Evolving the human acting space through digital artefacts

A study of the Facebook phenomenon

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Abstract

We live in an increasingly artificial world where information technology becomes more and more commonplace and in the same instance life changing. Thus, it becomes vital to gain a deeper understanding of how design activities in this area contribute to change our human acting space. A computational paradigm regarding this is the concept of ubiquitous computing which can be described as technology weaving itself into the fabric of everyday life until it is indistinguishable from it. We have related this concept to Facebook, a social utility that lets us interact with each other in new ways. Through a series of interviews and semi-field studies we have investigated and reflected around the impact Facebook has had on our human acting space and whether it has, or is becoming, a ubiquitous element in our lives. We were able to conclude that Facebook has changed our respondents’ social acting space and displays signs of becoming a presence in their lives, instead of a mere tool. We have also found that Facebook shows attributes of a calm technology and that it reaches several demands of a ubiquitous application. Thus, Facebook seemingly starts to have a ubiquitous role in the lives of our respondents.

Keywords

Interaction design, social acting space, ubiquitous computing, pervasive computing, calm technology, Facebook, social media.
Preface

We started writing about Facebook, the fact that we use it without thinking, which is the epitome of ubiquitous computing, and how this already has changed our human acting space. What we did not know was that our own acting space and the ubiquity of internet, would take a toll on our stress level and almost cause this study to not be a part of the PAJ-seminar. While typing the last of our transcripts just before due date, Cim encountered a huge thunder storm in her home town, and most of the information and the full study was on her computer. Cim mentioned the thunder storm while working (we use screen sharing for working on the document and the phone to talk to each other), asking if lightning could strike in an apartment building. The answer from Victoria, was of course no, apartment buildings have lightning rods. What we did think of was a possible power outage which might cause the computer to crash. We kept on talking on the phone, and when the time came to turn in the study, we discovered that Cim had lost internet access. First, we decided to wait, check the routers and restart them, not even considering that the on-going thunder storm might have been the problem. After a couple of hours we started to panic, the deadline had passed. While panicking the first realisation was, "holy crap - this is exactly what we are writing about, we are so used to having internet that it is a part of our perceived world". We spent a number of hours focusing on panic, trying to think of HOW to get online, even if we realised it was futile - but one can still hope, right?

One might think that this was the reason for us to choose the subject for the study, but instead it happened at the worst of times, when it was time to submit the study. However, it goes to show that more things than we are aware of are a part of our perceived world, and that we have changed our acting space to a degree that it would be extremely interesting to see how much it has changed just the past decade. However, that is a subject for another essay.

This one was written thanks to a couple of courses we have taken during our study years, which made us think about changes in our acting space, and since the both of us use Facebook and it is such a unique application, it seemed to be the perfect social media to examine in combination with ubiquitous computing.

Finally, we would like to thanks our dogs, Scott and Nexus, for making this possible.

We would never ever have been able to finish this study if they had not been there for us. Making us a cup of tea when needed, comforting us when we have been upset or sad, putting some dinner in the micro wave, but most of all being well-behaved and truly exceptional canines who did not demand the long and playful walks they are used to.

Thank you Scott and Nexus for sleeping a lot, being bored beyond belief, biting the mailman instead of the bones you are used to. We apologise for being bad mistresses due to lack of time, but we will make it up to you when school’s out for summer :)


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1. INTRODUCTION

1.1 Background

We live in an increasingly artificial world, a world consisting of environments and things created by mankind. In this world information technology (IT) becomes more and more commonplace and in the same instance life changing (Löwgren & Stolterman, 2004; McCullough, 2004; Nelson & Stolterman, 2003). We are surrounded by digital artefacts i.e. things designed by humans containing information technology. Things such as computer hardware, programming languages, computer software and information systems only to give a few examples. Our everyday lives are in many ways shaped by these artefacts and every new digital artefact, regardless of how small, present a change in our perceived world (Löwgren & Stolterman, 2004).

The design of digital artefacts is by professionals called interaction design (Löwgren & Stolterman, 2004; McCullough, 2004; Preece, Rogers, & Sharp, 2002). Designing is a natural human ability, that most of us are doing most of the time without even knowing it or thinking about it (Nelson & Stolterman, 2003). Imagine for example decorating your house, it is in fact nothing less than designing the physical space you live in. Interaction design can be described as building spaces for people to co-exist and communicate in, in other words to design interactive products that support people in their everyday lives (Jones & Marsden, 2006; McCullough, 2004; Preece, et al., 2002). The endeavour is to create meaningful relationships between people and the products and services they use. It is about embedding information technology into the social complexities surrounding the physical world. This is actually something more and more people engage themselves in without being fully aware of it (Nelson & Stolterman, 2003). What by many is seen as the starting point to one of the present most worldwide influential artefacts, Facebook, was actually created out of boredom, and of course, a fair amount of knowledge in programming (Schwartz, 2003).

1.1.1 The Facebook phenomenon

To describe it shortly; Facebook is a digital artefact that lets people communicate with friends, family, coworkers, acquaintances etc., i.e. anyone and everyone you may have a personal connection to in some way. Facebook is presented as offering information sharing through a digital map of peoples relations in the physical world (Facebook.com, 2011b). Marc Zuckerberg, the initial founder, describes it as a social utility (Locke, 2007).

Facebook, from the beginning, only intended to be a network for Harvard students (Locke, 2007; Phillips, 2007) but rapidly grew bigger than anyone could have predicted. Within the first month after the initial seed had been planted, the website named thefacebook.com (now known as facebook.com), approximately fifty percent of Harvard’s students had registered, this was in February 2004 (Phillips, 2007). After spreading rapidly to other schools, both in the US and then abroad, Facebook became public for everyone after only two years in business. The only criteria that needs to be fulfilled is that you are over 13 years old and that you
have a valid email account (Phillips, 2007). Today it is nothing less than a world phenomenon with more than 500 million active users, counting active users being users who log on to their account at least once a month (Facebook.com, 2011a). More than 250 million users of these 500 also have access to Facebook through mobile devices.

Facebook is not only a social media (Locke, 2007), it is something that has made an impact on how people use computing devices and internet today. Something changed with Facebook, making it socially acceptable and in demand by the greater masses - more or less regardless of age, nationality, culture, sex, race, computer experience or socio-economic class (Locke, 2007). What started out as Zuckerberg’s hobby on campus, has turned out to be something of a world wide community where people can co-exist and communicate. In other words, it has become an unmistakable example of interaction design. The phenomenon Facebook has become shows us that the world is changing rapidly through the use of digital artefacts, sometimes intentionally but just as often by mere accident. Even though the laws of nature may be fixed, the complex interactions of everyday events results in unpredictable outcomes (Nelson & Stolterman, 2003). It is therefore important to consider that design is an activity that comes with evident consequences, for better and for worse (Löwgren & Stolterman, 2004; McCullough, 2004).

1.2 Problem discussion
A paradigm of interaction design is the concept of ubiquitous computing (ubicomp) or many times also called pervasive computing. This paradigm deal with the fact that we are fundamentally changing our perception of computing and digital artefacts, they are becoming a presence in our lives instead of just tools that we wield (Gupta, Lee, Purakayastha, & Srimani, 2001; Hallnäs & Redström, 2002; Lyytinen & Yoo, 2002). The concept of ubiquitous computing was firstly introduced by Mark Weiser (1991) who describes it as technology weaving itself into the fabric of our everyday life until it is indistinguishable from it.

![Figure 1](image_url) Picture showing the interlacing of peoples lives with digital artefacts.

As Weiser (1991) predicted two decades ago, ubiquitous computing is now starting to come of age - even though we still are in the beginning of this computational evolution. The coming
ubiquity of digital artefacts opens up a range of challenges to scientists, designers, developers and researchers (Abowd & Mynatt, 2000; Dryer, Eisbach, & Ark, 1999; Hallnäs & Redström, 2002; Lyytinen & Yoo, 2002). Up until today scientist have been more or less studying something that does not yet exist. As Lyytinen and Yoo (2002) pointed out a decade ago - the challenge will shift from presenting the concept of ubicomp to integrating it and building widely innovative mass-scale applications as this evolution proceeds.

"As technology becomes more embedded and integrated with mobility, the barriers between social and technical aspects become blurred. A paradoxical outcome of ubiquitous computing is that it is simultaneously very personal and extremely global." (Lyytinen & Yoo, 2002, p. 65)

With the rise and growth of Facebook, people’s acting space has changed and as we know, it has definitely become mass-scale. We interact with each other, through Facebook, in completely new ways. Is it possible to start to think of this interaction, this new acting space Facebook has given us, as a pervasive or ubiquitous part of our lives? It is easy to find several examples of how accepted and customary the interaction through Facebook has already become. Just look at the case where a man asked his girlfriend to marry him - through a Facebook status, and she "liked" it (DN.se, 2011a). Or, how the modern democracy got a breakthrough when people in Tunisia and Egypt could coordinate and mobilise to force their oppressive rulers on the run, thanks to the word spreading in all directions on Facebook (DN.se, 2011c). Another example is the big car industry business Volvo, that is going to use Facebook as a resource in their recruitment campaign to find skilled engineers (Svd.se, 2011).

Marc Davis, former Chief Scientist at Yahoo! Mobile and now a Partner Architect at Microsoft, discuss the so called third great wave of technology innovation in an interview with TechCrunch (2010) where he stipulates that “The web and the world are ‘becoming one’”. The social web i.e. Facebook, is believed to be able to adjust to our own specific preferences, a bit like the artificially intelligent marketing function on Facebook that reads your profile and present the advertisement you are most likely to be interested in. This is however, only the basics. The social network we have on Facebook can be said to create a filter in the overwhelming amount of medial information constantly demanding our attention. For example, when a friend share a link on Facebook you immediately take the persons credibility, taste and your own time into consideration when deciding whether to read the link or not (DN.se, 2011b). This lets us make decisions not only after our own behaviour and knowledge but also from the behaviour and knowledge of people that we know and trust (TechCrunch.com, 2010). It is in our nature to learn by looking at others, that is why we say things like being a good role model is by doing not by saying, our children will as we all know, do what we do and not what we tell them to. This is a connection Facebook enhances, when a person I trust share something on Facebook he or she tells me that it is something that is worth my attention. Facebook lets us connect with more people than we ever have been able to before and aids us in learning what is interesting and worth while around us. Davis (TechCrunch.com, 2010) continue to say that this can be described as giving us a both synchronous and asynchronous ability to find knowledge about how to get things done, what’s worth our attention, where we might want to go and
what we might want to do. If this become a reality, the world and the web can be looked at as one seamless index and one seamless network that we can act and interact in. So is this where we are going? Is this "psychedelic evolution" Marc Davis talks about, or in other words the paradigm of ubiquitous and pervasive computing, in the making?

1.2.1 Area of concern
Through out their book Löwgren & Stolterman (2004) discuss the importance to reflect around interaction design and its’ impact on peoples lives to enhance our design ability and to create good ethical, aesthetic, political and ideological artefacts. They argue that design theory is about the conditions to change peoples acting space - more or less about the intellectual virtue Aristotle’s designated as Phronesis. In other words the capability to consider the mode of action, in its’ context, in order to deliver change, especially to enhance the quality of life. One can learn the principles of action, but applying them in the real world, in situations one could not have foreseen, requires experience of the world (Eikeland, 2008). This effort should build upon articulation, seeing the obtained design knowledge as an ongoing discussion with other designers and scientists around the repertoire of qualities digital artefacts posses (Löwgren & Stolterman, 2004). To reflect on the matter wether we dwell in Facebook or if it is just a functional artefact we use to connect with friends, will give a deeper understanding of how, intentional as well as unintentional, design activities contribute to change our human acting space and in what ways. So is Facebook in fact becoming an instance of ubiquitous computing? To reflect around this can also be of help to the interaction research community in the aim to complement the traditional experimental usability studies to this new role digital artefacts are starting to have in our lives (Hallnäs & Redström, 2002). Thefanos & Scholtz (2005) also point on the fact that designers need to understand how to design and evaluate ubiquitous systems in order to achieve systems that are seamlessly integrated into everyday life. By providing a framework of consistent terminology and an initial set of metrics, researchers can get an environment in which to share and learn from each other’s evaluation of ubiquitous computing applications. The background purpose of this study can as such be seen as multidimensional.

1.3 Research purpose and question
The purpose of this study is to investigate and reflect around the impact Facebook has on our human acting space in order to see if Facebook has, or is becoming, a ubiquitous/pervasive element in our lives. The aim can also be described as to find out wether we dwell in Facebook or if we simply use it as a tool?

**Research question:** *Which role does ubiquitous computing play in people’s behaviour while using Facebook today?*
1.4 Delimitations

As the very nature of ubicomp depends on personal use and acceptance this study is only carried out from an individual point of view. It is not possible to perform the study from a business or organisational perspective, regardless of the fact that they too are a very big part of the world of Facebook.

We are also aware of that ubiquitous computing is extremely dependable upon pure technical inventions, i.e. hardware. In this study we are however, only focusing on the human and application perspective of ubicomp, not taking into consideration the need of more built in hardware/sensors in our environment to fully achieve a ubiquitous computing environment (Weiser, 1991). We have concentrated our research on Facebook and its pervasive features from a psychological point of view, thus we are not discussing technical solutions or needs. Mobility is however, a very important aspect of ubicomp and thanks to the rapid development of, in much, the mobile phone, Facebook can be viewed as a truly mobile application as far as it is possible with today’s technology.

1.5 Definitions

**Facebook profile**: one persons entire Facebook-page (including wall, info, photos etc).

**Facebook wall**: a part of the Facebook profile in which one can see the interaction shared by a specific user, such as the latest status updates, shared links, comments, new friends etc.

**Facebook info**: a part of the Facebook profile where one can chose to enter personalised information about one selves, within a certain framework decided by Facebook.

**Friend (on Facebook)**: a user that you have accepted as a friend in your immediate social network. Thus, get a connection to on Facebook.

**Like(-button)**: a “thumb” that you can use instead of commenting status updates or other users comments, photos etc. Some use it to show that they agree with something, some use it to express that they *like* what is written etc.

**Tagged**: one can label friends in photos, videos, status updates and comments by writing their name, this means that the persons name will be showed and his/hers profile connected to the place where he/she has been tagged.

**Notification**: a part on the Facebook page where one can see if there has been any interaction involving themselves, such as a tag, a reply to an update, a message etc.

**Status update**: the place where you mostly interact with friends, through text, photos, links etc. All status updates made by a user are published on the persons Facebook wall.

**News feed**: the page on Facebook where all of your friends and groups status updates and latest happenings, such as new friends etc., are gathered.
Digital artefact; a thing designed by humans containing information technology. Such as computer hardware, programming languages, computer software, information systems etc.

Social acting space; an acting space is the room for action we have in a specific context, in this particular case it is the conduct of digital artefacts, and the results of such conducts on social levels (Groth, 1999; Löwgren & Stolterman, 2004).

Ubiquitous computing (Ubicomp); when a digital artefact becomes omnipresent and consequently disappears into the background of our consciousness, it is still a tool and obviously it is not invisible in itself but as a part of the context where it is used (Weiser, 1991).
2. THEORETICAL FRAMEWORK

2.1 Our human acting space

The foundation of using IT, in any form, is our desire to overcome limitations in our human capabilities (Groth, 1999). By using digital artefacts we humans can extend and enhance our basic human abilities and to an extent, subdue constraints in our physiologically defined capabilities.

<table>
<thead>
<tr>
<th>Basic Human Abilities</th>
<th>Basic Human Constraints</th>
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<tr>
<td>Versatile and creative in work.</td>
<td>\textit{Serial: Only one task at a time.}</td>
</tr>
<tr>
<td>Memory with great capacity and flexibility.</td>
<td>\textit{Short term (working) memory extremely limited, long term memory fickle and unsuited for precise administrative information.}</td>
</tr>
<tr>
<td>Flexible information processing capacity,</td>
<td>\textit{Limits in working memory severely restricts human ability to tackle complexity.}</td>
</tr>
<tr>
<td>good mechanisms for integration and simplification.</td>
<td></td>
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<tr>
<td>Versatile communication abilities, great capacity for</td>
<td>\textit{Verbal communication slow and serial.}</td>
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<tr>
<td>visual processing.</td>
<td></td>
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<tr>
<td>Communication range well adapted to simple, local</td>
<td>\textit{Severe limits in range; communication over distance depends on messengers.}</td>
</tr>
<tr>
<td>communication.</td>
<td></td>
</tr>
<tr>
<td>Emotions always important – we are less rational than we</td>
<td>\textit{... and conflict.}</td>
</tr>
<tr>
<td>like to believe. Emotions are the source of both cohesion...</td>
<td></td>
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\textbf{Table 1} Overview: The basic human abilities and constraints. (Groth, 1999)

Humans have always been a social animal and as such, a fundamental part of being human is to be organised (Groth, 1999). Connected to this, is the fact that we not only are born organisers but we also accumulate our experience and increase our collective skills from generation to generation. Today in the modern civilisation, organisational structures are numerous and highly varied, and they are a part of everyday life for nearly every human being (Groth, 1999).

