vargo and Lusch, 2004; Edvardsson, Gustafsson and Roos, 2005; Vargo, Maglio and Akaka, 2008; Grönroos, 2008) argue that value is created during usage, so called *value-in-use*. Value-in-use is based on consumption, in contrast to value-in-exchange that is based on trade (Vargo, Lusch and Morgan, 2006). Grönroos (2008) and Vargo, Maglio and Akaka (2008) argue that without value-in-use, there is no value-in-exchange. Applying this to smartphone apps, value-in-exchange emerges when the app is downloaded, whereas value-in-use emerges when the app is used. If the user of the app does not perceive any value during the usage, there will be no value in having downloaded the app, thus, no value-in-exchange. Consequently, value-in-use is an important part of the value concept to study. However, the literature on value-in-use combined with smartphones and apps is scarce. Earlier studies have mainly focused on motivations for using mobile phones (e.g. Grant and O’Donohoe; 2007; O’Doherty, Rao and MacKay, 2007; Jin and Villegas, 2008). Studies on smartphones and smartphone apps, in combination with value, have been done (e.g. Chiem et al., 2010; Verkasalo et al, 2012; Persuad and Azhar, 2012; Wells, Kleshinski and Lau, 2012; Salo et al., 2013), but few have focused on value-in-use. Thus, the purpose of this study is *to gain a deeper understanding of the consumer perceived value in using smartphone apps by studying*

how and why people use them. The research question to be answered is:

What is the consumer perceived value in using smartphone applications?

The consumer perceived value in using smartphone apps will also be referred to as *use value(s)* in this study. Thus, by answering the research question, this study aims to reveal the use value(s) in smartphone apps. Chahal and Kumari (2012) state that exploring the concept of consumer perceived value can help companies understand their consumers, since perceived value significantly influences satisfaction, trust and behavioural intentions. They claim that people perceive value in different ways since they have differing needs, preferences, and financial situations.

In the remainder of this article we first review the theory of consumer perceived value, followed by a methodology section. Data was collected through semi-structured interviews and self-observations, and analysed through coding. Next, how and why people use apps, and what use values they perceive, will be presented in the findings section. This will be followed by a discussion where the use values are connected to the theoretical framework. The importance of these findings for marketers will be reflected upon in the managerial implications. Finally, a conclusion and suggestions of further research will be presented.

THEORETICAL FRAMEWORK

In order to study how and why people use smartphone apps, and identify the use value(s), consumer perceived value theory is appropriate to consider. To start with, a general discussion of the consumer perceived value concept will be presented, which will be followed by a review of various value dimensions. This will aid in gaining a deeper understanding of the consumer perceived value in using smartphone apps.

Consumer perceived value

Consumer perceived value refers to what the consumers believe they get from buying and using a product, and not to what companies believe their customers value (Woodruff, 1997). According to Zeithaml (1988), value is a tradeoff between what the consumers get and what they give when acquiring and using a product. She explains:

“perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e., some are concerned only with money expended, others with time and effort), value represents a tradeoff of the salient give and get components.”
(p. 14)

This means, for value to be created, what the users receive from using a product or service have to exceed what the users give. That is, the tradeoff has to be beneficial for the users. Consumer perceived value is very much phenomenologically determined (e.g. Zeithaml, 1988; Babin, Darden and Griffin, 1994; Vargo and Lusch 2008; Grönroos 2011), and the consumers can have several value notions of the same offering simultaneously (Woodruff and Flint, 2006). Similarly, Holbrook (1996) regards value as relativistic since it is comparative, personal and situational. He claims it is comparative among goods or services, personal since it differs between people, and situational since it differs based on context. Thus, the concept is difficult to conceptualise and measure (Zeithaml, 1988).

Woodruff (1997) and Zeithaml (1988) claim there are differences in the situations where consumers think about value, such as before, during and after use. In each of these situations the consumers have to make different decisions and evaluate different attributes of the product, thus, think about value in different ways. Focusing on the use phase, Spohrer and Maglio (2008) exemplify value-in-use as that a teacher can distribute assignments to her students, but it is up to

them to complete the assignments to gain value. Similarly, Grönroos (2008) discusses that people do not buy groceries to store them, but to use them when cooking, and the value can be the finished meal enjoyed with the family. As he puts it: “customers are not primarily interested in what they buy and consume, but in what they can do with what they have in their possession” (p. 303). In line with this, Holbrook (1996) claims that value is an experience since it is not in the purchase, but rather in the consumption of the good or service. Grönroos (2008, p. 303) defines value for customers as that the customers “are or feel better off” after they have used a service than before, and Vargo, Maglio and Akaka (2008, p. 150) claim value is created when the customers’ “well-being has somehow been improved”.