Tools and methods, human creations expressing both knowledge and social values, indisputably contribute to change our social and cultural conditions. The basis for the composition of our human social fabric is the individual actions of every society’s members. Combining these two statements gives the conclusion that the influence tools and methods have comes from the way they change and enlarge the domain of possibilities for individual action (Groth,
Löwgren & Stolterman (2004) have introduced a repertoire of different qualities for digital artefacts regarding their usage. One group of such qualities deal with social outcomes i.e. the conduct of digital artefacts and the results of such conducts on social levels. One of the most prominent qualities in this group is what they refer to as social acting space. This quality regard the potential for social acting an artefact gives. Much the same that Groth (1999) conclude in his work. To clarify, an acting space is the room for action we have in a specific context. By changing our acting space we change the ways we act in different contexts. As Facebook is a social utility, the change in our acting space connected to it, regard our social interactions.

2.2 Human behaviour

Another theory, which was written in 1943, but is still applicable to this day, is the "hierarchy of needs" (Maslow, 1943). Not only can it be applied on every person, but also on everything in our perceived world, which of course differs depending on ethnographical differences. In the case of Facebook, ubiquitous computing and social acting space, it does have a specific meaning.

![Hierarchy of needs](image)

Figure 2 Hierarchy of needs. (Maslow, 1943)

The primary needs are the physiological needs, such as food, water, air etc, and the needs can of course be put into perspective of one another, air is more important than water; but water is more important than food. The most primary needs are our physiological ones, according to Maslow (1943) this also applies to sleep, go to the bathroom, be active, have sex etc. Mankind has evolved and keeps evolving, which means that ubiquitous computing could result in more time for our primary needs, or being able to use the time more effectively while doing our primary needs. One could, for example, check the newsfeed on Facebook during a bathroom
break, or update a status while being active, such as being out jogging, and tell your friends in real-time where you are, how fast you run and for how long time.

What Maslow (1943) discusses in his study is that these needs are motivators and creates a drive. The needs, regardless of time, may for example motivate Facebook users to frequently or always utilise ubiquitous computing without being aware of it. The other needs in Maslow’s (1943) pyramid of hierarchy of needs can also be related to Facebook and the use of it (see table 2).

<table>
<thead>
<tr>
<th>Need</th>
<th>Example from Maslow (1943)</th>
<th>Example from present use of Facebook</th>
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<td>Safety</td>
<td>Having a family</td>
<td>Propose using Facebook</td>
</tr>
<tr>
<td>Belonging</td>
<td>Community of some sort, might be a church or a bridge club</td>
<td>Facebook is a community</td>
</tr>
<tr>
<td>Esteem</td>
<td>Affection and attention from family and friends</td>
<td>Affection and attention from family and friends on Facebook</td>
</tr>
<tr>
<td>Self-Actualization</td>
<td>Growth motivation, “to be all that you can be”, a motivator for the other needs. If you usually lack money for food, you are motivated to get more money, which will give you the food you need.</td>
<td>“To be all that you can be”, ubi-comp might save time that you are not aware of, and you can fulfil another need thanks to this. Or, if you have low self-esteem, you can use your community to boost it.</td>
</tr>
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</table>

Table 2  Examples of our basic needs (Maslow, 1943) in relation to Facebook utilisation.

Another theory, about our needs and social media is presented by Strömbäck (2010). He points out some of the needs that social media, such as Facebook, has created:

- **Cognitive needs.** The need for random information on Facebook.
- **Affective need.** An opportunity for people to use Facebook as an outlet for their emotions, both negative and positive.
- **Personal integrative needs.** Gives an opportunity for people to get better self-esteem.
- **Social integrative needs.** Strengthening the bonds with family and friends by talking to them in various ways on Facebook.
- **Tension release needs.** Use Facebook to flee from daily chores, sadness or boredom.

These are the main needs in Strömbäck’s (2010) theory and as you can see they are closely related to many of the needs Maslow (1943) talks about in his hierarchy of needs.
2.3 Psychological characteristics of ubiquitous computing

Ubiquitous artefacts reside in the human world, that is in direct contrast to the popular discussed matter of virtual reality - where humans dive into and resides in the world of the computer. By being a part of the human world, ubiquitous computers pose no barriers to personal interaction but gives a transparent connection between different locations and times, something that even may tend to bring people and communities closer together (Weiser, 1991).

A basic human psychology trait is that when we learn something well enough it disappears into the background of our consciousness (Weiser, 1991). Take for example bicycling - while learning you have to be fully concentrated on it, you can not lose a seconds attention or you will fall, but as we learn we gradually cease to think about it. Instead we can begin to concentrate on the traffic around us, people walking by or the sunshine on our skin and the wind in our hair. This is the essence of ubiquitous computing. As all digital artefacts surrounding us begin to be more and more natural for us to use, they start to disappear from our immediate attention, just like knowing the art of bicycling. Thus, we can concentrate on the actual task we perform with help of the artefact, instead of the artefact itself (Weiser, 1991).

"The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it." (Weiser, 1991, p. 94)

The artefact is of course still a tool and obviously it is not invisible in itself but as a part of the context where it is used. Eyeglasses are an example of a good tool according to Weiser (1994). You do not look at the glasses but at the world around you – through them. As he describes it, good tools enhance invisibility, something that sounds easy enough, but when thinking about it in relation to computers most designs in this area actually attempt to catch your attention – not the other way around. Making digital artefacts invisible, instead of craving for attention, will make individuals more aware of the people on the other end of the artefact (Weiser, 1991).

2.3.1 Calm technology

The most important feature of ubicomp according to Weiser (1991) is that it will overcome the problem of information overload, as for example today's overwhelming amount of medial information constantly demanding our attention. So far, mobile phones, internet, TV, radio and emails most often are seen as the enemies of calm, never stopping to pore information over us. However, we actually have more information at our fingertips during a walk in the woods than in any computer system, but even so, walking in the woods is seen as relaxing while computers are frustrating (Weiser, 1991). Calm technology on the other hand, is technology that fit our human environment and makes it as "refreshing as taking a walk in the woods" (Weiser, 1991). This is, according to Weiser & Brown (1996), achieved by engaging both the center and the periphery of our attention, and making the artefact naturally move between the two. The periphery in this instance, represent what we are attuned to without attending to it explicitly. Like driving a car where our attention usually are attuned on the road, the passengers and the music from the radio, but not on the noise from the engine. However, if an unusual noise ap-
pear from the engine, we notice it immediately. We where in fact aware of the regular noise from the engine in the periphery, and could, consequently, quickly attend to it i.e. move it to the center of our attention.

Weiser & Brown (1996) further emphasise that anything, but on the fringe or unimportant, is thought of as being in the periphery and what is in the periphery at one moment, can be in the center of our attention at the next, and then be crucial. It is even possible for one physical thing to have elements in both the center and the periphery at the same time. Like in a conversation where your immediate attentions is on the story (i.e. the spoken words) the other person is telling, but at the same time his or her’s voice and body language, peripherally, tells you if the talked of event was a happy one or not. Only if the other person starts to, for example, yell of anger so the actual words become difficult to apprehend, the tone of voice moves to the center of attention, and then back to the periphery when the person quiets again.

The easy move back and forth between the center and the periphery of attention is fundamentally encaising for two reasons, according to Weiser & Brown (1996). Firstly, because we are able to attune to a great deal more things when we move a bunch to the periphery of our attention. These things are then controlled by the large portion of our brain that are devoted to sensory (peripheral) processing. It is, in other words, informing us without overburdening. Secondly, because when we move something to the center of attention, that has formerly been in the periphery, we take control of it. Becoming aware of that something is not quite right in the periphery can, for example, make you agitated and uncomfortable. As when you read an awkward sentence, by moving the sentence construction to your immediate attention you can act, and either find a better construction of the sentence, change what you read or accept it and continue. Centering things in the periphery therefor gives us increased awareness and power, which is fundamentally encaising (Weiser & Brown, 1996).

There are three signs of calm technology; as already mentioned, an encaising artefact must be able to easily move back and forth between the center and the periphery of attention. Moreover, by bringing more details into our periphery it may enhance our peripheral reach. Like a video conference that gives you the additional, peripheral, information of the other persons’ body language and facial expressions, in contrast to what a phone call would have. Finally, it puts us at home - in a familiar place. By connecting us, without the slightest effort, to a multitude of familiar details, our periphery makes us tuned into what is happening, what is going to happen and what just has happened. (Weiser & Brown, 1996)

To summarize as contradictory as Weiser & Brown (1996), more information can be the solution to the problem of information overload, and the solution to become attuned to more information can actually be to attune to it less.
2.4 From use to presence

The coming ubiquity of digital artefacts call for consideration of what it means for something to be present in our lives instead of just being used for something. The difference between using an artefact or it being present in our lives can seem hard to pinpoint but there is in fact a distinct divergence. Use can be said to refer to a general description of a thing in terms of what it is used for while presence refers to a definition of a thing based on how we invite and accept it as a part of our perceived world (Hallnäs & Redström, 2002). Just as simple as we take electricity for granted in our daily lives, when we flick a contact to turn on the light in a room we do not think about the actual electricity making it happen, hence presence. Not until the day we have a power outage, that is the moment when we become aware of the electricity, and our lives and actions connected to it. Electricity is something that we do not live side by side with, our lives are thoroughly intertwined with it, and when it does not work, it causes a major disturbance in our lives. Thus, presence refers to more than just being physically available.

When taking a digital artefact for granted it becomes something more than just a tool to help us accomplish a specific task - it becomes a part of our perceived world (Hallnäs & Redström, 2002). As we, for example, customise our laptops and mobile phones with different shells and stickers on the outside as well as with colours, background images and applications on the inside - we tell the world that this is not just any artefact, it is a unique thing that belongs in the context of my life. In the same way our house is just not any house but this particular house of mine. Furthermore, things we take for granted become invisible to us (Hallnäs & Redström, 2002; Weiser, 1991), we just use them without thinking about it. We look at these things as natural parts of our lives that we neither need to attend to or reflect upon - as we do not consciously use our feet to walk, we just walk. A characteristic of presence is when things gradually starts to disappear from our perceived world (Hallnäs & Redström, 2002). For example, when we buy a new piece of furniture we are in the beginning fully aware of it and probably fell happy about it. After a while though, the piece starts to disappear from our attentions as we gradually begin to take it for granted as a natural element in our home. This acceptance starts at the very first encounter with the object, and as we invite it into our perceived world it become meaningful to us, in the same way a plain gold ring gets a meaning through a wedding ceremony - and becomes “my” wedding ring (Hallnäs & Redström, 2002).

Hallnäs & Redström (2002) put forward use and presence as two complementary ways of describing and defining artefacts. Use regard functionality while presence regard the expressions of the artefact. This can be compared to the way we, for instance, evaluate a couch. When buying a couch we consider if it is practical (e.g. big or small enough) for our specific needs and if it is comfortable to sit on (use) as well as if it’s materials, colours, design etc. fits in our living room in the way we want (expression). Put the computer in the place of the sofa and we get an environment where the computer loses it’s unique position and instead become just another material. A material with special properties of course, but from an existential perspective it will be as familiar as everyday wooden things or everyday plastic things etc. (Hallnäs & Redström, 2002).
2.5 User evaluation areas for ubiquitous applications

Ubiquitous applications are diverse in nature. Regular systems are designed in regards to the basic concept of tasks, in other words if the users can utilise the system to achieve goals efficiently, effectively and with acceptable satisfaction on the part of the user (Benyon, Turner, & Turner, 2005; Theofanos & Scholtz, 2005). Vital expressions for ubiquitous applications are in contrast social aspects, such as emotions, values, privacy and trust (Hallnäs & Redström, 2002; Theofanos & Scholtz, 2005; Weiser, 1991). Theofanos & Scholtz (2005) has presented a proposed framework for evaluation of ubiquitous applications where nine user evaluation areas (UEA) are identified with associated metrics and measures. The measures are defined as observable values and by applying human judgment to them, they associates meaning to those values which results in metrics.

The nine evaluation areas are; attention, adoption, trust, conceptual model, interaction, invisibility, impact and side effects, appeal, and application robustness. With this framework Theofanos & Scholtz (2005) claim that they also emphasises stakeholders, in opposition to only focusing on the user as in traditional evaluation. A stakeholder can interact with the application and/or it’s output both in a direct and indirect way. A direct stakeholder is, as it sounds, interacting in a direct way while an indirect stakeholder is affected by the application in a meaningful way but not directly. Theofanos & Scholtz (2005) do however, point out that the metrics and measures in their framework so far only focuses on the direct stakeholder, but that the indirect stakeholders are as important to address when designing.

Furthermore, the proposed framework is a first step to provide a structure for evaluation of ubiquitous applications and to help researcher and designers understand and learn from each other (Theofanos & Scholtz, 2005). The authors presents the framework as a help not to overlook key areas when evaluating ubiquitous applications and their social implications. However, they emphasise the need for more assessment to really be able to say if it captures all the relevant factors that influence the social aspects of ubicomp or if pieces are still missing.

<table>
<thead>
<tr>
<th>UEA</th>
<th>Metric</th>
<th>Conceptual Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>Focus</td>
<td>Number of times a user needs to change focus due to technology; number of different displays/actions a user needs to accomplish, or to check progress, of an interaction; number of events not noticed in an acceptable time</td>
</tr>
<tr>
<td></td>
<td>Overhead</td>
<td>Percent of time a user spends switching foci; workload imposed on the user due to changing focus</td>
</tr>
<tr>
<td>UEA</td>
<td>Metric</td>
<td>Conceptual Measures</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Adoption</td>
<td>Rate</td>
<td>New users/unit of time; adoption rationale; technology usage statistics;</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>Change in productivity; perceived cost/benefit; continuity for user; amount of user sacrifice</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
<td>User willingness to purchase technology; typical time spent setting up and maintaining the technology</td>
</tr>
<tr>
<td></td>
<td>Availability</td>
<td>Number of actual users from each target user group; technology supply source; categories of users in post-deployment</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>Number of tasks user can accomplish that are not originally envisioned; user ability to modify as improvements and features are added</td>
</tr>
<tr>
<td>Trust</td>
<td>Privacy</td>
<td>Type of information user has to divulge to obtain value from application; availability of the user's information to other users of the system or third party</td>
</tr>
<tr>
<td></td>
<td>Awareness</td>
<td>Ease of coordination with others in multi-users application; number of collisions with activities of others; user understanding about how recorded data is used; user understanding inferences that can be drawn about him or her by the application</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>Ability of users to manage how and by whom their data is used; types of recourse available to user in the event that the data is misused</td>
</tr>
<tr>
<td>Conceptual Models</td>
<td>Predictability of application behaviour</td>
<td>Degree of match between user model and behaviour of application</td>
</tr>
<tr>
<td></td>
<td>Awareness of application capabilities</td>
<td>Degree of match between user's model and actual functionality of the application; degree of match between user's understanding of his or her responsibilities, system responsibilities, and the actual situation; degree to which user understands the application's boundary</td>
</tr>
<tr>
<td></td>
<td>Vocabulary awareness</td>
<td>Degree of match between user's model and the syntax used by the application</td>
</tr>
<tr>
<td>UEA</td>
<td>Metric</td>
<td>Conceptual Measures</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interaction</td>
<td>Effectiveness</td>
<td>Percentage of task completion</td>
</tr>
<tr>
<td></td>
<td>Efficiency</td>
<td>Time to complete a task</td>
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<tr>
<td></td>
<td>User satisfaction</td>
<td>User rating of performing the task</td>
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<tr>
<td></td>
<td>Distraction</td>
<td>Time taken from the primary task; degradation of performance of primary task; level of user frustration</td>
</tr>
<tr>
<td></td>
<td>Interaction transparency</td>
<td>Effectiveness comparisons on different sets of I/O devices</td>
</tr>
<tr>
<td></td>
<td>Scalability</td>
<td>Effectiveness of interactions with large numbers of users</td>
</tr>
<tr>
<td></td>
<td>Collaborative interaction</td>
<td>Number of conflicts; percentage of conflicts resolved by the application; user feelings about conflicts and how they are resolved; user ability to recover from conflicts</td>
</tr>
<tr>
<td>Invisibility</td>
<td>Intelligibility</td>
<td>User's understanding of the system explanation</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>Effectiveness of interaction provided for user control of system initiative</td>
</tr>
<tr>
<td></td>
<td>Accuracy</td>
<td>Match between the system's contextual model and the actual situation; appropriateness of action; match between the system-action and the action the user would have requested</td>
</tr>
<tr>
<td></td>
<td>Customisation</td>
<td>Time to explicitly enter personalisation information; time for the system to learn and adapt to the user's preferences</td>
</tr>
<tr>
<td>Impact and Side Effects</td>
<td>Utility</td>
<td>Changes in productivity or performance; changes in output quality</td>
</tr>
<tr>
<td></td>
<td>Behaviour changes</td>
<td>Type, frequency, and duration; willingness to modify behaviour or tasks to use application; comfort ratings of wearable system components</td>
</tr>
<tr>
<td></td>
<td>Social acceptance</td>
<td>Requirements placed on user outside of social norms; aesthetic ratings of system components</td>
</tr>
<tr>
<td></td>
<td>Environment change</td>
<td>Type, frequency, and duration; user’s willingness to modify his or her environment to accommodate system</td>
</tr>
</tbody>
</table>
Table 3  User Evaluation Areas for Ubiquitous Computing Applications (Theofanos & Scholtz, 2005)

<table>
<thead>
<tr>
<th>UEA</th>
<th>Metric</th>
<th>Conceptual Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appeal</td>
<td>Fun</td>
<td>Enjoyment level when using the application; level of anticipation prior to using the</td>
</tr>
<tr>
<td></td>
<td>Aesthetics</td>
<td>application; sense of loss when the application is unavailable</td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Ratings of application look and feel</td>
</tr>
<tr>
<td></td>
<td>Robustness</td>
<td>Pride in using and owning the application; peer pressure felt to use or own the</td>
</tr>
<tr>
<td>Application</td>
<td>Performance</td>
<td>Percentage of transient faults that were invisible to user</td>
</tr>
<tr>
<td>Robustness</td>
<td>Speed</td>
<td>Measures of time from user interaction to feedback for user</td>
</tr>
<tr>
<td></td>
<td>Volatility</td>
<td>Measures of interruptions based on dynamic set of users, hardware, or software</td>
</tr>
</tbody>
</table>

2.6 Combination of theories

By combining the presented theory and their slightly different views we believe we first and foremost can capture the overall change Facebook has made on our acting space as human beings, and analyse our use of Facebook as to whether it has or is on the way to become a ubiquitous part of our lives.

The framework Theofanos & Scholtz (2005) propose to evaluate ubiquitous applications are obviously not used for this mean, as Facebook, to our knowledge, not is designed with ubiquitous use in mind. However, by comparing how well (or not) our use of Facebook lies within the different user evaluation areas we believe we can discern a pattern - whether we move to a ubiquitous use of Facebook or not. Important to note is however, that we have not followed the proposed measurements or even rigorously every metric. This has not been a user test but a conversation and certain metrics have neither been possible to examine or been necessary, to accomplish our goal. The proposed measurements and metrics even so contribute to break down the important characteristics of ubiquitous computing, discussed in the preceding theory parts, into smaller researchable parts. Overall the framework and our other presented theory match or complement each other in a natural way, giving us a very solid base to work from. Together they constitute our analytical framework.
3. METHODOLOGY

3.1 Research approach
We have chosen a deductive approach (Saunders, Lewis, & Thornhill, 2007) for our study, which means that we have read a massive amount of scientific articles, journals and books about ubiquitous and pervasive computing as well as Facebook in specific, but also social medias in general. After filtering out the more important, we ended up with a selection of theories that became the core of the study. There are a lot of studies done in these particular areas, by choosing a deductive approach we have the possibility to work with previous studies and to expand and combine them. Choosing a deductive approach instead of an inductive means that we do not have to create and find a completely new theory, which is not what we are aiming for. Our main goal is to find out how people use Facebook, if the interaction and usage has changed our acting space and made Facebook, as a digital artefact, a ubiquitous part in our lives. Since Facebook has figured in media a lot, both showing negative and positive sides of this particular social media, most people have an opinion of Facebook even if they do not use it. Thus, this is something that has to be thread carefully and possible prejudice in combination with the theory we want to know more about, makes a deductive approach the logical way to go through with this study.

We have, in this study, started off with existing scientific research, which has given us a hypothesis to work from. To simplify the difference between a deductive and inductive approach, it can be illustrated such as Bryman (2011) has done.

A deductive approach is simply said - to test a theory (Saunders, et al., 2007) which is exactly what we are doing in this study.
3.2 Data collection

This is a qualitative study, in other words, the focus is to accomplish a thorough understanding of our field of study (Bryman, 2011). Generalisation is not sought after or even possible, it is a closer study of Facebook, and can as such not be generalised to any other application or social media. Qualitative data are ambiguous and result in thorough description or abstraction (Saunders, et al., 2007). Choosing a qualitative approach makes it possible for us to explore our subject in as real a manner as possible, based on the richness and fulness of the gathered data. It is not possible to measure the degree of ubiquity in our use of Facebook in numbers, but it is something that need in-depth understanding of the what, why and how’s. In this aim we are using the qualitative methods semi-structured interviews and semi-field studies, to gather our empirical data.

When it comes to qualitative research it involves a number of different methods (Bryman, 2011), the most imperative are ethnographical/observing, various qualitative interviews (a term which includes a number of different interview techniques) and focus groups to gather data. Bryman (2011) also points out that researchers working with qualitative methods often use different kinds of methods during one particular study, something we feel that we have embraced in our study, using both interviews and semi-field studies.

3.2.1 Interviews

Of outmost importance was how to formulate our interview guide, since we are members of the Facebook-community ourselves. We therefor needed to think outside the box and it was an iterative work to find the questions that would work, and not be biased. It was necessary to step out of our roles as Facebook-users, to be able to see what we usually do not think about, in order to find relevant questions. We did struggle with this and after a first attempt revised our questions, since it has been an iterative work we do believe we in the end managed to produce the questions needed. The questions are derived from the different areas in our theory which we combined with our understanding and knowledge of Facebook. This combined, resulted in the weave of questions we used in our interviews. We were supported by Bryman’s (2011) proposed mode of procedure when formulating our interview guide. A pilot guide was also performed with two test people, after which we revised and added some new questions, just as Bryman (2011) proposes.

What we believe was imperative for our data collection, was to be able to give the respondents our questions one at a time, and not all at once as they would have if we had performed a survey. This, as the questions were formulated in a way and in an order, so that it would be possible to find inconsistencies in the respondents answer. However, if they did not understand a question due to lack of computer and/or Facebook knowledge, we did give them enough help to comprehend the question.
The basic questions given were the same to each respondent, but as this where semi-structured interviews every question had the possibility to develop further and lead to different attendant questions. The only thing the respondents knew from the beginning was that this was a bachelor’s study about Facebook, not wanting to give any hints or leading questions that would ruin the outcome of the collected data. Every interview was recorded, giving focus to the conversation instead of writing down answers, and to not miss anything important in the respondents replies, otherwise easily done. After the interview was completed we informed the respondents what the study really was about and that their Facebook profiles would be observed as well. The respondents were also informed that they could ask questions before the interview was over, if they wanted to add something, and that we might would need to contact them again for follow-up questions.

3.2.2 Semi-field study
The semi-field studies conducted after the interviews was performed to investigate the respondents Facebook profiles, to look for inconsistencies between the respondents replies to our questions and their actual use. The study was performed during a one week period. During this time our aim was to study our respondents actions on Facebook and put the actual actions in comparison with their interview replies. Of course we also looked for answers to any, in the interviews derived, attendant questions. These observations where made indirect, without involving the respondents, only observing their profiles from the perspective of a friend on Facebook. The semi-field studies where performed collectively i.e. by both of us together, at the same time.
3.2.3 Sampling
We have used a convenience sampling in this study (Saunders, et al., 2007), handpicking our six respondents from our own Facebook networks. Even if we ourselves are Facebook users and part of this social media, we both use it basically the same way, which means that we are not really aware of how others perceive and use Facebook. Since this is one of the first social medias to attract people from all kinds of age groups, gender, computer skills etc. the maturity as a user in our study vary from relatively new users to users for several years, we have people that have fewer friends and people with several hundred, and we have used an equal number of respondents from both sexes. Furthermore we tried to get a goal-oriented sampling, using respondents we believed in the best way would help us answer our research question and ful- fill our purpose with this study. This was done by a quick, overall scanning of the respondents Facebook profiles to get a clue of how active and in-depth users they where, and adding this characteristic to our other sampling criteria. Another criteria we looked for was the use of Facebook on mobile devices.

3.3 Analyse method and parameters
Our analyse is based on pattern matching i.e. we have tried to find patterns in our collected data based on our theory (Saunders, et al., 2007). To do this we identified five different themes in our theory that we have used as a framework for our empirical analysis. The five different themes are;

- **Social acting space** (or the domain of possibilities for individual action)
  Possible changes and enlargement of our human abilities through FB.

- **Human behaviour and needs**
  Possible fulfilment of needs through FB.

- **Calm technology**
  Signs of encalmness in the information load on Facebook.

- **Use and presence**
  Signs of the use or presence of Facebook in our lives.

- **User evaluation areas for ubiquitous applications**
  Signs of adoption, trust, conceptual model, interaction, invisibility, impact and side effects, appeal, and application robustness in our use of Facebook.
3.4 Execution

One of the more important methodologies that we have used during the course of this study is De Bono's (1999) “The Six Thinking Hats”. It is a methodology that focuses on inspecting different perspectives of a problem or task. It can be used even if there is less than six people in a group but it does require at least two people, taking turns in “wearing” the different hats. Every hat represents a different perspective or attitude. We find this method very useful, and usually work with it without being fully aware of it. It is not a methodology approach per se, however, we have chosen to use it through out the literature study gathering our theory, this methodology part to choose from various sampling methods and techniques and last but not least to help us with analysing our empirical findings to reach our goals as researchers (Löwgren & Stolterman, 2004).

To distinguish the difference between the six hats they all have different colours. While wearing, not literary of course, the white hat you are neutral and the one who focus on facts, trying to find gaps in information and knowledge. In contrast to the white hat, the red hat is emotions, you work without facts, just your intuition, and you are also the one trying to see how other people will react to your work emotionally. The black hat is negative, just focused on what might not work, this is the hat that finds all the weak points in the study. This hat might be the most important, since people in a group tend to be very optimistic and unaware of the holes in a certain discussion. Working without the black hat could be a disaster - since the workflow could have serious flaws to begin with and no one daring to mention it.

The yellow hat stands for the optimistic role, it might seem close to the red hat, however, this is the one that keeps the spirit up, and also the one who just lays ideas on the table - some that will be discarded, and some that will be picked up and may give you a new way of looking at things when you are at a grind. While wearing the yellow hat, your job is to see the benefits of the work unlike when you are wearing the black hat. There is also a green hat, which stands for creativity and solutions, for example, when the black hat finds a big hole in an argument, it is the green hat’s job to come up with a solution, or a completely new way around it. Finally, there is the blue hat, which is the one who has the overview of everything, the one that keeps everything in order. One could call this the chairman of hats. When using this method with awareness, and people appointed to a certain role, the blue hat is the one asking the others for input where needed.

This is a methodology that many people use on a daily basis without being aware of it, however, when you know about these six roles - they are used with both caution and awareness, and this is how we like to approach things and this has been our methodology throughout the study, we just keep switching hats. Sometimes we are aware of it, and sometimes not, however, the hats in use are usually opponents to one another. Our opinion is that without this methodology, we would not have been able to produce much at all, and it is resilient for the way we work. It is also a proven methodology, which can be applied on everything from working out marital differences, to handling world affairs - and writing essays.
3.5 The quality of the research

When researching for a study, such as ours, there are three criteria that measure how credible the study may be (Bryman, 2011). The first one is reliability, which simply put, is if the study is reliable, something that is easier to measure in a quantitative study. We are aware that the reliability in terms of a qualitative method might not always be perfect, however, the responsibility for a reliable result lies in the hands of the researchers and can as such be controlled.

The fundamental issue is that the researchers need to be as un-biased as possible. One way to assure this is to use more than one evaluator (Dix, Finlay, Abowd, & Beale, 1998). This is obviously something that we have embraced in our study, and brought to a high level by making use of De Bono’s (1999) six thinking hats. Our interviews were however, performed one by one and to increase the reliability of our study we have recorded our respondents and transcribed the exact words they replied during our interviews. Even if our respondents did not mind participate with their real names we also chose to give them aliases’ to make them even more comfortable during the conversation/ interview. Also, of the six respondents chosen for the interviews and additional semi-field studies, no one chose to leave the study. This means that we have 100% attendance, which also shows some reliability. The reason we mention this as a reliability even though these were semi-structured interviews i.e. a qualitative data collection, is that we did not give our respondents a lot of information before the interviews. As mentioned, we only gave them the fact that this was a bachelor’s thesis about Facebook. We specifically did not mention any kind of area of the thesis, in our opinion this could have ruined the study and its’ outcome, giving the respondents time to think about what kind of answers we would want, and not the spontaneous answers that we needed. They were informed that they could leave the study before the interview, and when the interview was over, we told them about our aim and asked again if they wanted to leave. Our last question was if we could do a semi-field study of their Facebook profile, and they all gave affirmative answers. We feel that this proves some reliability since we interviewed them under false pretences, but none of the respondents left the study after being told the complete truth.

We chose to not let the respondents read the analysis, since we did not want them changing anything that might be of importance to the spontaneity of their answers, or else the outcome of this study might have been compromised. Some interviews have explanatory follow-ups on certain questions, thus, we did not feel the need to let them read in order to change possible mis-interpretations.

The semi-field studies where a collective performance, something we felt was particularly important when using a convenience sampling and one of us therefore obviously knew the respondent to some degree. No respondent has connections to both of us. Reliability is something that is more easy to use in a quantitative research since those are not as open for interpretation, so our roles as moderators/researchers are the most imperative part when it comes to high reliability (Bryman, 2011). To further decrease bias we started this study by reflecting around our own roles as Facebook users, trying to become as aware of our own knowledge
about the application, our own use and feelings about it. Doing this gave us a possibility to recognize when we were in danger of being biased and take a step back.

Another criteria for performing a credible study is validity, which most people consider the most important. We have worked carefully to try to assure high validity in our study. Partly by creating an interview guide which has been followed throughout the interview sessions. We worked iterative in producing our interview questions, testing them in two pilot interviews, and then improving them where it felt necessary, to make them as focused and goal oriented as possible. We also increased the validity by performing a semi-field study as a complement to our interviews, thus being able to further validate our interview findings. Another factor in this area is the fact that our respondents were not wholly informed of the actual purpose of this study. They were accordingly not able to modify their answers in any direction, showing more or less of ubiquitous use of Facebook, according to their own conceivable opinion of whether it is a good or not development. Together we believe these procedures have contributed to ensure a valid study.

Lastly, the criteria of replication - something rarely used in studies, which basically means that a researcher should be able to replicate our study and questions and come to the same conclusion. This, however, in a qualitative research does rarely give the same result due to a number of reasons, whereas we are only mentioning it as a criteria, but we would like to point out that this does not give our study any increasing credibility. We do feel that we have aimed for high validity and reliability, by using the techniques described, and to take a step away from us as persons, taking on the role of the un-biased observer/researcher, struggling to interpret the result of the interviews and semi-field studies as objective as humanly possible. We would like to describe our efforts in this study with help of the following quotation;

"The Scylla of overgeneralizing from a limited number of contacts is accompanied by the Charybdis of bogging down when users disagree" (Grudin, 1993)

This quote refer to Scylla and Charybdis, two monsters from the Greek mythology sitting on opposite sides of a narrow channel, when sailors tried to avoid Scylla they almost sailed into Charybdis and vice versa. This is used to describe how hard it actually can be to do a study in the right way, and points to the narrow line one have to walk. One side, for us, have been to chose the right respondents, formulate the questions and performing the data collection in an objective manner; the other side is to not be biased when analyzing the data and drawing conclusions from the analysis. We have, throughout this study, been careful to try to balance between these ends.
3.6 Ethics

We have followed four basic ethical principles while performing this study (Bryman, 2011).