Value Dimensions

Sheth, Newman and Gross (1991) claim that consumer behaviour is a function of multiple value dimensions. Applying this to using a smartphone app, what values the users perceive during usage, will affect how they use the app. According to earlier studies, the usage of smartphones and apps is influenced by utilitarian and hedonic value dimensions (Chun, Lee and Kim, 2012; Salo et al., 2013). Similarly, Wagner (2011) claims consumers view their smartphones as a secretary or a friend, which can be likened to bringing utilitarian or hedonic value. Value is generally viewed as a combination of utilitarian and hedonic outcome (Babin, Darden and Griffin, 1994). However, Sheth, Newman and Gross (1991) propose a theory where they suggest five value dimensions all influence consumer behaviour: functional value, emotional value, social value, epistemic value, and conditional value. They state their theory can be used to predict, describe and explain consumer behaviour, which makes it applicable in this descriptive study. Also, Babin, Darden and Griffin (1994) suggest studying several value dimensions, such as in the theory suggested by Sheth, Newman and Gross, gives a fuller picture of the consumption experience. Sheth, Newman and Gross’ theory will therefore be used as a

base with a few modifications described next.

Chun and Hu (2010) claim that the functional value dimension, as suggested by Sheth, Newman and Gross (1991), and the utilitarian value dimension (e.g. Babin, Darden and Griffin, 1994) both describe the functional aspects of consumer perceived value. Therefore, to extend the functional value dimension suggested by Sheth, Newman and Gross, it seems reasonable to also incorporate theory where the dimension is referred to as utilitarian value. This will be done in this study. Chun and Hu (2010) further propose that the social and emotional value dimensions suggested by Sheth, Newman and Gross (1991), and the hedonic value dimension (e.g. Babin, Darden and Griffin, 1994) all refer to the symbolic aspects of consumer perceived value. Therefore, in the same manner as for the functional value dimension, the social and emotional value dimensions suggested by Sheth, Newman and Gross, 1991, and the hedonic value dimension, will be incorporated into one dimension in this study, connecting the symbolic aspects of these three value dimensions.

According to Sheth, Newman and Gross (1991), functional value derives from the utilitarian or physical attributes of the product, and connect it to values, such as, reliability, durability and price. Similarly, Rintamäki et al. (2006), link utilitarian value to monetary savings and convenience. Utilitarian value is further connected to task completion (Holbrook and Hirschman, 1982), and accomplishment and/or disappointment about completing or not completing a task (Babin, Darden and Griffin, 1994). Holbrook (1996) and Rintamäki et al. (2006) claim utilitarian value occurs when the aim is to accomplish something beyond the actual usage. Hence, when the usage is perceived as a means to some predefined end. From here on, functional value and utilitarian value will be incorporated and referred to as *functional value* in line with Chun and Hu (2010). Regarding the use of smartphone apps, functional value occurs when the use of an

app is for an aim situated outside the app. That is, when the aim is used to perform a certain task outside the app itself. It is perceived when an app can be used for the user's intended function, bringing reliability, and thus simplifying the user's life.

Emotional value refers to how well a product creates and retains a certain feeling or an affective state (Sheth, Newman and Gross, 1991). Social value derives from a product's relation to a stereotyped group, connected to, for example, demographics and socioeconomic, associated with highly visible goods and services (Sheth, Newman and Gross, 1991). Similarly, Holbrook and Hirschman (1982) state hedonic value can be described as connected to emotions and fun. Hedonic value is further suggested by Babin, Darden and Griffin (1994) to be connected to enjoyment, excitement, captivation, escapism, and spontaneity, and Rintamäki et al. (2006), connect it to exploration and entertainment. Hedonic value is perceived when the usage is appreciated as an end in itself (Holbrook, 1996; Rintamäki et al., 2006). From here on, emotional value, social value and hedonic value will be incorporated and referred to as *symbolic value* in this study in line with Chen and Hu (2010), since they all refer to the symbolic aspects of value. Applying this to using smartphone apps, symbolic value is perceived when the usage of an app creates and retains feelings for the user, makes the user feel connected to a desired group of people and viewed in a certain way by oneself or others, and when the usage of an app is an end in itself.

Epistemic value refers to how well a product can stimulate curiosity, stand for novelty, and/or provide knowledge, and is always found in new experiences (Sheth, Newman and Gross, 1991). That is, epistemic value from using apps is perceived in apps allowing the user to widen his or her base of knowledge, but also in apps constantly updating their content.

Conditional value means that the perceived value changes depending on situation and the surroundings (Sheth, Newman and Gross, 1991). This suggests apps can be

perceived as valuable, or as more valuable, in specific situations, whereas in other situations there is no, or less, perceived value.

Hence, the value dimensions to be examined in this study are: *functional value*, *symbolic value*, *epistemic value* and *conditional value*. Sheth, Newman and Gross (1991) mean consumers are regularly willing to lose out on one dimension in order to gain more on another. However, it is possible that a choice is influenced in a positively manner by several or all value dimensions.

Woodruff and Flint (2006) state that most definitions of value have advantages, but the concept of value is confusing since academics are not always clear on which definition they use. Similar to Woodruff's (1997) compilation of what combines the definitions of consumer perceived value, the value concept is defined in this study as: (1) distinguished when the product or service is being used; (2) a phenomenologically determined concept that is perceived by the consumers; and (3) a tradeoff between what is given and what is received. Although not discussed by Woodruff (1997), value is also viewed in this study as (4) a multidimensional concept. This definition of consumer perceived value will aid in identifying and understanding the use values of smartphone apps.