- **Information.** We have informed our respondents about the purpose of the research, and that they of course are volunteers. They were also informed of their principal ethical rights, as they were asked and informed about the semi-field study conducted on their Facebook profile in complement to the interviews.

- **Consent.** All participants were volunteers for this study, giving their full consent. They could, if they wanted to, leave the research at any point during the study.

- **Confidentiality.** Since this study depends on personal use, opinions, acceptance and experience we have been careful to ensure our respondents confidentiality using alias and only a few, not traceable, personal parameters (like hometown and birth year).

- **Use.** The respondents were informed that the collected data only would be used for research purposes, i.e. this particular study, and nothing else.

However, there is one thing that needs to be added to ethics in this particular study, something called “false pretences” (Bryman, 2011), that we partly have exploited during our interviews. As we did not want to give our respondents all the information about the study before asking our questions, to get as unstudied and spontaneous answers as possible. We had to be slightly vague and describe the study in a way that may have led them to believe that the research purpose was another. This, in combination with not giving them more than one question at a time, and not giving them the opportunity to change a previous answer, to get the effect that we aimed for; can be pointed out as false pretences. However, after the interview was done, the respondent were informed about our real aim - and that we would study their Facebook profile too. They where of course still able to leave the study at this point or to say no to particular parts, if they changed their mind after finding out what we really aimed for.
4. EMPIRICAL FINDINGS

4.1 Respondent “Barney”

4.1.1 Interview

Barney is a man in his sixties, living in the small town of Nyköping. He has a very thorough knowledge about computers, working with them daily. He has been a member on Facebook for 13 months and is not really sure how many friends he has for the moment but think somewhere between 50 and 100. Barney has Facebook (FB) on his computers as well as mobile device.

Barney first and foremost read the news feed on Facebook. He wants to find out if anything new has happened, reading both status updates as well as comments, and he enjoys commenting and debating with his friends. His computers and mobile phone are constantly logged on to Facebook, but in the background. He actively uses Facebook, mostly during work-hours, when he feels he has some time to spare. Some days he does not use it at all, whilst other days he is using it actively multiple times per day. Barney feels the main purpose with Facebook is to read and comment and can not think of anything else that he actively use it for. Since he has Facebook in his mobile phone Barney also has the opportunity to access it in various places. Which he does wherever he might be on his spare time, such as during his lunch break, and he mentions the car as another example of where he is using it. He never really consciously think about where he is when he is accessing Facebook. It comes natural to him to check out what is happening on Facebook, while performing similar tasks on the phone, such as checking his email and Skype.

Before Barney had access to his friends and acquaintances through Facebook he estimates that he never interacted with about 75% of his Facebook friends through a digital artefact, however, in person he occasionally ran into them at the gym, randomly seeing them out on town or for lunch. Thus, he feels that his social network has changed, not in size but in depth, and points out that he considers that this is the whole point of social medias.

Barney very rarely involves himself in different groups on Facebook, not since the group for his gym changed from being an actual group to being a local business page instead (note from researchers - this was a change enforced by a Facebook update). It does happen that he makes a choice to join groups if there is a specific event arranged by it, but it is very rare. He never creates groups of his own.

In theory Barney is online 24/7, however, he is not active more than a small portion per day, thus he is not available at all times. He feels insecure about how the notification messages work as he does not think he receives messages every time he should. He does however, always look at the notification flag when checking Facebook. As Barney decides when and how often he visits Facebook he does not feel that the availability part is stressful.
Barney does not check all the third part information that his friends share, such as, links, music, videos etc. His reasons for what he chooses to look at more closely are vague but the common denominators are probably personal interest and closeness in relationship to the person sharing.

Concerning the level of privacy when Barney himself shares information on Facebook, with acquaintances, it is probably quite similar to what he would share face to face as well. However, he points out one difference, the history available on Facebook i.e. previous comments and such, shows his personality and usual jargon to people he does not really know that well. This makes him more bold and private when commenting on acquaintances’ profiles on Facebook than he would be face to face.

Regarding the security of participating in debates online, at first he does not know what to answer but later comments that he does not think the debates on Facebook are truly serious, more for entertainment than for anything else.

"Online you can debate for the fun of debating, while in real life, the discussed subject is more important than the actual debate."

"I use Facebook for socializing not for some sort of information dissemination."

Facebook helps Barney to remember things in only one instance according to himself, that is other peoples’ birthdays, as he always write down events planned through Facebook in his calendar when deciding to go.

"As many Facebook friends are people you ordinarily never congratulate when they have their birthday, you now get the opportunity to post a 'Happy Birthday!'"

To communicate with friends, Barney usually utilise Facebook, Skype and his mobile phone, he is using a different media depending on the relationship. He uses his phone to call his closest friends, next to closest he contacts through Skype and others through Facebook. Of course there are no definite boundaries between the different set of friends, and his closest friends are also friends on Facebook. However, using Facebook as a means of communication is not his first choice when it comes to his closest friends.

The emotions while reading on his news feed range from frustration to happiness. He never feels overwhelmed by information but rather can feel it is relaxing to check in and read on Facebook.

"... it's like reading the newspaper at home, and that's fun."

Overall he is positive about Facebook, otherwise he would not use it at all as he points out.
"There are a few friends I do not have neither phone number nor email address to, that I now can communicate with. I think Facebook is really good."

Writing himself, he does not only actively think that he is writing on Facebook but also that everything we writes is absolutely public, regardless of the fact that it is limited to his friends. He does not feel that this limitation really restricts his data. Barney does not feel that it is unsafe to use Facebook but uncertain.

"I only feel unsafe when I write something that I do not want should be spread to my surroundings. But in this case I am aware of that the things I write can end up anywhere and in that role I do not feel unsafe."

Regarding bugs in the system, Barney think there are a few of them. When disrupted by a bug he gets annoyed or frustrated, but as the things he do on Facebook not are vital he usually shrugs it off, and thinks it was a pity it did not work. However, overall he feels Facebook is an easy system to use but points out that he does not think he use any advanced functions. He simply has no need for it, as he puts it. On the other hand, one basic function in the system regarding comments, has just recently changed and that is something he is not all together happy about. He has not really dared to try other solutions or means to bypass it. He does usually adjust to system functions, and can not really say if any functions he might would like to have are missing. It is nothing he has thought about. Barney estimates that he is using 25% of the functions that are available on Facebook, and he motivates the low rate by saying that he does not know what he would use the other features for, nor does he see any purpose with them.

When asked if Facebook has brought any new value to him, he answers that he really appreciates the given connection between names and faces as it makes it easier to learn other peoples' names. He does not think Facebook saves him any time, he is of the opinion that it is rather time consuming. Even though it gives him a more effective way of keeping in touch with more people, he previously had very little contact with them i.e. he spends more time on it now.

Regarding the question whether he thinks being a member on Facebook gives him a status he did not have before, he does not think so but rather that not being a member could. He explains it in relation to how people use not having a TV to gain a certain status by for example saying "we certainly do not have a TV" and the corresponding "I do not use Facebook". He does, however, neither feel ashamed nor proud of being a member himself and mainly gets positive response when he mentions it.

Lastly, Barney says he would have no problem terminating his membership on Facebook;

"I was fine before Facebook so of course I would be fine without it now." Obviously it would make a difference, as I appreciate having contact with the people I have contact with there, but it is not something I could not live without. Facebook is a complementary way of communicating, not my main way."
He ends the interview by saying that since it is a free service, one can not have too big demands, but it would not surprise him if they (Facebook) soon did a “Spotify” (researchers note - severely limiting the functions for free use and demanding pay for the full version). If they were to change this, and the fee would not be unreasonably high he would be willing to pay for it.

4.1.2 Semi field-study

Barney has 84 friends on Facebook. During the timeframe of the observation we have not seen a single status update from his mobile phone. Unfortunately Facebook does not have a feature where one can see if a comment is made through a mobile device. From what we can see, Barney spends most of his time on Facebook commenting other peoples’ status updates (photos, links, written updates etc.) rather than updating his own status. Approximately 90% of his actions is spent on comments and 10% on status updates. However, Barney is very active and usually interact with someone more or less every day. When he has started to comment he usually develop it into a discussion or "conversation", commenting back and forth around the same update or subject during a short period of time i.e a few hours or even minutes.

When it comes to privacy, we can see from his settings that he is semi-private, he shows his full name, where he went to school, hometown, birthplace and date of birth, however, not his birth year. Also, his profile picture is an actual picture of Barney himself. He has chosen to disclose his political and religious views. He does however, share his Skype contact name and email address and shows that he has two daughters, one active on Facebook and linked to, while the other is just listed as family. On the other hand, he has very few photos on his profile, three to be exact and two of those are other peoples photos that he has been tagged in i.e. not shared by him. However, his profile does have the default settings regarding privacy. Which means that friends of his friends can see his profile, as well as his immediate friends of course, but not any other people.

Barney, from what we can see, is using quite few features. Basically just the occasional status update and mostly commenting others. During these two weeks he has not shared one single link, photo, video etc. He has not tagged any other people in his updates or comments. When it comes to adjusting Facebook to personal preferences, Barney had chosen to enter information about religious and political views, however, he does not disclose his actual views. The information he has entered is for humorous purposes. From what we can see he has the default settings regarding privacy. We would estimate that Barney maybe uses 5% of Facebook’s features.
4.2 Respondent "Herbie"

4.2.1 Interview
Herbie is a man in his thirties, living in the small town of Nyköping. He has a very good knowledge about computers and would rate his knowledge as a strong eight on a scale of one to ten. He has been a member on Facebook almost from the start in 2006. He thinks he has approximately 450 friends. Herbie has Facebook (FB) on his computer as well as in his mobile device. He can be just about anywhere while checking in on Facebook, such as on a train, before practice or during any other spare moment. He never really actively thinks about checking in, it comes natural to him.

Since he presently spends a lot of time at home, he also spends much time by the computer. While there, he has Facebook in the background at all times, however, he is using it actively approximately an hour per day, spread out on many short visits. Herbie considers himself more or less always available, getting push notifications and emails whenever anything new happens directly connected to him and his profile. If he gets a question he usually replies within an hour. It never becomes a stressful matter as he feels that he can shut it down whenever he wants to.

First and foremost he reads the news feed, checking what has happened since last time, what people have done. He can not really pin point any other use but feels that this is what he is doing on Facebook. He hardly remembers how he kept up with his friends before Facebook, but he mentions that he spent a lot more time on the phone or sending text messages. Herbie also believes that he had very limited connection to about 80% of his present friends on Facebook before Facebook. Nowadays almost all contact with his friends is handled through Facebook.

"Not to a 100% BUT a big part of it is that you write there instead."

There are very few people Herbie has met and connected with through Facebook, without previously having met him or her in person on at least one occasion, very few. Though he has reconnected with a lot of old classmates, relatives and such. He both creates and is active in a few groups on Facebook, they can be anything from discussion forums to recreational associations. He frequently gather people around temporary groups to organise trips, parties, training sessions etc.

Herbie does not check all the third part information in the news feed, such as, links, music and videos etc. that friends share, however, he probably checks about 90% of it. Anything too boring he quickly shuts down again though. A big part of what he does look at depends on the relationship he has with the person who has shared the information, as well as what he knows about the persons taste and opinions. He does not feel that the information ever gets overwhelming, in such a case he would simply hide the things he is not interested in.
He thinks he is quite open, mentioning a lot in his own status updates. However, he feels that people mostly share positive things happening, or just use it for plain fun. Herbie believes it can be easier debating with others on the other side of a computer screen, but thinks he is quite private with his opinions, thus he avoids debating.

Regarding memory, Herbie feels that Facebook has contributed a lot since he is using it to plan all his weekend activities. Something he really misses on Facebook is an actual calendar function.

In terms of communication he estimates that approximately 60% of all his communication with friends go through Facebook and the other 40% through his mobile phone. Usually he does not think about it, turning to Facebook is a natural choice. However, to some extent it does depend on the person he wants to interact with. If that person is an in-active Facebook user who only logs on once a week, Herbie chooses another means of communication if he needs a quicker response.

Facebook is more than anything Herbie’s first and most natural choice whenever he wants to share information with his friends. He does not experience a lot of technical disturbances while using it. The only thing he can think of is the chat function that sometimes time out, but he does not see it as a big issue, thinking it will start to work again soon.

In terms of use he feels Facebook is an easy application to grasp, but he considers himself a pretty basic user who does not bother using any difficult functions. He can not think of any function he misses in the interaction with his friends either, or that he adjusts any existing function to his preferences. He estimates that he is using about 5% of everything that is possible to do on Facebook, mentioning that he does not use any applications. He believes that the low figure depends on everything from lack of interest to lack of knowledge of what is possible or not to do.

Herbie finds great value in using Facebook as he believes it saves him a lot of time and also has deepen certain relations.

"When you want to do something you can just write three lines and click on the persons you want in on it, instead of spending a lot of time phoning everyone."

"Facebook has helped me to strengthen my relationships to a lot of people."

Regarding safety and privacy he feels secure with the available privacy settings. However, delicate information such as bank account numbers he would never send through Facebook.

Herbie thinks it can give some kind of status to be a Facebook member as it is a forum for affirmation. He is probably more proud of being a Facebook user than ashamed, if he has to
choose, and gladly mentions to others that he is a member. About 95% of all people he mentions it to are positive towards it.

He would absolutely not be happy about closing down his account as he really appreciate the social network on Facebook. He would consider it a loss to lose that network but truly respects and understands people who say they would never want to be a member. Overall Herbie thinks Facebook is great, but that you need to choose your words as employers and parents etc. might see the information you relay.

4.2.2 Semi field-study

Herbie has 494 friends on Facebook. He approximately updates his status from his mobile phone one third of the time. Herbie shares a lot of different medias on Facebook. Everything from photos, homemade videos as well as YouTube videos to regular status updates. He is also using an application where he can share movies that he has seen and rated. This is the only application that he is using, but he does it extremely frequent. Another feature Herbie has tried is the new “question” feature where you can answer a poll and the answer turns up on your profile. When it comes to interacting, Herbie does comment other peoples updates, however, he updates his own status more often than he comments, an estimate during the week of study is that of his interaction 70% is status updates and 30% commenting. He usually posts something on Facebook several times a day, everyday, thus a very active Facebook member.

When it comes to privacy, we can see from his settings that he is somewhat private, he shows his name, his hometown and his birthday, however, he does not show where he went to school, his workplace or birth year. Herbie does, on the other hand, show his interests as well as music, movies and television shows that he likes. He has also stated his religious views, however, not his political. To sum up his personality he has also written a little something about himself on his profile.

Herbie’s profile has open privacy settings, meaning that it is public for anyone to see, regardless if they are his friend or a complete strangers roaming around Facebook. Herbie is also both tagged in and shares an abundant amount (over 1200) photos of himself, his friends and places he has been to.

We can see that Herbie is using groups quite a lot on Facebook, everything from interest groups to organising and administrating an association page and gathering his friends for different activities. During the timeframe of this study we have not seen Herbie use any features in any other way than they are supposed to. We would estimate that Herbie is using about 45% of Facebook’s features.
4.3 Respondent "Happy"

4.3.1 Interview

Happy is a woman in her thirties, living in the town of Visby. She has a very good knowledge about computers, since she is using computers as a tool a couple of hours per day in her line of work. She has been a member on Facebook for about one and a half to two years, thinking she has too many friends, estimating them to about 300-400. Happy has Facebook (FB) on her computer but not her mobile device. She has tried it on the phone but as she never got it working properly she stopped trying. Happy is mainly using it at home and the only place outside of her home where she has accessed Facebook is at her mother’s house when she goes there to visit.

Happy is a periodical user of Facebook, sometimes she is active every day, several times a day, but sometimes she does not even log in for several weeks. Her availability is not very high, nine out of ten times when she is on Facebook she never logs on to the chat. She considers it just as fast to send an email as it is to wait for a response through Facebook from her. Happy is quite restrictive when it comes to being available and does not interact a lot. However, she is somewhat curious about what other people are doing, but rarely posts comments even though she says that she does have opinions on certain posted subjects.