METHODOLOGY

A qualitative study, preferable when the aim is to understand people's behaviour (Daymon and Holloway, 2011), consisting of in-depth semi-structured interviews and self-observations were conducted. Interviews are suitable when there is a need to understand people's feelings, perceptions and thoughts, and the flexibility of the method allows for asking probes in order to gain more information (Daymon and Holloway, 2011). Observations are suitable since they minimise the gap between what the participants say and what they do (Daymon and Holloway, 2011).

Data collection

Four criteria were set for the participants: (1) be between the ages of 20-35; (2) live in Sweden; (3) use downloaded apps on a daily basis; and (4) have more than 30 downloaded apps on their smartphones. This is the same amount of downloaded apps as the average Swede has on his or her smartphone (Google¹, 2012, p. 17), and a sufficient number of apps to aid in the discussions during the interviews. People from generation Y (born after 1980) were chosen since they adopt new technology the fastest (Wells, Kleshinski and Lau, 2012). In line with this, there is a higher frequency of smartphone ownership in this age group in Sweden, in comparison to other ages (Bolin, 2012).

The participants were sampled non-randomly with the aim to use snowball sampling. Thus, we found participants in our extended networks, and those people then found participants within their networks (Daymon and Holloway, 2011). However, some problems were encountered with the method, and half of the participants were sampled using convenience sampling (Daymon and Holloway, 2011). This is not seen as a problem, since people in our extended networks contributed with deep discussions about their app usage. Actually, Eriksson and Kovalainen (2008) argue that it can be an advantage to conduct a study with people the researcher is familiar with since it provides easier access to the needed material. A summary of the participants, with fictitious names, is found in table 1.

Twelve interviews, each one to one and a half hours long, were held between the 13th of March and 15th of April 2013 with participants from the Gothenburg area in Sweden. At this point, a saturation of the collected data was recognised in line with Guest, Bounce and Johnson (2006). The interviews were combined with self-observations where the participants documented, with the help of their smartphones, what apps were used during three days prior to the interviews (see Appendix 1). The self-observations started the participants' reflections on their app

usage, which contributed to the discussions. Also, we only wanted to discuss apps that the participants had actually used, since it presumably is from them use value easiest can be distinguished.

User ¹	Age	Main Occupation	No. of apps ²	No. of used apps ³
Victoria	23	Student	58	18
Sandra	23	Student	52	12
Jenny	23	Student	54	17
Andreas	23	Student	32	18
Emma	24	Student	54	7
Anna	25	Employed	51	19
Sara	25	Employed	42	11
Erik	25	Student	120	24
Niklas	26	Student	190	16
Maria	28	Student	36	14
Marcus	32	Student	58	9
Daniel	34	Student	61	22
¹ All use a private smartphone ² No. of downloaded apps on smartphone ³ No. of downloaded apps used three days prior to interview			Total: 808	Total: 187

Table 1. Summary of participants

The interview sessions started with ensuring the respondents of confidentiality and explaining the structure of the interview (see Appendix 2). In all, 187 apps were discussed during the interviews, whereof 111 were apps occurring more than once. Only apps that the participants had downloaded to their smartphones where discussed. This limitation was done because of the shift in power to control the apps from the manufacturer to the user (Verkasalo et al., 2010). By making it possible for the user to personify the smartphone by downloading apps, the smartphone is assumingly more valuable for him or her. Also, when personifying the smartphone by downloading apps the user makes active choices and puts in effort, which assumingly results in giving more use value. Therefore, we argue that the downloadable apps are interesting to study when wanting to distinguish use values. By conducting semi-structured interviews (Eriksson and Kovalainen, 2008), it was possible to adapt the interviews both to the individual participant and to the different apps. The possible problem of the participants being influenced by the

interviewer (Daymon and Holloway, 2011), was accounted for by asking open questions.

Analysis

All the interviews were recorded and transcribed in Swedish, which resulted in 143 657 words on 333 pages. The citations in the findings section have been translated from Swedish.

The analysis started with grouping the apps into categories (see Appendix 3) based on what they are aimed to be used for, to get a better overview of the findings. This approach to categorise the data was chosen to make it possible to distinguish if one app category has several use values, and how they differ between categories. To distinguish the use values, the data was coded and analysed using consumer perceived value theory as a framework. Next, the remaining data was re-coded and connected to the chosen value dimensions of consumer perceived value. This aided in giving a deeper understanding of the use values in smartphone apps.

FINDINGS

The data reveals six use values: *convenience*, *control*, *motivation & inspiration*, *monetary savings*, *entertainment*, and *knowledge*. In this section, a short presentation of the use values will first be presented, followed by a presentation of what the app categories are actually used for and their connection to the distinguished use values. The participants are users of the apps, and will therefore be referred to as *user(s)* throughout this section and the next.

Convenience for the user means saving time, that it is simple to use, and can be used wherever the user is. In all, the apps connected to this use value simplify the user's everyday life.

Control means that the apps tied to this use value help the user stay in control, by keeping track of the daily life. It gives the user a feeling of control by aiding in planning processes and reducing the need of remembering things by heart.

The use value *motivation & inspiration* is perceived when the usage of apps motivates and inspires the user to perform better in actions connected to something outside the actual usage of the app.

Monetary savings is connected to bringing value by helping the user save money through reduced costs.

Entertainment is connected to having fun, providing the use value when the user is bored or wanting to pass time. Consequently, it is not only connected to having fun, but also to being less bored.