First and foremost Happy reads what is on the newsfeed and then goes on to play a lot of games. She does not interact a lot with other people in the games she plays, except for one, which is a four people card game. She has no problem to think about the games as board games. Before Facebook she was also playing a lot of games on other sites and she is also a part of a group of friends that get together in person on a regular basis to play different kinds of board games.

Happy really does not feel that her social network has changed in particular through the use of Facebook, even though she has a lot of friends. Most friends are only people connected to her due to the different games she plays, and she has no other relation with them or any interest in them. She stays in touch with her close friends by meeting them face to face or through phone calls, the only thing she is using Facebook for when it comes to her close friends is to keep track of their birthdays. Except for that she does not feel that Facebook helps her memory in any way.

Happy is a member of many different groups on Facebook but she does not quite know how many or what kind of groups, since she says that other people can place her in groups without her being aware of it, as well as the groups she has chosen. Even though she is a member in many groups, she is never really using them in any way.

She looks at very little third part information in her news feed, such as, links, music and videos etc. If she does look at something it is a third part information that she recognises and that is
the reason she chooses to watch it. It does not matter to her who has shared it. Her opinion is that Facebook is a place for playing and games. She avoids to participate in debates as she thinks it is so easy to pass the line of decency and become mean in a way you never would in person. However, outside of Facebook she can debate with friend just because the sheer fun of it.

As a mean to communicate she rarely use Facebook, rather using email or even better, phone calls or send text messages. The few times she does use Facebook she does not write anything without having thoroughly thought it through before submitting.

About the news feed Happy mostly feels people share nonsense or uninteresting things. At the time of the interview Happy tells us about a friend who recently started playing a game and is now updating constantly through the game, and this is something that Happy finds disturbing. Happy shares very little information about herself and she can even become irritated with people that she thinks share too much information about themselves, thinking they give away too much.

Happy rarely encounters system failures, but if she does she just walks away, not thinking it is important enough to get annoyed about. The only value she considers that Facebook can give her is that it is a gathering place for a lot of fun games. She does not miss any function and has not bothered to learn a lot since she does not use Facebook that much.

Happy claims that she feels quite safe with the privacy controls but has chosen to share very little on Facebook, in her opinion that is the best way to control the information.

"You never know if a bug turn up in the system and then it is out on the internet."

Furthermore Happy believes that she is using about 30-35% of the available functions on Facebook, since she mainly plays games and reads about what her friends are doing. She does not see any other meaningful use with Facebook.

She does not feel being a member on Facebook gives her any status, she and her friends mostly look at it as amusement. She is neither ashamed nor proud to use Facebook, but she rarely tells other people that she is a member on Facebook. Happy does not have any doubts when it comes to the question about terminating her account since she has already contemplated it several times, thinking she is using it so little that she hardly knows why she has it at all.

4.3.2 Semi field-study

Happy has 300 friends on Facebook. From what we can see she does not use Facebook on her mobile phone. During the timeframe of the study Happy more or less seem to have been playing games. She has shared one status update written by herself (and not automatically generated by a game). When it comes to interacting, Happy does comment other peoples updates,
however, very rarely. Approximately 95% of the posts on her wall are game updates and 5% commenting and her own updates. However, Happy is quite active through the games she plays, as there are posts from several different games almost every day or many updates from one game during one day.

Regarding privacy, Happy is not that private. She states her name, hometown, birth town, birthday except for birth year, school, as well as her religious and political views. She also declares what languages she can speak and that she is in a relationship, and with whom. Happy also share her taste in music, movies and television shows.

Happy’s privacy settings are a bit mixed. She only shares her wall and family relations with her friends. However, the rest of her profile is public. She has published very few pictures, only one of herself but a couple of her home and things in her surroundings. Of the few pictures (around a dozen) on her profile, 50% are from games.

She is a member of many interest groups, however, during the study we have not seen any interaction in these groups or involvement in any other types of groups. We have not seen Happy use any features on Facebook in any other way than they are supposed to. An estimation is that Happy uses about 15% of Facebook’s features.

4.4 Respondent “Kal-El”

4.4.1 Interview

Kal-El is a man in his early 40's who lives in Gothenburg, he claims to have 111 friends on Facebook and his guess is that he has been a member on Facebook for approximately a year and a half to two years. His computer skills are extremely good since he has a history of working with computers, and technological gadgets are one of his main interests. He uses Facebook on his computer, iPhone and iPad.

Kal-El describes himself as a “Peeping Tom” when it comes to what his main interest on Facebook is, mostly checking the news feed and comments, but he also mentions that he congratulates friends on their birthdays and watches peoples pictures. According to Kal-El, the only difference between Pre-Facebook and Post-Facebook is that he is actually using Facebook as a mere birthday calendar. He claims that his social network of friends has not changed and that he is a member of certain groups that interests him. However, he is not an active member of any group, but he does look at their statuses in their news feed.

Regarding his social network he points out that his personality is extrovert, but when it comes to Facebook he has close to zero interest in interacting with his friends. In his case Facebook has turned an extrovert person into an introvert, out of sheer lack of interest. This is also something he mentions when it comes to debating on Facebook which he also finds pointless, claiming it is easier face to face, he just does not want to do it on Facebook.
Kal-El is available 24/7 on Facebook, lately more than he used to, using push-notices on his phone, however, this is something that does not bother him since he can choose to turn it off and it is his own choice to read the “crap” on Facebook. He says that he does not check any third-party links, regardless of what it is, since it is mostly nonsense. He does mention that he is using it everywhere, due to the application on his mobile devices, but he never reflects on where exactly he is while using it.

When it comes to memory, he specifically says that looking at old photographs of his home town triggers his memory since it makes him remember what it used to look like, however, he also mentions birthdays, where he has a very strong opinion that it has nothing to do with the question about memory, and the comparison with the fact that we used to remember phone numbers before we had cell phones has nothing do to with birthdays on Facebook. Birthdays is something that he never payed much attention to and was never a part of his memory, which means that Facebook is merely a tool. A tool and a bonus, and if he is logged on to Facebook the day someone in his social network has his/her birthday he does congratulate, however, this has nothing to do with his memory, since he would not ever remember it without the birthday application inside Facebook.

As a means of communication, Kal-El mostly uses email, Microsoft Live Messenger or phone calls, when asked if Facebook has any purpose for communication we get the answer that he might press the “like-button” and sometimes comment, but yet again he mentions that he does use the birthday application to wish people a happy birthday. He claims that using Facebook is an active choice, since he likes to see what people are up to and maybe get something gossipy out of his Facebook usage.

If he thinks that he is getting an overload of information, or information that he is not interested in he removes the friend and group that bothers him, he also says that;

“there are a lot of nonsense - however, since I am reading it when I am bored I can't decide what other people write which means I can live with the over-load of information that I am getting”.

However, when Kal-El decides to post something on Facebook to inform his friends, he does point out that he does not think of Facebook as an application, instead he considers it a way to relay something to his friends.

He does not feel that Facebook has any technical flaws as far as he is aware, however, when it comes to usage, he mentions that it is easy to add a person, but a lot harder to remove. As for his socialising on Facebook, he does not feel any obstacles, or the wish for something new and improved on Facebook since “he does not socialise on Facebook”. This leads to the question about value, to which Kal-El simply replies “No, I would not die or mourn if all Facebook servers burns down” and when it comes to status he says “If Facebook was exclusively for Modera-
terna, (Note from researchers - Swedish right wing party) it would make me feel special, but now it is open for everyone so I have to share it with the mob too”.

He does not use any function for anything else than it should be used, he does feel semi-secure when it comes to using Facebook as an application, but since it is on the internet one can never be completely safe. Regarding the question about his own privacy settings he does not feel secure, since he does not know if the old rule when Facebook had the rights to access everyone’s personal pictures still applies to this day.

Kal-El is neither proud nor ashamed of his Facebook-use, he does not actively tell others that he does have a Facebook-account, and he could very well cancel his account, but since it does not bother him he might as well keep it. He does express one concern, and that is in case of his death, that he does not appreciate the fact that his account might live on while he does not. Lastly, in his own words when asked for other opinions on Facebook:

“Congrats Zuckerberg - I would gladly had gone to the bank in your name”

4.4.2 Semi field-study

Kal-El has 111 friends on Facebook, from what we can see Kal-El only use his mobile devices to access Facebook. During this study, we can see that he is mostly using the feature “Places” to check-in. Places is a feature that is only available on mobile devices, since it uses the built in GPS-function to pinpoint your location and publish it on your Facebook wall synchronously. The only other status updates published is pictures taken from random situations which he takes part in. He rarely comments friends status updates. Approximately 80% of his published activities are through the feature “Places”, 15% are pictures and 5% are commenting posts. Kal-El is not a very active Facebook user; during the week of studying him, he did not publish anything from Monday to Friday, however, he made frequent posts during the weekend, updating several times a day.

As for privacy, Ka-El is not very private. He states his name, birthday and year, relationship status and with whom, also religious views. Kal-El shares his private phone number and email address. He has not published his political views, or his home town. He has not mentioned any interests at all. Kal-El’s privacy setting are pretty restricted, only his friends can see everything about him, friends of friends can see that he is male, his name, interest groups and parts of his published photos. A complete stranger can see the same as friends of friends except that they cannot see any pictures at all. Kal-El has a fair amount (approximately 100) of pictures published, he is in most of them, together with friends, family and on vacation.

He is a member of very few interest groups, but we have not noticed any interaction in these groups or any kind of engagement in other types of groups. We have not seen Kal-El use any features on Facebook in any other way than they are supposed to. An estimation is that Kal-El uses around 20% of Facebook’s features.
4.5 Respondent "Ami"

4.5.1 Interview

Ami is a woman in her early 30’s who lives in the small village Obbola, she does not know how many friends she has and she is a skilled computer user with a degree in programming. Her guess is that she has been a member on Facebook for approximately three years. Ami is using a laptop and an iPhone for Facebook.

Ami laughs and tells us that her main purpose on Facebook is to have fun, and when asked to think about it she says that she mainly uses it to keep in touch with people she does not see on a regular basis, or have phone conversations with. The only difference before and after Facebook is that, in the words of Ami.

“You did not hear from one another for a year or so”.

She estimates that she is using maybe a couple of percent of Facebook’s capability, since she only uses it to chat, communicate on walls, add pictures and movies and that is all. However, Ami uses it everywhere, in her own words;

“in the couch, at home, in bed, at school, in the bathroom...everywhere.”

Ami’s social network has grown a lot after starting to use Facebook, and she estimates that she is available 24/7 thanks to her iPhone and push-notices, and she is active every day and does not even dare to think of how much time she spends on Facebook. Her initial response if there has been a change regarding her interaction with her friends due to Facebook is “no”, however, after giving it some thought she considers this is a tricky question to answer. She thinks that the friends that were in her inner circle of friends has not changed, except that they are more easily accessed and that she has gained more contact with the ones who she had sporadical or no contact with. All her friends are friends that she has known in one way or another in reality though. Ami does not think that the constant availability is something negative, as she says;

“it's my choice, and I can turn it off if I want to.”

If Facebook were to be considered a means of communication, Ami is of the opinion that Facebook is a complement to 1) phone, 2) e-mail and 3) text messaging, but even if she thinks that it is a complement, she does not conduct an active choice if she were to use Facebook, she would not think of Facebook as an application. Also, when asked about using Facebook to inform her friends about something, how she considers Facebook, the answer is;

“I do not think of it as an application - just that I have something that I want to tell multiple friends at the same time”.

When it comes to checking the news feed, we have already established that she thinks it is fun, but when asked if Ami checks all the third-party information, such as links and music the an-
swer is a flat out NO. If she might check something it needs to have a valid source or if she has a personal interest in it, if not, she blocks it instantly. Also, when asked about the information in the news feed, she says that there are massive amounts of information but that she chooses to actively remove the things she does not want to see on her news feed such as games and videos.

This can be evolved into the question about being private on Facebook even if you are an extrovert person in reality, and Ami considers herself being an extrovert person but extremely cautious on Facebook in general, but internet in particular. She is not of the opinion that arguing on Facebook is easier than in reality, however, she does not withhold her opinions regardless of forums.

When it comes to groups, Ami is and has been very involved in different groups, such as groups for spreading knowledge about various injustices. She has not been involved in any groups just for fun though, as an example she gives us one group that was created due to the fact that her municipality had misbehaved, and the group gathered people to stop it and make their voices heard.

Ami answers the question about memory, and if Facebook can be of help when it comes to remembering things that she usually memorise, and her answer is "birthdays", and says that;

"Facebook is a gold mine when it comes to birthday information."

She does not think that Facebook has too many technical issues, however, lately messages is starting to disappear, sometimes one cannot log in and then some spam. But that is not only symptomatic for Facebook, but for internet in general and it does not bother her.

Ami thinks Facebook is easy to understand and use, and cannot think of any additions she would want in order to make it easier to socialise with her friends. The question about added value is answered in a way that belongs with socialisation, Ami thinks that there is a value in using Facebook to save time, and most important, you do not have to call each and everyone to ask how they feel and what they are up to, if they mention it on Facebook there is no need to worry. Facebook usage is also the best social media today, according to Ami, when asked about possible feelings she laughs and says;

"my feelings are so positive."

A question that confuses Ami is if there is a function on Facebook that she uses for another purpose than it is intended for. Her first response is that she does not think so, but then she beams and says:

"well, if I use it for something that I think serves a purpose, how can it be wrong?"
When it comes to safety and security, Ami does not feel secure on Facebook, simply because she does not entirely trust anything that is on the internet, and even if there is a setting for privacy in Facebook she claims that to be a false pretence, if Facebook were to decide to sell or give away all the information they have, who can stop them. Ami does not feel that Facebook gives a certain status and she is neither proud nor ashamed of using it, and she does tell people that she has a Facebook account.

Lastly, when asked if she would consider cancelling her Facebook account, she says;

"of course I could, it's not a life or death decision if I could never use Facebook again, but I have no plans of doing it".

She does not have any additional opinions on Facebook, she just says with a smile;

"but I guess I should, since it is a world phenomenon."

4.5.2 Semi field-study

Ami has 154 friends on Facebook, and from what the study shows she is using a mobile device approximately 50% of the time to access Facebook. Throughout the study we can see that she is using Facebook to publish status updates and comment posts, Ami updates her status approximately 70% of her time on Facebook, and commenting 30%, and she is an active user with one or more post per day. She also uses a fortune telling application once a day. Another feature Ami has tried is the new "question" feature where you can answer a poll and the answer shows on your profile.

Ami is not private at all, she states her name, birthday and year, home town, birth town, languages, what she studies and which college, previous colleges, religious views. She has entered information about her interests in movies, music and television. She has written about herself and her personality, her networks, and all of her email addresses.

Ami's privacy settings are low, anyone can see everything, except for religious views, political views, contact information and wall. The only difference between looking at the profile as a friend of friend and as a stranger, is that the friend of friend can see photos.

Ami has approximately 200 pictures published, and they vary a lot between pictures, an estimate is that Ami is in 50% of her pictures.

She is a member of many interest groups, however, we can not see any interaction with these groups or any other kinds of groups. When it comes to adjusting Facebook to personal preferences Ami has chosen to enter information about political views, however, she does not disclose her actual views. The information entered is in the eye of the beholder. An estimation is that Ami uses around 35% of Facebook's features.
4.6 Respondent "Blair"

4.6.1 Interview
Blair is a woman in her late 50's who lives in the small town Eskilstuna, she claims to have 115 friends on Facebook and her guess is that she has been a member on Facebook for approximately two years. She considers her computer skills being fairly good, and she uses Facebook on both computers and her iPhone.

Blair describes that her main Facebook usage is to keep track of her children and the rest of her time online she spends writing nonsense, sometimes she does write provocative things just to create a debate online for the fun of it. Her initial reply when asked again was that she is using it to keep track of her closest family and friends, and acquaintances and their birthdays, Blair does use the chat from time to time as well. Of all the things available on Facebook, she estimates that she is using 20%.