Knowledge is gained when the usage of apps stimulate curiosity and widen the user's base of knowledge.

Bank apps

Bank apps are often used on the go when the user needs to transfer money between accounts, but also to check the balance, and pay bills. Andreas explains why he prefers the app over other ways of transferring money: "When I'm in a store and feel like I really want something, but have no money on my card, instead of having to call the bank, or talk to a personal banker or something, I just use the app, fast and simple." Victoria says the bank app almost totally replaces her need for a homepage as it offers fewer steps, which saves her time. She says: "I don't have to make a mountain out of a molehill, like I have to use the computer and stuff like that. Instead I have the phone with me all the time, so I just: Let's do this, you and me phone!" Positive with the app is also that it sends notifications when it is time to pay a bill. Daniel says he uses the app to check if he has received his salary, since it lets him stay in control, and means it is faster than going to an ATM or use the computer. Similarly, Emma describes her usage of a bank app as, "to have a little bit of control".

Overall, bank apps are connected to the use values *convenience* and *control*.

Calendar apps

Calendar apps are used to plan meetings, organise schedules, and keep track of future plans and events. Sometimes the apps even remind the user of things to do by sending notifications. Victoria describes the usage of a calendar app as “it decreases my need for control”. She further says: “It’s after all the app that keeps track of my life”. However, calendar apps are not only used for planning the future, but also to remind the user of what he or she has done in the past.

Overall, calendar apps are connected to the use value *control*.

Deal apps

Apps where the user can find deals and coupons, or other downloadable apps to a reduced price, are often used with the aim to save money, but satisfying deals are rarely found. Niklas says: “There has been damn bad stuff so I haven’t bought anything in a long time”. However, the apps are still used since the user does not want to miss out on any good deals. These apps are often used when being bored or having time to pass, Sandra describes her usage as “just checking if there is something that interests me”, and Niklas describes the apps as “giving some kind of excitement in a way”. Moreover, apps that show coupons are often location based and used when the user is about to buy something, which saves the user money.

Overall, deal apps are connected to the use values *monetary savings* and *entertainment*.

Game apps

Game apps are often used to pass time when the user is bored or has nothing else to do. The usage of game apps is described by Erik as “pointless”, and Niklas as “a brain dead activity”. Niklas further says: “I guess it gives me some kind of stimulation. It’s not hilarious but it’s not boring either. It’s like when people watch TV without watching anything in particular.” Though, in some instances game apps are described as entertaining. Sandra describes her usage of game apps as a form of relaxation, and she likes to use game apps where she does not

have to think much. However, Daniel argues that he gains knowledge when he uses some game apps, such as quizzes.

Often the lack of interaction with other players when using a game app is positive, since it is convenient for the user to play whenever he or she wants to. However, when using some game apps, such as competing in quizzes, this requires interaction with other players, and is perceived as entertaining.

Overall, game apps are connected to the use values *convenience*, *entertainment*, and *knowledge*.

Information apps

Several apps are used to find various kinds of information in a convenient way. It is convenient in the way of not having to ask someone else or look at the computer. For example, apps to find telephone numbers and addresses, apps to plan gym training, apps to look at apartments for sale, and dictionary apps to translate words are used since they are convenient ways of accessing the desired information. Regarding why Jenny prefers dictionary apps before other similar services, she says: “It’s faster, it’s like so accessible”. Similarly, recipe apps are used since they are considered more convenient than a cookbook. Furthermore, many describe they do not have time to watch the weather on the news or in the newspaper. Therefore, they check a weather app instead, since it can be done whenever and wherever the user is. This is also valued for apps providing access to documents, often when the user does not have access to a computer. Maria says: “You can check small details, fast, when you’re on the go”.

Some information apps are used to gain knowledge when there is no one to ask or when people disagree, for example, when watching a movie and wanting to know the name of the actors, or when the user is engaged in discussions. Furthermore, information apps are used to find information about products and prices when shopping. For example, Niklas uses an app to scan the barcode of a product to see if

he can find it somewhere else at a cheaper price: “to defend myself against impulse buying”. Similarly, Sara argues that using some information apps saves money as she does not have to pay for other services.

Information apps give the user a feeling of control, by helping him or her in planning processes. Gym apps, for example, are used to book and cancel gym training, and check the schedule and opening hours of the facility. Regarding a cinema booking app, neither Daniel nor Andreas uses it for booking, instead it is used to plan the cinema visit, to decide what movie the user wants to attend. Furthermore, recipe apps are used to get inspired for what to have for dinner, to plan the meals for the upcoming week. Notifications in information apps are used to remind the user of important things.

Overall, information apps are connected to the use values *convenience, control, motivation & inspiration, monetary savings, and knowledge*.

Mail apps

Mail apps are often used to only read e-mails, and not to write them, unless it is a short and unimportant message. Maria says: “If it’s urgent it’s like really simple to just answer through the app.” By using the mail app she does not have to start the computer every time she needs to check her e-mail, which is perceived as convenient. She says: “it’s so much faster, everything”. Since the smartphone is always with the user, mail apps allow the user to stay in control so he or she does not miss anything important.

Overall, mail apps are connected to the use values *convenience* and *control*.

Music and Radio apps

What the users choose to use music and radio apps for is very individual, and depends on their mood, what they are doing, and the time of the day. Frequently mentioned is the possibility to find music the user has never listened to before for free by exploring top lists and friends’ playlists. Through radio and podcast apps it is also

possible to learn new things by listening to documentaries.

Music and radio apps are seen as convenient since they can be used anywhere and at anytime. Marcus says he likes not having to adjust his life according to when a programme starts, and it is convenient to connect the smartphone to wireless speakers, to the car stereo, or just listening through headphones. Music and radio apps have replaced the need for CDs or loading music players with music, which is seen as saving time and money. Sara explains it as: “I’m having a hard time imagining I would bring a CD-player to work, so I would probably not have done that, and I would probably be too lazy to pay for music and then download it to the smartphone. It has simplified a lot.” This is also the case with listening to podcasts or radio via apps, as it saves the user time and effort of entering the podcast’s or radio show’s homepage.

Several users claim that the primary aim with music apps is to shut out sounds, especially during transportation, allowing the user to stay in control of the situation. Without the availability of music apps many are uncomfortable with just sitting on the bus or the tram. Sandra says: “You kind of escape, to a different world [...] Otherwise, I would have found myself in more difficult situations”. Similarly, when Maria is asked what she gets from using a music app, she says: “Meditation purpose...? It’s so incredibly many sounds and movements and all that around you, and you sort of pay attention to everything. It gets a little calming in a way that you can shut everything else out and just be [...] Alone time on the way home from the gym, me and my app.”

Overall, music and radio apps are connected to the use values *convenience, control, monetary savings, entertainment, and knowledge*.

News apps

A reason for using news apps is to stay updated due to interest, but also as Victoria says, since one “has to” stay updated.

Similarly, Sara says she uses news apps “to know what people talk about” because she wants to be able to engage in discussions. News apps are commonly used when having time to pass. However, the time spent on them is not just gone. Sandra says: “When you read the news, then you spend time in a good way. It’s like studying, but it’s more fun. You get more knowledge that you have direct use for.” Even though the traditional newspaper is sometimes preferred, news apps are favoured when the user is in time constraints. This is because the app allows for the news to be read anywhere, and everything is in the same place, which makes it simple and quick to browse through.

Overall, news apps are connected to the use values *convenience*, *entertainment*, and *knowledge*.

Social media apps

Social media apps are often used to get information about people that interest the user. Maria describes the purpose with using social media apps as “to keep myself updated and stalk people”. Using social media apps is compared with checking news apps, but with news about friends. Many say they use these apps because they do not want to miss out on anything. Social media apps are also used to get inspiration. Sandra, for example, has chosen to use a social media app “to get inspiration for training and food, only for that”, instead of following her friends.

Since the phone is always with the user, using social media apps is a convenient way to reach people. Maria says: “It’s always simpler to reach people on social media apps if you don’t have their phone number, you just send a message.” Emma compares checking social media apps with talking to friends on the phone, and argues that social media apps are more effective and time saving. She also says that checking the apps frequently during the day saves her time and energy, since it would have taken longer going through everything later on a computer. Using social media apps is also a convenient way of organising groups to, for

example, decide on times for meetings, plan school assignments, and organise events. The calendars incorporated in some social media apps helps with this. Erik says: “it is used pretty much by many others which make it a very grateful way of keeping track of what is going to happen.”

Social media apps are often used to pass time when the user feels bored or lonely. Victoria says she would have been isolated without social media apps, and Sara compares it with smoking: “I think I check it quite often when I’ve got time to kill, like you’re in the sofa watching TV and the commercial starts. I used to smoke a lot, so instead of taking a cigarette I check a social media app.” Moreover, Jenny uses social media apps to keep a dialogue during the day to avoid feeling lonely when alone. The usage of social media apps is often explained as something the user does whenever checking the phone, and has more or less become a habit, as Daniel says: “when there is nothing else to do”. Sometimes these apps are used more than the user feels is reasonable, for example, as an excuse for taking a break when studying. In fact, social media apps are used every day by all participants.

Overall, social media apps are connected to the use values *convenience*, *control*, *motivation & inspiration*, *entertainment*, and *knowledge*.

Text message apps

Text message apps are used to communicate and send pictures for free. This is described as an advantage compared to the pre-installed text message apps. Furthermore, text message apps are used because others use them. Erik says: “It’s an app that I have, so there’s no reason not to use it, because it’s convenient for my friends.” The only reason Jenny keeps one of her text message apps is because she has a group conversation with some friends on it, and she does not want to miss out on anything.

Overall, text message apps are connected to the use value *control* and *monetary savings*.

Tool apps

Since the phone is always available, apps have come to replace physical tools. These apps are not used to pass time as many other apps. For example, an app used as a remote control, an app used as a self-timer for the camera, and an app used as a flashlight, have all been used. The flashlight app is used in situations where the user cannot predict a flashlight is going to be needed. Moreover, TV apps are used to plan what to watch on TV, for example, what football games to watch during the weekend, sometimes through a reminder function in the apps. They are also used as substitutes for browsing the TV channels, often during commercial breaks to save time and effort.