The difference for Blair when comparing Pre-Facebook to Post-Facebook is not that big of a deal since she tells us that she used to have a blog where she could post and get comments, the slight difference is that she did not get the exact same contact as she is getting today since Facebook has made it easier for her to be equal to her "blog-readers". When asked about the social network she says that it might have increased a little but not too much, since she has all of her friends that she had from the beginning, and her blog-readers followed her to Facebook. These blog-readers are also part of her change in socialisation since it used to be more of a one way communication on the blog, but on Facebook she can chat with them and - as already mentioned - be more equal. Blair is not a member of any group on Facebook.

The social network and Facebook as a means of communication, Blair prefers to send messages through Facebook, and when asked if it is an active choice her reply is that;

"it is usually Facebook since I always have that site up and running"

She finds the news feed amusing. Also, she says that even if she mostly writes nonsense on Facebook, she does not think of it as an application, she does think of it as a mean of communication and a way to reach out to many people at the same time. However, if the information is more private, her choice of communication is email. The social network, and possible obstacles or wishes for additions or changes in the applications to make it simpler, she is content with the way it is.

Blair estimates that she is actively online 15 times a day and maybe a total of an hour, an hour and a half per day, but also says that Facebook is always open, and she is available 24/7 through her iPhone. Her availability can be somewhat disturbing, but when she feels bothered she simply shuts down the site or the chat. When asked if she feels that Facebook is easy to use, she says that after two years she has no problems with it, and adds that it is pretty simple and logic.
When it comes to checking third-party links such as movies and music Blair says that she checks most of it, except if it looks really uninteresting when she is browsing through the status. Using a function for something that it is not intended for is nothing that Blair is aware that she is doing.

Blair tells us that she is very private on Facebook compared to in reality, due to various reasons, and she prefers to argue in reality rather than on Facebook. When asked about the feeling of security in combination with the use of Facebook the answer is no, and she gives an example of a group that a relative joined which was for a good cause, but later when it had enough members it changed names and turned into a pedophile group. Blair says that she is very cautious, and especially when it comes to pictures, that she thinks that she does not have any pictures with faces on Facebook anymore.

As for the memory question, Blair is a bit confused at first, but then exclaims “birthdays”, that Facebook helps her to remember everyone’s birthday. When it comes to the question about value, Blair mentions that she already felt a certain value from her blog, and that has followed her to Facebook, but when asked what her feelings can be she thinks for a while and then mentions her daughters and close friends, if they mention on Facebook that they are sad it affects her, and also if it is vice versa and something good has happened. She does, however, point out, while laughing;

“there are a lot of people that I do not give a crap about”

Blair uses Facebook at work through her iPhone at times, and at home, but she never reflects on where she is while using it, and she does not think that there is a value in Facebook-usage, she mentions;

“No, everyone’s on Facebook, and you don’t really exist if you don’t have a Facebook account”.

She is neither ashamed, nor proud of being a part of Facebook, and she does tell people that she has an account.

When asked if she could cancel her account she says yes, if she feels that she has nothing more to say, like she did on her blog. She would probably not cancel the account at first though, but just stop using it, and if the feeling would persist for a longer period of time Blair thinks it would be pointless to keep the account just for the sake of it.

Lastly, when asked for other opinions on Facebook, Blair says that something that annoys her - which has nothing to do with the application itself - but with her social network, is that so many people never writes anything, they just browse others profiles for information, never giving anything back. Not that everyone has to update 15 times a day, some days Blair does
update 15 times, and some days she does not update at all, she does not feel the need to. However, the people in her social network who never updates is really annoying according to Blair.

4.6.2 Semi field-study

Blair has 126 friends on Facebook, and from what we can see, Blair uses a mobile device for approximately 5% of her entries on Facebook. Throughout the study we can see that she mostly publishes status updates (text), shares links and comments posts. Blair does comment other peoples updates, however, she updates her own status more often than she comments, an estimate during this study period is 70% status updates/links and 30% commenting. Blair is a very active Facebook user, during the study week it was not unusual with 15-20 status updates per day.

Blair is semi-private, the only information she shares is her name, relationship status (but not with whom), birthday. Also interests when it comes to music, movies and television. She has written a little about her personality on her profile.

Blair’s privacy settings is very restrictive, it is the same for both friends of friends and if you are a complete stranger, the only information you can see about Blair is her name and profile picture. Blair has approximately 400 pictures published, and they vary a lot between pictures, the pictures are mostly of Blairs surroundings and close family, however, Blair or parts of Blair (clothes etc) are in about 10% of the pictures.

She is a member of many interest groups, which she occasionally shares links to, but no other interaction in these groups or any other kind of groups. When it comes to adjusting Facebook to personal preferences, Blair has chosen to enter information about her workplace and education by simply entering information that implies that she does have a work and college degree. She does not, however, disclose what her work is or which education she has. An estimation is that Blair uses around 30% of Facebook’s features.
5. ANALYSIS

5.1 Social acting space

Regarding changes in our ways of communicating (Groth, 1999), Barney, Kal-El, Blair, Ami and Herbie utilise Facebook to stay updated and keep track of their friends activities. Blair stands out a little since she focuses on her daughters a lot more than the rest of her social network. Facebook makes it versatile for all of them since they never interacted with their friends like this before. Verbal communication is slow and serial but as we have great capacity for visual processing (Groth, 1999), which Facebook offers, all five are now able to find out what all their friends are up to at a much faster rate, instead of having to talk, write or meet all of them one by one. Blair does not think that Facebook has increased her social network, possibly a little. In her case she used to have a rather well known blog, and the friends she gained through her blog have followed her to Facebook. She does mention that she was used to writing on her blog, but she could not interact the same way on the blog as on Facebook, she considers the blog an asynchronous way of communicating, while Facebook has changed it into a synchronous way since she often chats with her friends now.

Before Facebook, Barney and Herbie did not interact with as many people as they do now through Facebook. Approximately they only communicated with 20-25% of the social network they have today regularly. Before Facebook they only communicated with the remaining 75-80% if they occasionally met them in person e.g. out on town, but now they have a more in depth interaction with many of them. Ami does not measure it in percentage but basically says the same thing. Herbie and Ami also mention the fact that they now have a much bigger social network, thus being able to keep in touch with more people than before. This does not only show versatility, but also the extension of Barney’s, and in an even higher degree Herbie’s and Ami’s, communication range, as they now communicate with friends more or less regardless of both time, place and in Herbie’s and Ami’s case, size (Groth, 1999). Kal-El on the other hand, claims that he only check his news feed and use it for congratulations on friends birthdays. However, this contradicts with our findings from the semi-field study where we see that Kal-El definitely shows versatility and a big extension of his communication range (Groth, 1999) since he mostly uses it from his mobile devices, and the function “Places” is frequently used - along with posting pictures where he is with family and friends. Happy also utilises Facebook to stay updated and keep track of her friends activities but that is it, she rarely interact with them and from her answers it seems to be no big changes in how she communicates with her friends.

A contribution to extend the memory capacity that Groth (1999) mentions as a vital human constraint, is also done by Facebook. Kal-El mentions one thing only when we are talking memory, and that is when he looks at old pictures of his hometown, which helps him remember how it looked when he was younger. Barney and Ami mentions the fact that they now get automatic reminders of friend’s birthdays from Facebook, but Barney also takes it one step
further, concluding that he previously did not even know when most of his friends had their birthdays to begin with. Facebook has in other words, automated the task of finding out and collecting this information, thus simplifying it. After a while both Blair and Kal-El mentions the birthday feature, but Kal-El points out that without the automation Facebook gives he would not have bothered with the birthdays at all. Happy simply answers that Facebook helps her remember birthdays but nothing else.

Herbie uses Facebook a great deal to extend his memory (Groth, 1999), he says that it is a tool for him to remember all that he is doing and planning every weekend. This also leads him to add that he would like to see an actual function, such as a working calendar, implemented on Facebook instead of just using the event feature for this purpose.

Together these extensions of our human basic abilities that Groth (1999) considers imperative for our acting space, adds up to a more effective way of organising our social activities. One very specific example of this is the group organising features on Facebook. Barney use these features very rarely but it does happen. The purpose of Facebook for him is to use the whole of Facebook as a group, by reading, posting and commenting within his social network. This social network is Barney’s organisation and according to him, the whole point of using Facebook. As for Kal-El’s social networking, he claims yet again that he does not communicate with his friends using Facebook, however, his semi-field study gives us another picture since we can see that he is very active using “Places” and posting pictures. Kal-El also uses interest groups to a greater extent than Barney, and is a part of several that can be associated with his hobbies. He says that he does not interact within the groups, but he wants the information they post on his news feed. Happy admits to be a member of many groups but neither cares about them nor interact with them. She has only become a member because friends have asked her to or by simply being put in a group without any active involvement from her part.

For Herbie the group features are of great importance. He has created a group for an association, interest groups and he is particularly active in creating group events. Ami has also both started and participates in different groups, mostly groups that want to “make a difference” in one way or another, such as Amnesty International. Unlike Barney and Kal-El who are idle users of groups, Herbie and Ami are active users and interact a lot through them. Besides this Herbie uses his entire social network on Facebook as an organisation, just like Barney. When asked about groups Blair says with emphasise that she is NOT part of any kind of groups, but she contradicts herself when we look at the semi-field study, since she is a member of many interest groups.
5.2 Human behaviour and needs

Barney, Ami and Herbie enjoy interacting with their friends and family on Facebook and they do it a lot, especially Herbie. This is connected to our affective needs; by using the semi-field study we can see that Barney really appreciates when he gets comments and a debate is started on Facebook, in other words, when he gets affection and attention (Maslow, 1943; Strömbäck, 2010) from his friends and family. Both Maslow (1943) and Strömbäck (2010) mention more or less the same human behaviour and needs, which are applicable on everyone, everywhere, and in every situation. However, we are going to use them to help us tie up the bag of analysis when it comes to the behaviour and needs that Facebook can help fulfil.

The mentioned interaction is also in many ways connected to the need of social integrative (Strömbäck, 2010), since it has strengthened Herbie’s bonds and made it more accessible to interact with family and friends for him. This is also something Herbie specifically mentions, he thinks Facebook has helped him to strengthen the ties to a lot of people in his social network and he is very grateful for it. Blair states that she can post something provocative just to get a reaction i.e. an outlet for her emotions. Kal-El and Happy does not seem to have the same affective needs as the others, they repeatedly says that they do not interact with their friends, however, Kal-El later admits to a random comment every now and then and sometimes he uses the like-button. From the semi-field study we can see that the low degree of interaction is true for Kal-El and Happy, during the study period we can barely see any interacting by any of them. From Kal-El it is mostly a one way communication and from Happy not even that much.

When it comes to tension release needs (Strömbäck, 2010), both Barney and Kal-El says that it can be relaxing to check in and read on Facebook, Barney even compares it to reading the newspaper. Barney is usually active on Facebook when he have some time to spare from his work and it can be a way of fleeing from daily chores and boredom. Also Kal-El mention that it can be an escape from boredom. This can also be an indication to the need for random information about their friends activities i.e. their cognitive needs (Strömbäck, 2010). Both Blair and Ami uses Facebook when they have nothing better to do, and they find it amusing. They spend a lot of time on Facebook, when they are out they have the phone. When Blair is relaxing inside she almost always is accompanied by her computer and Facebook. For example, when she watches TV, she lies down on the couch with the computer on her stomach with Facebook up and running. In Ami’s case she use the phone basically the same way Blair use the computer indoors.

The social integrative and cognitive needs are in a bigger perspective needs of belonging (Maslow, 1943). Herbie shows an example of this need, mentioning the desire to pop in on Facebook to see how his friends react to the things he write. Fulfilling this need is also done by gossiping on Facebook, as Barney says it; finding out if I have bought a new pair of shoes is hardly vital or even affects people, but it might be fun to know. Something Herbie confirms by stating that he usually writes something on Facebook to be funny or to relate something nice he has been a part of. Kal-El says up front that gossip is one main reason for him to check in on
Facebook while Happy speaks of it as being curious about what other people is up to. In Ami's case she just declares that she finds it enjoyable to read about her friends and post what she is up to. Kal-El, Herbie, Barney, Ami and to some extent Happy, full-fill the same needs of belonging even if Barney, Ami and Herbie to a greater magnitude enjoys the back and forth interaction with their friends. Blair is the only one who does not admit to any kind of change in the social and cognitive needs, due to her blog in the past which already full-filled these needs for her; with Facebook she only maintains them. When it comes to the basic human need of self-actualisation (Maslow, 1943), Herbie is the only one that points out that Facebook is a forum for assertion.

5.3 Calm technology

Since we have already stated that both Barney and Kal-El uses Facebook to take a break from daily chores. Such as work, or when they are bored, this is also per definition the calm technology that Weiser & Brown (1996) mention in regards to ubiquitous computing, when it comes to attention. Unlike many other medias, Barney and Kal-El do not feel that Facebook is overwhelming, on the contrary, Barney specifically mentions that even if it mostly is a forum where you convey "unnecessary" information, it is information you want to know and find amusing to take part of. The few times Kal-El can feel that the information starts to get too much, he solves the problem by removing, for example, the annoying group or person from his network. Herbie and Ami do something similar, actively exploiting the possibility to conceal unwanted information in the news feed on Facebook. Happy on the other hand, thinks the amount of information starts to get a bit overwhelming as different games publish news on her wall constantly. However, earlier she concealed the news flow from a couple of the games and when she had done that she was content with the amount of information.

The unnecessary information Barney mentions is given on Facebook can be interpreted as a new dimension of information. A sign of calm technology is that you are given more peripheral information (Weiser & Brown, 1996) than you might have received in other medias and as Barney says, if he posts on his status that he has bought new shoes, he reaches out to all of his friends and it tells us something about his taste and personality. Barney also mentions the available history of his interaction on Facebook i.e. they way he usually express himself, showing his personality, as an extra source of information that does not exist when you meet an acquaintance on the street. Meeting a person that does not have this extra source of information makes us limited in the way we interact, according to Barney. He would not start a debate with an acquaintance on the street, however, on Facebook the background information allows him to interact more freely and is one way Facebook gives us additional, peripheral, information.

A sign of that Facebook easily moves between the center and periphery of our attention (Weiser & Brown, 1996) is the fact that Barney, Ami, Blair and Kal-El mentions how easily they can pop in and check out what has happened there without always making a conscious choice to do so. Herbie more or less never actively thinks about when he browses around Facebook, it is the most natural thing for him to do. In other words, they are all attuned to the fact that
Facebook exists in the background and easily moves it to the center of attention whenever suitable. Blair is the one that most clearly shows the switch between having things in her periphery and center of attention of all our respondents. She tells us that she actively has Facebook open on her computer while at the same time watching TV. She updates frequently what is going on in the TV-shows, which indicates that she is switching her attention back and forth between Facebook and the TV at a really fast pace.

The email notifications and push notices on mobile devices is also a way that Facebook brings our attention from the periphery to the center. As Barney does not think he receives notifications every time he should it is also a motivation for him to keep Facebook in his peripheral attention and check in from time to time i.e. bring it to the center of his attention by choice. Kal-El on the other hand first and foremost utilises Facebook on his mobile devices which he always is tuned in on, and switches from peripheral attention to center every time he gets a push notice or an email. Much the same as Herbie and Ami do, though they use it just as much from their computers as from their mobile phones. Happy neither uses Facebook on her mobile phone or really cares about the email notifications she gets. She gets one every time something happens in the games she plays and that can mean twenty notifications in twenty minutes.

### 5.4 Use and presence

When it comes to use and presence (Hallnäs & Redström, 2002) Barney seems to use Facebook rather than having it present in his life, this is his answer when given a somewhat leading question about the subject. However, he does contradict himself, since his replies to other questions shows characteristics of it being present in his life. For example, he says without hesitating that he is online 24/7 on both his computers and mobile device, this is his reply to an actual question that is not leading him in any direction. He does not think about Facebook except for when he actively uses it for personal communication with someone from his social network i.e. sends a private message. Herbie is also online more or less 24/7 and he explicitly says that Facebook is a natural part of his life that he neither needs to attend to or reflect upon. This is also the case for Kal-El, Blair and Ami, they never think of it as “using Facebook” when they are going to make a post, they think of it as communicating or rather, relaying information to their friends.