Some tool apps are not used as tools, but rather to be entertained. Jenny talks about using photo tool apps: “I don’t do these things because I’m bored, I do it because it’s so much fun [...] my purpose is to play a little”. Also, Erik claims he uses an app that measures blood pressure for fun.

Overall, tool apps are connected to the use values *convenience*, *control*, and *entertainment*.

Training and Diet apps

Training apps are used to keep motivation and improve results by, for example, measure how far and how fast one runs and walks. Andreas says his training app helps him stay motivated. The apps tell the user the average pace and distance during exercise, which allows him or her to stay in control of results. Andreas also uses an app to keep track of his caloric intake in connection to preparing meals and buying food, and says: “It’s like getting an approval. Sometimes, especially when I’m on a diet, I use it as a tool beforehand, and then I can see: Damn! If I eat this much I’ll exceed the intake today, that’s crap!” Similarly, Daniel says he uses his training app to “keep track of my running”. Andreas describes the aim of using his training and diet apps as “to perform as good as possible, in terms of training and diet”.

Overall, training and diet apps are connected to the use values *control* and *motivation & inspiration*.

Transportation Apps

Transportation apps are used to aid when the users are to transport themselves with public transport, by foot, or by car. Using these apps is critical if the user is in time constraints, or if travelling to or from a location they do not visit on a daily basis. Niklas says the usage of these apps gives him the possibility to save time: “I don’t have to walk to the bus stop unnecessarily, I don’t have to use the computer, I don’t have to do a lot of things. It simplifies the whole process of travelling.”

In comparison to a computer, where the information has to be written down or remembered, the app is available during transportation, which further simplifies for the user, and makes it possible for the user to stay in control during transportation. For example, keep track of delays in public transports. Emma says these apps can make her “relax a little bit more”. Also, for people who feel they have a bad sense of orientation, these apps work as a security, for example, in cities the user is not familiar with. Maria says: “I don’t have a good sense of orientation and I don’t try to improve it [...] so I think, if I didn’t have the app I would have to think more [...] I think it’s a bad habit I have that I don’t have to improve due to the app.” Furthermore, transportation apps are sometimes used for entertainment. Marcus, for example, uses the satellite images in some of these apps to find places he has visited, and Sandra uses these apps when travelling. She says: “I think it’s fun to see exactly where I am”.

Overall, transportation apps are connected to the use values *convenience*, *control*, and *entertainment*.

Video apps

A common usage for video apps is to watch funny clips. Often when someone tells the user to watch them, to feel involved and know what people talk about. Overall, watching videos on apps instead of having

to turn on the computer is expressed as time saving. Video apps are also used to watch TV shows without having to be at home, which is described as practical and entertaining. Maria describes that watching TV shows on the go, is one step even further into shutting other people out. She compares it to using music and radio apps, and means that when using video apps the focus of the eyes is also moved away from the surroundings, which is not the case when using music and radio apps. Furthermore, these apps are sometimes used to gain information about schoolwork, or a product the user is interested in buying.

Overall, video apps are connected to the use values *convenience*, *entertainment*, and *knowledge*.

DISCUSSION

Six use values have been identified in smartphone apps: *convenience*, *control*, *motivation & inspiration*, *monetary savings*, *entertainment*, and *knowledge*. These will be connected and discussed in relation to theory in this section, followed by a discussion of the managerial implications this knowledge brings.

Convenience - The app categories connected to this use value are bank apps, game apps, information apps, mail apps, music and radio apps, news apps, social media apps, tool apps, transportation apps, and video apps. In all, the apps simplify the user's everyday life in completing various tasks, and can be said to give *functional value* (Holbrook and Hirschman, 1982; Holbrook, 1996). This is consistent with theory, as Rintamäki et al. (2006) link convenience to functional value. However, sometimes the apps are only seen as convenient, or seen as more convenient, when being the only available option, such as when the user does not have access to a computer, which is connected to *conditional value* (Sheth, Newman and Gross, 1991).

Control - The app categories connected to this use value are bank apps, calendar apps, information apps, mail apps, music and radio apps, social media apps, text message

apps, tool apps, training and diet apps, and transportation apps. For the use value to be perceived by the user it is likely that the user has to trust the apps, that is, consider the apps as reliable. Hence, if the apps were not reliable it is unlikely the users had perceived them as bringing control, and as fulfilling their intended functions. Reliability is connected to *functional value* by Sheth, Newman and Gross (1991), and this value dimension can thus be connected to the use value. Control is also connected to *symbolic value* (Sheth, Newman and Gross, 1991; Babin, Darden and Griffin, 1996), since the usage of apps bringing control make the user think less and relax. Hence, the usage of these apps creates and retains certain feelings.

Motivation & Inspiration - The app categories connected to this use value are information apps, social media apps, and training and diet apps. These apps motivate and inspire the user to complete tasks outside the usage of the apps in themselves, connecting it to *functional value* (Holbrook and Hirschman, 1982; Holbrook, 1996). This brings and retains feelings of contentment, during usage which is connected to *symbolic value* (Sheth, Newman and Gross, 1991).

Monetary savings - The app categories connected to this use value are deal apps, information apps, music and radio apps, and text message apps. Sheth, Newman and Gross (1991) claim that price is connected to *functional value*. This is in line with Rintamäki et al. (2006) who connect saving money to this value dimension. Moreover, since the apps are used to save money in connection to something outside the app usage, it can be described as a means to a predefined end (Holbrook, 1996; Rintamäki et al. 2006), also connecting the use value to functional value.