In contrast, Happy shows a low degree of availability through Facebook. When contacted, according to her, it can take up to two days before she sees it and replies. She can also be away from Facebook for several weeks without giving it a second thought. However, for period of times she is very active, checking in on Facebook everyday, several times a day. We would interpret this as Happy uses Facebook as a tool - in turns putting it away and then fetching it back when she feels like it. Choosing Facebook to interact with her friends is a most conscious choice and one she makes very rarely.
Another contradiction in replies from Barney is when he says that he could terminate his account without problems, however, when asked if he would be willing to pay for it, he does not hesitate when he replies that he would - within a reasonable amount of money. The termination shows "use" whilst the money issue rather points to "presence". When Kal-El is asked if he could terminate his account his answer is that he would not care if all Facebook servers would burn and vanish. Both Blair and Ami would consider to terminate their accounts but neither of them has any intention to do so. Herbie, on the other hand, replies that he absolutely do not want to terminate his Facebook account and motivates it with how much he enjoys the social intercourse there. Thus, Herbie shows a great acceptance of Facebook and how meaningful it has become to him. Facebook is, in much, his social relation. Again, Happy’s opinion is quite the opposite. She has actually considered terminating her account on several occasions as she uses it so little and hardly even know what purpose it has in her life.

5.5 User evaluation areas for ubiquitous applications

5.5.1 Adoption

Barney, Herbie, Blair, Ami and Kal-El has a high degree of availability on Facebook, which shows a good level of adoption (Theofanos & Scholtz, 2005). Other metrics in this area also points to this in Barney’s case. He is willing to pay to be able to use Facebook if that would become an issue. A value Facebook has given Barney, Ami and Herbie, but especially Ami and Herbie, is a more in-depth relation with many acquaintances. Barney also mentions the ease to learn other peoples’ names as Facebook gives a connection between name and picture. In two instances Barney however, shows a lower level of adoption. He has some difficulties adapting to new features, but this is according to Barney’s answers, lack of interest. He does not feel the need to use any other features than he already does. One can also say that Barney has a hard time adjusting to changes in features, when he gets used to a certain behaviour from Facebook, it really annoys him when they do a modification. Kal-El on the other hand says that Facebook does not contribute with anything valuable in his life and it seems like he does not care at all about Facebook. This is contradicted by his profile, since he is using a lot more features than he seems to be aware of, and when he interacts he is very active. From what Kal-El says, he has a low level of adoption, but from the study it looks like he has a semi-high level of adoption. Blair again mentions that her previous blog already gave her the value of a social network but as she now has terminated her blog and “moved” to Facebook we would state that Facebook in fact gives her this value now. When it comes to Happy she shows nothing to a very low degree of adoption, she plays games and that is basically it. She does not feel that it gives her any value and could just the same be without it.

Again, Herbie shows that Facebook gives him great value, this particular metric gives him positive change in productivity. He says that this is a really big thing when he actually ponders it, since he considers Facebook time-saving, something also Ami mentions. Instead of calling each and everyone in a specific group when he has planned something, he can create an event, or simply write something about it on the group page. Ami gives the example that she can see
on her friends statuses if they are happy, sad, sick etc. She does not have to call all her friends to make sure they are all right. Thus, both Herbie and Ami mention the fact that they can reach out to their entire social networks at the same time as something very valuable Facebook contribute with.

5.5.2 Trust

The area of trust (Theofanos & Scholtz, 2005) is very personal from user to user. Barney is very aware of what kind of information he enters on Facebook, he uses it with the assumption that everything is public. Barney seems to obtain great value from Facebook regardless of these privacy assumptions or the amount of data he shares about himself. When it comes to the metric control in this area, Barney does not completely mistrust Facebook, however, he is of the opinion that it is a fairly unsafe way to communicate. Barney feels that he can control who has access to his data but does not use that feature. In conclusion, Barney is well aware of the privacy and he uses Facebook with caution, even so Facebook is of value to him. However, if it would have made him feel more secure, it is possible that it would give him even greater value.

When it comes to trust and sharing information, Kal-El just says that he is a lot more extrovert outside of Facebook, since he is not interested in having a dialogue on Facebook. Regarding the metric control, he is not completely sure, but his bottom line and opinion is to never trust anything on the internet completely, Facebook included.

Herbie says that he reveals pretty much on his status updates, however, mostly in positive terms, i.e. when he has done or experienced something good, or when he just wants to be funny and play around. In other words, Herbie shows quite a big deal of trust towards Facebook. He is aware of the possibility of different privacy settings, which he can use to maintain control of who can access what. This gives him a feeling of security, however, he points out that he never would send delicate information, such as bank account numbers, through Facebook.

In Happy’s eyes Facebook is not much more than a place for games, if she gets to say it herself. She claims to share very little information about herself and her life on Facebook. The semi-field study however, shows that she actually has published quite a lot of personal information and that everything except her wall is public for everyone, regardless if they are friends with her or not. We can not say that this in any way shows that she trusts Facebook, especially as she does not use it for more than gaming.

Blair is very private on Facebook and does not reveal a lot about her personal life, she also mentions that she is very careful when it comes to pictures, even if the semi-field study partly shows something else. Blair says that she does not put much trust in Facebook as virus can spread through it and it occurs that dishonest people create and recruit members to what ends up to be fraudulent groups. She does feel she can control who can access what, but still appears a bit uncertain when it comes to trust.
Ami is a very extrovert person, but restricts herself on Facebook, she does however mention internet in the same meaning, that she is cautious when it comes to everything that is on the internet, which obviously includes Facebook. To a certain extent Ami feels she can control access to her information but she also mentions that she thinks that Facebook has the overall control and could release everything she has shared about herself if they wanted to.

5.5.3 Conceptual model

When it comes to the awareness (Theofanos & Scholtz, 2005) of which features that exist on Facebook, Barney believes he utilises about 25% of them. Studying his Facebook profile however gives us the apprehension that it more likely is closer to 5%. Barney is seemingly unaware of many of the existing features on Facebook, thus guessing that he utilises more than he actually does. Kal-El does not think that he uses more than a fraction of what is possible on Facebook, but from looking at his profile we estimate that he actually is using around 20%. He is aware of many of the functions that Facebook provides, but is under the impression that he does not use any of them.

Studying Herbie's profile shows us that he utilises many of the available features on Facebook, approximately 45%. However, he only believes that he is using around 5%, only thinking about all the games and applications he is not interested in. Even so, Herbie is the one of our respondents that is using most features on Facebook, which makes him aware of much more than he thinks. Ami is the only respondent that does not give an estimation in percentage but she says she thinks she only uses a fraction of what can be done on Facebook. Our estimation on the contrary shows that she is not far behind Herbie and actually is using approximately 35%.

Happy state that she is using about 30-35% of all Facebook features at a maximum. She plays games and keeps track of her friends activities, not thinking that there is much more possible to do. However, the semi-field study shows that she more likely use around 15% of what is available i.e. she is not particularly aware of which features that exist on Facebook, probably due to lack of interest. Blair assumes that she is using about 20% of Facebook's features which is not too far from our estimation of 30%. Thus, she seems to be a fairly aware user.

5.5.4 Interaction

Both Barney and Herbie feel that they are on a basic level of usage and that Facebook on this level is a simple application to comprehend and utilise. Barney does not use any advanced functions as he states, which also corresponds with the semi-field study findings. However, in Herbie's semi-field study his assumption contradicts with his actual use, since he is not such a basic user as he believes. Herbie does mention that if something is too tricky or to advanced he simply does not use it. Happy also thinks Facebook is easy to use but at the same time mentions that she ignores many features as she is not interested in them. Neither Blair nor Ami think they have any problem utilising Facebook.
Kal-El does not think that Facebook is easy to use, and specifically mentions that it is easy to add a friend but a lot harder to remove them. We cannot say if this corresponds with what we found on the study, except that he does utilise many more functions than he mentions which shows that Facebook, in his case, seemingly is easier to use than he is aware of. As per Theofanos & Scholtz’ (2005) metrics in the area of interaction, the respondents accordingly show signs of both effectiveness and user satisfaction.

5.5.5 Invisibility
Barney says that he is content with the match between the system-action and the action he would have requested (Theofanos & Scholtz, 2005), i.e. he does not feel the need to use any function on Facebook in any other way than what it is developed for. However, we can see from the semi-field study, that Barney has used information fields somewhat in-accurate, for example when it comes to political and religious views, he has actively chosen to fill out the information, but used it for his own humorous purposes. This means that he actually has customised (Theofanos & Scholtz, 2005) the feature to an extent. Blair has done the same by filling out the form about work and college, without stating where and when, just that she actually does work and that she has studied. Another thing that singles out Blair is that she actually is aware of the fact she does customise one thing. The status update has a limit of 420 characters, Blair has learnt to bypass this by adding a picture, to which there is no limit in characters. Ami is of the opinion that if she does use a feature for something that Facebook claims to be a norm, she claims that it is up to her do decide how to use what. What we can see from her semi-field study is that she has chosen to write about her political views without actually disclose them, such as Barney.

Herbie is unaware of things he might use for another purpose than it is originally intended for, however, when we talked to him about memory he mentioned that he uses Facebook as a kind of calendar, keeping track of events and what he has planned for the weekend. He is aware of the fact that he would like to have a real calendar function implemented to Facebook, but he does not think about that he in a way already uses the event function as one, which is not it’s purpose. Other than that we have not seen any signs of Herbie adapting (Theofanos & Scholtz, 2005) existing functions to his own liking which also is his answer to this question. Not using many words, Kal-El simply says no when asked if he use any Facebook function for something it is not intended for, and his profile shows that this is true from what we can see. The same goes for Happy.

All our respondents can also be said to adapt (Theofanos & Scholtz, 2005) Facebook to their own liking by simply choosing what information to fill out and what not to. Just because the functions exist does not mean they have to use them. Each and everyone’s profile look different as they all have chosen to share different types and amounts of information about themselves.
5.5.6 Impact and side effects

The willingness to modify their behaviour, that Theofanos & Scholtz (2005) mention as one of their metrics, to access and use Facebook as an application, is an area where Facebook has had a great impact on Barney, Herbie, Blair, Ami and Kal-El. They are, as already mentioned, online 24/7, Barney checks in and usually interact with someone more or less every day from what we can see on the semi-field study. Kal-El is also very regular with checking the news feed. Herbie, Blair and Ami frequently checks Facebook during the days, often replying within an hour to different posts and questions. From the amount of interaction Barney does, we can conclude that he spends a lot of time on Facebook. Both him and Herbie also points out that they did not use this much time to interact with friends and acquaintances before Facebook even if Herbie mentions that he was using the phone to interact with friends a lot more before. Other side effects for Barney is that he uses Facebook as a tool to remember birthdays without having to make notes in a calendar, which is a change in productivity and performance (Theofanos & Scholtz, 2005), something Kal-El also use. Herbie achieves the same changes but possibly to a higher degree since he frequently organises and remembers events. Happy neither seem to modify her behaviour to any great extent nor being interested to do so. She played a lot of online games as well as board games before Facebook which means that Facebook has not had that big of an impact on Happy’s life, it is just another place for games.

When it comes to comfort ratings (Theofanos & Scholtz, 2005) of Facebook being mobile, all respondents except Happy has no second thoughts about using Facebook on their mobile devices, it is natural for them. Happy has tried it but never gotten it to work properly on her phone.

5.5.7 Appeal

As for appeal (Theofanos & Scholtz, 2005), Barney finds Facebook a fun application and enjoys using it. He has a very positive attitude towards Facebook in general, and thinks it is a great artefact. When it comes to status (Theofanos & Scholtz, 2005) there is neither pride nor shame in using Facebook in Barney’s opinion. In the occasion that he informs others that he is a member on Facebook he usually only gets positive responses.

Nothing about Facebook is appealing to Kal-El, when he is asked. However, we can see from the semi-field study that he seems to enjoy it since he posts a lot of pictures and location-updates. As for status his only comment is that it does not make him feel special since everyone is using it. He does tell people that he is on Facebook, which does not seem like a big deal to him, he is not ashamed of it, rather the opposite.

Herbie is also very positive about Facebook, he actually does not want to be without it and enjoys it thoroughly. In his opinion it can give some status to be a member on Facebook and he declares that he is proud rather than ashamed of using it.

Happy is almost a little negative about Facebook, not knowing why to use it or for what. The only value she can see is that some of the online games there are a bit more fun than the ones
she played earlier, and that it gathers a lot of good games in one place. As for interacting with friends she rather does it through her phone or face to face. Happy do not think there is any status in using Facebook and claims to neither be ashamed nor proud of using it. However, usually she does not tell people that she is a member on Facebook.

Blair is positive to Facebook in general, she even states that if you are not a member on Facebook you do not exist. However, since she focuses on her children it can affect her emotionally a lot if one or both of her daughters write that they are sad or sick, which causes a negative feeling. This goes for most of her friends too, but mostly her daughters. It does work the other way around as well, if something really good happens, she is drawn into that emotion and gets very happy. When it comes to status she is neither ashamed nor proud.

Ami says that she is extremely positive when it comes to Facebook, and specifies it by saying that it is the best social network there is. She is neither ashamed nor proud of using it though. She does tell people that she is a member on Facebook to which she has gotten various reactions, some are adamant that they do not want to be on Facebook, and some agrees with her about how good it is.

5.5.8 Application robustness
The metrics volatility and robustness (Theofanos & Scholtz, 2005) on Facebook is according to Barney very unstable. Lately there has been some flaws with the system, however, this is not something that Barney considers a life or death matter. It does irritate and frustrate him though. Unlike Barney, Kal-El, Blair and Happy cannot think of anything that is unstable when it comes to volatility and robustness, their experience of Facebook is that it is stable and there is nothing about the system that annoys or irritates them. Happy even states that she has better things to do than to get annoyed with Facebook. Herbie and Ami are somewhere between these two opinions. Herbie can experience trouble with the chat function from time to time but not much else. His reaction to it is to just shrug it off and wait for a while until it works again. Ami does not like spam messages, and that comments, status updates and private messages sometimes disappear. However, she claims it does not bother her at all.
5.6 Summary

To summarize our analysis we firstly can find a number of clear patterns regarding changes in our human acting space through the utilisation of Facebook. Today we can communicate with the people in our social network more or less regardless of time, place and size. We can, at the same time, have a deeper connection to a larger number of people. Facebook helps us to remember more details about our friends and automate the gathering of such information. Furthermore, it makes the task of organising our social intercourse more efficient, on several levels and dimensions. (Groth, 1999)

Secondly, as the human being is a social animal we can fulfill many of our basic needs through the social intercourse on Facebook (Maslow, 1943). We can get a sense of belonging, self-actualisation, affection and attention while utilising it. We would claim that the changes in our human acting space build upon these opportunities, to overcome limitations in our nature and to fulfill several of our basic human needs - to new extents. Facebook would probably not have become the phenomenon it is today without these contributions. If anything, that it has become such a world phenomenon is more likely an indication that it has affected us on a basic level of being humans. It is also necessary for an artefact to bring changes as these in order to reach a ubiquitous status in our lives (Hallnäs & Redström, 2002; Theofanos & Scholtz, 2005; Weiser, 1991, 1994; Weiser & Brown, 1996).

The purpose of this study is to investigate and reflect around the impact Facebook has on our human acting space in order to see if Facebook has, or is becoming, a ubiquitous element in our lives. Except the above mentioned basic changes we can find several clear patterns that are specific to ubiquitous use. In many instances, Facebook live up to the characteristics of a calm technology. We can conclude that Facebook can reside both in the periphery and in the center of our attention, it is easy for us to move it between these two conditions and Facebook gives us additional periphery information about our social relations.

Furthermore, Facebook, in many ways, shows signs of being present in our lives, rather than only being used (Hallnäs & Redström, 2002). However, we would claim that this is not a black and white matter - use or presence, but an area with many nuances of grey, as it is quite personal from respondent to respondent. We could almost pinpoint our respondents on a graph, starting at the bottom with Happy that is the one that most evidently use Facebook, then in succession are followed by Barney, Blair, Ami and Kal-EL, where each of them take a step up on the scale towards presence. At the top we have Herbie that very clearly has invited Facebook as a natural part of his life. What the cause is to these clear differences we can only speculate about. It is not unlikely that it partly is due to differences in personality, as Happy do not seem to have the same need or desire for social intercourse as, in contrast, Herbie. The fact that Happy continue to stay a member on Facebook, even though she do not really know what to use it for, could on the other hand, be a confirmation to our conclusions about overcoming limitations in our nature and meeting our basic human needs. Something makes Facebook appealing to Happy even if she is not aware of it.
Regarding the user evaluation areas for ubiquitous applications (Theofanos & Scholtz, 2005) we can see that the degree of adoption in much follow the above pattern of use and presence in our group of respondents. Thus, Facebook fulfils the demand of adoption for a ubiquitous application to different degrees for different respondents. However, in the area of trust it is harder to draw any solid conclusions. We got quite irregular interview answers and the semi-field study showed that many of the respondents seemingly trust Facebook more than they declare. If anything, our respondents slightly keep to the same pattern as in the area of adoption. Regardless, we do not feel we can find a regular enough pattern in this area as to make it reliable to use. On the other hand, when looking at the user evaluation area of conceptual model we can discern a pattern showing that most of our respondents seem to be more aware of existing features than they think. Thus, Facebook could be claimed to fulfil this metric to a degree. Also, in the area of interaction most of our respondents agree that Facebook is very easy to use and we can accordingly conclude that it to an extent meet the demands in this area as well.