Entertainment - The app categories connected to this use value are deal apps, game apps, music and radio apps, news apps, social media apps, tool apps, transportation apps, and video apps. Using these apps creates and retains certain feelings, such as enjoyment and escapism, connecting it to *symbolic value* (Holbrook

and Hirschman, 1982; Sheth, Newman and Gross', 1991; Babin, Darden and Griffin, 1994). Similarly, Rintamäki et al. (2006) describe entertainment as connected to symbolic value, further tying the use value to the value dimension. However, the use value is often perceived when being bored or having time to pass and the use is thus connected to *conditional value* (Sheth, Newman and Gross, 1991).

Knowledge – The app categories connected to this use value are game apps, information apps, music and radio apps, news apps, social media apps, and video apps. These apps provide the user with knowledge and stimulate curiosity, and the use value is therefore connected to *epistemic value* (Sheth, Newman and Gross, 1991). Sometimes apps are used to gain knowledge when the user wants to complete a task, which connects the use value to *functional value* (Holbrook and Hirschman, 1982; Holbrook; 1996). The gained knowledge is often used in discussions, to feel involved and viewed in a certain way by oneself and others, bringing *symbolic value* (Sheth, Newman and Gross, 1991).

A summary of the connections between the various use values, value dimensions and app categories can be found in table 2.

If viewing the use values, all six are connected to one of the two, or both, value dimensions functional and symbolic. This indicates that smartphones and apps are used for a combination of utilitarian or hedonic reasons in line with previous research (Chun, Lee and Kim, 2012; Salo et al., 2013), since these are incorporated in the functional and symbolic value dimensions in this study. However, the social value dimension incorporated in symbolic value is not as prevalent as the emotional and hedonic value dimensions incorporated in the same. Perhaps since the usage of smartphone apps is not highly visible to others. The remaining value dimensions considered in this study: epistemic value and conditional value are not standing out as values during the usage of apps. There may be several reasons for this. For example, that the smartphone is

always available might almost automatically make it a good choice, undermining the conditional value dimension. Also, in accordance to Wagner (2011), the findings suggest smartphones and apps are used either as a friend or a secretary, thus, bringing symbolic or functional value, which might explain why apps are not much used for epistemic value, as this coheres more with the features of a teacher.

USE VALUE	
Value dimension	App category
Convenience	
<i>Functional</i> <i>Conditional</i>	Bank, Game, Information, Mail, Music & Radio, News, Social media, Tool, Transportation, Video
Control	
<i>Functional</i> <i>Symbolic</i>	Bank, Calendar, Information, Mail, Music & Radio, Social media, Text message, Tool, Training & Diet, Transportation
Motivation & Inspiration	
<i>Functional</i> <i>Symbolic</i>	Information, Social media, Training & Diet
Monetary savings	
<i>Functional</i>	Deal, Information, Music & Radio, Text message
Entertainment	
<i>Symbolic</i> <i>Conditional</i>	Deal, Game, Music & Radio, News, Social media, Tool, Transportation, Video
Knowledge	
<i>Epistemic</i> <i>Functional</i> <i>Symbolic</i>	Game, Information, Music & Radio, News, Social media, Video

Table 2. Summary of findings

The app categories are often connected to several use values in line with Sheth, Newman and Gross (1991). Social media

apps are used by all participants, and it is also the type of apps that give the user all use values except one, monetary savings. This indicates that by making it possible for the user to maximise all the use values, the usage will increase. Thus, the consumer behaviour, how apps are used and how much apps are used, is influenced by the values it gives the user, which suggests consumer behaviour is a function of several value dimensions, in line with Sheth, Newman and Gross (1991).

Managerial implications

Since consumers today assume everything to be “appified” (Accenture, 2012), apps can be regarded as something most companies will need to develop, as marketing channels or as products and services in themselves. Therefore, the importance for companies to understand consumer perceived value in using smartphone apps is essential. The large amount of downloaded apps discussed in this study, indicates that the entrance of the smartphone has shifted the power to control the apps in the smartphone from the manufacturer to the user, in line with Verkasalo et al. (2010). This highlights the importance of examining the usage of apps. Hence, value-in-exchange is no longer enough. By understanding how and why consumers use apps and what values they perceive when using them, marketers can maximise their customers’ usage, and in the extension, in line with Chahal and Kumari (2012), their customers’ levels of satisfaction, trust and behavioural intentions. According to this study, different app categories should offer convenience, control, motivation & inspiration, monetary savings, entertainment, and knowledge, or some combination of these use values, to be valuable to the users. We argue that this knowledge is of great importance to marketers, since it provides an understanding of what consumers value in different types of apps. Consequently, this knowledge will minimize the challenge for marketers to offer consumers what they want, when they want it, which in turn maximises the value for the users.

CONCLUSION

The purpose of this study has been to gain a deeper understanding of the consumer perceived value in using smartphone apps by studying how and why people use them. By answering the research question: *What is the perceived value in using smartphone applications?* six use values were identified: *convenience, control, motivation & inspiration, monetary savings, entertainment, and knowledge*. All examined value dimensions: functional, symbolic, epistemic, and conditional, have been identified as connected to these use values, but to different degrees. Functional and symbolic values have been most prevalent, corresponding to previous research on smartphones and apps in combination with value. However, the remaining value dimensions: epistemic value and conditional value, were also identified in this study, but to a lesser extent, indicating these values are less perceived during the usage of smartphone apps.

FURTHER RESEARCH

As this qualitative study was conducted with a specific group of people, further research could focus on studying other groups or entire populations. In this study, only downloaded apps were included in the data collection. Further research can therefore focus on the pre-installed apps or only specific app categories to gain an even deeper knowledge, since the use values differ between the app categories. Furthermore, as this study presents six use values, these are possible to apply in a quantitative study. For example, by allowing the users to rate the importance of the use values to create a value scale that can be used as a tool in future studies and developments of apps.

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Appendix 1 – Instructions for self-observations and interviews¹ (translated from Swedish)

Hi NAME!

Thank you for helping us with our master's thesis! Our purpose is to study your app-usage and the interview will take approximately 1 hour.

Three days before we meet, that is DAY, we would like you to delete the open programmes on your phone and then **not delete them** until we meet. You do this by double-clicking on the home-button and then hold your finger on one of the apps until they start shaking. Press the minus sign on the apps until all of them are deleted.

We would also be grateful if you have someone in your circle of friends who would like to take part in an interview. The person should use apps on a daily basis, have at least 30 downloaded apps on his or her smartphone, and be between 20-35 years old. Please bring his or her contact information to the interview.

If you have any questions do not hesitate to contact us, otherwise we will meet at PLACE, DAY, DATE, TIME.

Regards,

Frida Frost and Emelie Andersson

¹ For iPhone users

Appendix 2 – Guide for semi-structured interviews *(translated from Swedish)*

GENERAL INFORMATION ABOUT THE USER

1. Please, tell us a little bit about yourself.
2. We would like you to describe a typical day in your life. If it simplifies, build on what you did yesterday.

GENERAL INFORMATION ABOUT SMARTPHONES AND APPS

3. Is it your private smartphone or work phone?
4. Describe how you use your smartphone apps during a typical day. If it simplifies, build on how you used it yesterday.
5. Are there occasions when you use your smartphone more or less?
 - 5.1. Are there any other situations that come to mind?
6. Can you mention a smartphone app that you would not want to be without?
 - 6.1. How come you would not want to be without this app?
7. Which one is your “favourite app”?
 - 7.1. What makes it your favourite?

QUESTIONS ABOUT THE OPEN PROGRAMMES

8. Is this a smartphone app you use daily?
9. What have you used this smartphone app for during the last three days?
 - 9.1. Is this what you normally use this smartphone app for?
10. Are there any special situations you use this smartphone app?
 - 10.1. Is there a special reason you use it in these situations?
11. What would you conclude that your purpose is with using this smartphone app?
12. What is particularly good with this smartphone app?
13. What could be improved with this smartphone app?
 - 13.1. Do you miss anything in this smartphone app?
14. How would your daily life be without this smartphone app?
15. What does it give you to use this smartphone app?

SUMMARY

16. Do you feel like these open programmes represent the smartphone apps you normally use?
 - 16.1. If not, which smartphone apps do you normally use?

Appendix 3 – App categories

Bank

SEB
Swedbank

Calendar

Google Calendar
Veckoappen
Week Calendar

Deal

Appsfire
Dagens App
FreeAppADay
Groupon
Let's Deal
Members
Rabble
Wrapp

Game

Candy Crush
Clash of Clans
Dragon Island
Flow
Four Pix One Word
Heroes
Hill Climb Racer
Knights of Dragon
Knights of Pen and Paper
Mega Run
Plants vs Zombies
Top Eleven
Quizkampen
Wordfeud

Information

Aero Weather
Arla Köket
Dropbox
Eniro
Fysiken
Google Drive
IMDB
Klart.se
Mage+
Nordic Wellness
Nya Hemnet

Ping Pong
Prisjakt
SATS
Simplifyurlife
SMHI
SF Bio
Tap Forms
Tasteline
Tyda
Wikipedia

Mail

Gmail
Mailbox

Music & Radio

Beyond Pod
Radio Play
Sound Hound
Spotify
SR Play
TuneIn Radio

News

Aftonbladet
Allsvenskan
BBC News
DN.se Mobil
eGP
escores
GP
MacWorld
Sportbladet
Sportstats
Supernytt

Social Media

Badoo
Facebook
Instagram
LinkedIn
Messenger
Skype
Tumblr
Twitter
Vine
Wordpress

Text message

SMS Smileys
Viber
Whats App

Tool

Alarm Clock
BPM Counter
Chrome
Camera+
Color Splash
Control App
djay
Downloads
Ficklampa.
Flashlight
Foto Rus
Frame Magic
Heart Rate
InstaCollage
InstaEffect FX
PS Express
RetroCam
SpaceFX
Sync.Me
TimerCam
Transphotos
TVmatchen.nu
tv.nu

Training & Diet

RunKeeper
ShapeUp
Runkeeper

Transportation

Google Maps
Reseplaneraren Västtrafik

Video

Chrunchyroll
Magine
Veetle
YouTube