Furthermore, we can see very clear signs of that our respondents can adapt Facebook to their own likings. In this area, invisibility, we can conclude without hesitation that Facebook corresponds to the demands of a ubiquitous application at a good level. The same conclusion can be drawn regarding impact and side effects. Our respondents, all but one, have shown a great willingness to modify their own behaviour to stay tuned in on what is happening on Facebook and they have no second thoughts about using it through mobile devices. Again, all but one, also find Facebook almost extremely appealing and receives great pleasure in using it. Lastly, the majority of respondents think Facebook is a relatively stable application and even if they sometimes come across bugs they are not disturbed by them in particular. Thus, Facebook can be said to reach the requirements of a ubicomp application quite good in both of these areas, appeal and application robustness. Overall Facebook accordingly live up to the demands of a ubiquitous application in several cases according to Theofanos & Scholtz’ (2005) framework.
6. CONCLUSION

To finally answer our research question about which role ubiquitous computing play in people’s behaviour while using Facebook today, we can find evident signs of that ubicomp has a bigger part in our respondents’ behaviour than one would probably expect for an application that is not explicitly designed with ubiquitous use in mind. Facebook has thoroughly changed our respondents acting space regarding their social behaviour, it shows several attributes of a calm technology and of having the possibility to become a presence in their lives. We were not able to investigate all metrics or user evaluation areas, and failed to find adequate patterns in some. Even so, by evaluating Facebook from the perspective of how well it fulfils the demands of a ubiquitous application we see that it actually fulfils several metrics in the different areas. In conclusion, Facebook seemingly starts to have a ubiquitous role in the lives of our respondents and as one distinct feature of ubiquitous computing is that our digital artefacts gradually disappear from our consciousness, we can conclude that they now can be found to be within this process.

How far our respondents have come in the process is harder to pinpoint but we can make a qualified guess. Imagine a gradient between black and white, where black is our lives without ubicomp and white is when it is fully developed and implemented. On this scale of grey, we would assess that our respondents still are somewhere in the grey zone where black dominates, but not particularly far away from the middle, where there is an even blend between black and white. We believe the development will continue in this direction and probably explode whenever the hardware technology exists (i.e. is flexible and cheap enough to utilise in the necessary way) to make it possible to go all the way to a ubiquitous computing environment. We find our basic human desires to overcome our limitations and fulfil our needs as such potent motivators as another development seem extremely unlikely when we now have started down this path. We would like to end this chapter with a quotation from Mark Weiser, the “father” of ubiquitous computing, that we through our findings have found to be most true, applying it to individuals (instead of communities);

"Ubiquitous computers ... reside in the human world and pose no barrier to personal interaction. If anything, the transparent connections that they offer between different locations and times may tend to bring communities closer together." (Weiser, 1991, p. 104)
7. DISCUSSION

7.1 Lessons learned

While performing this study we have learnt several important lessons, both about doing research in general as about ubiquitous computing in specific. We could actually conclude that the, in the introduction talked about, principles of our intellectual virtue, in our case have been very true. You can learn the principles of action, but applying them in the real world, in situations one could not have foreseen, requires experience of the world as Eikeland (2008) put it. As this study is our first substantial of this kind, we have gained real world experiences that we will carry with us hereafter. The most obvious lesson, about research in general, was when we analysed our collected data, something that took quite some effort as we could find relevant information for one area of analysis in several places in our interviews. We believe that this to some extent would have been impossible to avoid no matter what, as we conducted semi-structured interviews, however, a more structured interview guide would most likely have saved us a lot of work. A more thorough structuring of the questions would have been a one time matter instead of searching through the whole of our interviews several times over. Important to point out is that we do not feel that this has had any big influence on either the reliability or validity of our study, we have been very thorough in our analysis, but it has had a big impact on our workload. Working efficient is of course of great importance in a study.

Furthermore, being at the end of this study, we can feel that we embraced a big area to investigate. We are still of the opinion that we have reached our goal with this study but it has maybe been a more general study of the area than we believed from the beginning. An even more in-depth investigation would probably have resulted in a double amount of empiric and analysis as well, which would not have been manageable during the timeframe of this study. However, we are fully content with the study and feel it has been both very interesting and essential to perform. If our angle had been more specific towards only one of the perspectives in our theory it would have resulted in the loss of, in our opinion, relevant outcomes.

7.2 Further research

After just having concluded that our study have been somewhat general we would first and foremost propose a more in-depth research in the different areas of our theory. Our research can be seen more as an introduction that show how important it is to reflect around the impact digital artefacts have on peoples lives, to enhance our design ability and to create good ethical, aesthetic, political and ideological artefacts, which also was one of the background purposes of our study. An area we feel would be very interesting to dive deeper into is the user evaluation framework for ubiquitous applications. We were not able to investigate all areas and actually rather few metrics in every area. However, an instinctual reflection about the framework is that we believe conversations, and not just measurements, probably could give another dimension to it. The human being is a complex creature and we do not think every-
thing about us is measurable. As Groth (1999) for example put it; emotions are always impor-
tant – we are less rational than we like to believe, emotions are the source of both cohesion
and conflict.

Another area we found very intriguing but not where able to investigate in much, is what
Hallnäs & Redström (2002) refer to as an artefacts expression and the possibility that the
computer loses its’ unique position and instead become just another material - as familiar to
us as everyday wooden things or everyday plastic things. However, further hardware devel-
opment are most likely necessary before this truly can start to happen.

One last reflection is that it could be interesting to conduct a similar study in another country.
Sweden is one of the countries with the most mobile devices in the world, if not the leading
one according to PTS (Statistikportalen, 2010). Telia Sonera was first in the world to open a
4G net in Sweden in 2010 and according to the latest statistics there are 12.6 million mobile
phone subscriptions in Sweden, with 9.3 million inhabitants. This makes it easy for Sweden as
a country to be leading when it comes to ubicomp as well. Compared to USA where the latest
statistics say 223 million mobile phone subscriptions (Signalnews.com, 2010) and 380 million
inhabitants, it would make it interesting to conduct a similar study in the USA for example. In
the USA there are 59% of the inhabitants who has a mobile phone subscription, compared to
Sweden where there are 135% subscriptions in comparison with the inhabitants. A compari-
son between countries with differences as these could show how important the hardware ac-
cess is for ubicomp and further investigate the gradual disappearance of digital artefacts from
our consciousness.

7.3 Emotions in Motion

We would like to conclude this final chapter by mentioning the emotions throughout the study,
and also mention our own emotions and how much we have relied on each other. De Bono’s
thinking hats were mentioned early in the study, and we would like to point out how impor-
tant they have been to us. We have spent approximately 200+ hours on the phone, and we
have no idea how much time we have spent screen sharing, talking, writing, laughing, crying,
arguing and making up. However, this work has been ubiquitous from the first discussion be-
tween the two of us. Switching from peripheral to central between the two of us. There has
been days when we have had internet problems and also issues with the phone, and the work
has come to a screeching halt due to us not being able to interact. Some days one of us has
been wearing six different hats and the other one merely one hat, some days one hat each, and
on the really crappy days none of us have been wearing any hats. However, what has been the
most important throughout the study is the feeling of the two of us together, and we would not
have been able to produce one single word without the other. The emotions between each
other, the emotions for the study, and the ubiquity and genuine interest in our subject has led
to this, and we feel value, pride, status and we will most likely post that on a Facebook update.
6. BIBLIOGRAPHY


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7. APPENDIX A

7.1 Interview guide

1. Introductory questions – "Can you mention something about when you started to develop an interest for..."
2. Follow up questions – asking the respondent to develop his/her answer "What do you mean by..."
3. Investigative questions – to follow up and ask the respondent for a more in depth answer "Can you develop that a little further..."
4. Specific questions – "What did you do when that occurred?" "What kind of reaction did you get?"
5. Direct questions – "Do you think that Facebook is a positive thing?" (yes and no questions - this type of questions should wait until the end of the interview to not lead the respondent if not necessary)
6. Indirect questions – "What is your opinion about..."
7. Structured questions – "I would like to change the theme now"
8. Silence - to give the respondent the time and possibility to think and develop their answers
9. Interpretive questions – "Do you think it is okay to be nice to customers as long as they are not rude to you"

After the interview one should note:

- how was the interview, was the respondent talkative, co-operative, nervous etc.
- where was the interview conducted
- other experiences from the interview, i.e. if something led to new ideas or areas in interest
- environment

Interview guide for qualitative research by Bryman (2011).
7.2 Interview questions

Name:  
Number of Facebook friends:
Gender:  
Member on Facebook since:
Year of birth:  
Computer skills:
City:  
Facebook on any mobile device (phone/tablet):

1. Spontaneously, what are the main things that you first and foremost do on Facebook?

2. If you think about it thoroughly, can you think of any other things that you do on Facebook?
   2a. How did you do that before Facebook?

3. Has your social network changed with Facebook (bigger/smaller)?
   3a. Has it changed the way you interact with your friends? If YES, why did it change?
   3b. Did you make a change in which persons that you interact with?
   3c. Do you use "groups" on Facebook? (part of/create own etc) If YES, how?

4. How often do you visit Facebook, and how much time do you spend every time you access it?

5. How much are you available on Facebook? (push notices, email etc)
   5a. Does it feel like an overwhelming availability?

6. Do you read/listen/check all information such as links/music that your friends share? If NO: Why not/how do you chose what to look at? If YES: Why do you check everything?

7. Are you more extrovert on Facebook as a social media than in reality or does it have the opposite effect on you? Such as, if you are an extrovert person in reality, does Facebook hold you back and makes you withhold information, or are you more introvert in reality and use Facebook as a means of communication because it feels more impersonal.
   7a. Is it easier for you to debate/argue on Facebook than face to face, since you are in a secure environment (hiding behind a computer screen/mobile device) when you are using it?

8. If you think about “memory”, do you consider that Facebook helps you remember things. For example, before we had mobile phones, we memorised many phone numbers, but today we do not need to anymore since everything is stored on the mobile phone. Is there something on Facebook that can be seen as a parallel to that?

9. If you think of Facebook as a means of communication, in relation to phone, email, letters, chat etc, what do you mostly use to communicate with your social network. How much do you use Facebook to communicate?
   9a. Is that an active choice, or do you chose Facebook without thinking about it?
10. How do you feel about the information on Facebook when you, for example, look at the newsfeed? (too much, too little, overwhelming/relaxing)

11. If you do, or experience something that you want to tell to your friends and use Facebook to relay it, what are your thoughts about this? That you are going to tell you friends, or that you are going to write something on Facebook? (Comparison: use - presence)

12. Do you think that there is a lot of technical issues with Facebook?
   12a. How do you feel about that? (annoyed/nothing)

13. Do you think Facebook is easy to use, and easy to comprehend, or or do you encounter things that you do not understand how to manage or use a lot? Do you spend a lot of the time that you are logged on to Facebook just handling the application itself?

14. Do you ever feel that there are obstacles in your interaction with friends on Facebook, i.e. would you want to do anything else in relation to your friends on Facebook than what is possible today?

15. Does Facebook give you any kind of value that you have missed or never had before? (Time saving/rational/sense of belonging etc)
   15a. Does the usage of Facebook create any feelings? (happiness/anger/sadness/excitement etc)

16. Do you use any function/feature on Facebook for anything other than it is supposed to? (For example, writing random info where you are supposed to enter your favourite quote?)

17: Do you feel secure on Facebook, i.e. do you trust Facebook as an application?
   17a. Do you feel that you have control over how private/public you and your info are?

18. How much of what is possible to do on Facebook would you estimate that you actually use?
   18a. Why is it that you do not use it more/less?

19. Where are you when you are using Facebook? (Work/at home/leisure)
   19a. Do you ever reflect upon where you are when you are using Facebook?

20. Do you feel that your Facebook usage gives you some kind of status?
   20a. Are you proud or ashamed of your Facebook usage?
   20b. Do you tell others that you have a Facebook account?

21. Would you consider terminating your Facebook account? Why/why not?

22. What is your overall opinion about Facebook, is there anything you would like to add?
7.3 Intervjufrågor

Namn: Antal vänner:
Kön: Datorvana:
Födelseår: Medlem på Facebook sedan:
Ort: Facebook på mobilen (och/eller iPad):

1. Rent spontant, vad känns det som att du i första hand gör på Facebook?

2. Om du tänker efter noggrannare, vad använder du Facebook mer till?
   2a. Hur gjorde du det innan?

3. Har du fått ett annorlunda (större/mindre) kontaktläge i och med Facebook? NU/DÅ?!
   3a. Har du ändrat på vilket sätt du har kontakt med dina vänner?
       Om JA: varför har du gjort det?
   3b. Har du ändrat vilka personer du har kontakt med? Kan du säga lite mer om det?
   3c. Använder du grupper på FB? (ingår i, skapar egna) Om JA: hur?

4. Hur ofta besöker du FB och ungefär hur lång tid spenderar du där per gång?

5. Hur mycket är du tillgänglig på FB? (push notiser, email)
   5a. Är det en påträffande tillgänglighet?

6. Läser/lyssnar/kollar du upp all information (länkar/musik) dina vänner delar med sig av?
   Om NEJ: Varför inte/hur väljer du vad du tittar på och inte? Om JA: Varför gör du det?

7. Är du mer privat på FB som socialt media än du är irl, eller har det motsatt verka? Om du är en öppen person irl, hämmar FB dig och gör att du inte går ut med information som irl, eller är du en mer privat person irl som använder dig av FB för att det känns mer ohämmat/opersonligt.
   7a. Har du lättare för att debattera/argumentera på FB än IRL, då du är i en trygg miljö "hemma" när du gör det?

8. Om du tänker på minne – anser du dig hjälpt att minnas saker genom Facebook? (T.ex. innan mobiltelefonen fanns så memorerade vi en massa telefonnummer men idag behöver vi inte det längre eftersom vi har allt sparat på telefonen. Kan du se någon liknande parallell med ditt användande av FB?)

9. Om du tänker på FB som ett kommunikationsmedel, i relation till saker som telefon, email, brev, chatt mm. Vad använder du oftast för att kommunicera med personerna i ditt liv? Hur mycket använder du FB i detta syfte?
   9a. Gör du ett aktivt val – eller väljer du FB utan att tänka på det?
10. Vad känner du inför informationen på FB när du t.ex tittar på news feeden? (mycket/lite/jobbig/avslappnande) "Vad menar du med....??" / "Kan du säga lite mer om det där...?"


12. Tycker du att det är mycket tekniskt strul på FB?
   12a. Hur känner du inför det? (irritation/ingenting)


15. Ger FB dig något mervärde som du har saknat/inte haft förut? (sparar tid/rationellt/känsla av tillhörighet osv)
   15a. Vad skapar användandet för känslor (glädje/ilska/ledsen/spänning)


17. Känner du dig trygg med användandet av FB? (litar du på FB som applikation)
   17a. Känner du att du kan styra hur privat/offentlig du och dina uppgifter är?

18. Hur stor del av vad som är möjligt att göra på FB tror du att du använder?
   18a. Varför använder du det inte mer/mindre?

19. Var är du när du använder Facebook (jobb/hemma/fritid)?
   19a. Reflektorer du någonsin över var du är när du använder FB?

20. Känner du att använda FB ger en vis status?
   20a. Skäms du eller är du stolt över att använda FB?
   20b. Berättar du gärna för andra att du finns på FB?
   "Vad fick du för reaktion?" Positiva/negativa?

21. Skulle du kunna tänka dig att avsluta din profil på FB? Varför/varför inte?

22. Vad har du för åsikt om FB?/ Finns det något övrigt du vill säga om Facebook?