Does Facebook improve having a satisfying social life or does it undermine our offline relations?

**Master Thesis** 

What determines the choices of people to use or not use Facebook? Which socio-cultural and socio-economic determinants and which personality traits are of influence on this (non-) use? And how are people's social lives' affected by their choice to become a (non-)user?

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# **Table of contents**

Abstract	3
Introduction	4
Theoretical Framework	6
Types of users and non-users	6
Reasons and motivations for use and non-use	6
Conceptual Model	10
Effects of Facebook use on social life	12
Method	13
Sample	13
Measures	13
Analysis	15
Results	15
Users types	15
Correlation analysis	16
Model and regression analysis	17
Method	19
Sample	19
Measures	19
Analysis	20
Results	20
Interview results	20
Non-users	20
Users	22
Effects on social life	25
Sub-questions	25
Discussion	27
Main findings	27
Limitations	30
Implications for further research	31
References	32
Appendix	35

#### **Abstract**

Digital innovations like the internet and smart phones have changed the way people communicate. One of the most popular ways of communication, with in particular our friends, is social media. A main player here is Facebook. It is however not clear what reasons people actually have to become users or non-users and what might determine those choices. Information about this can help improve the quality of Facebook and possible other types of social media, especially through the information non-users can give. Taking away some of their possible hesitations or objections can open up Facebook for those people that want to become users, but are held back for some reasons. This way social exclusion for this group of people might be resolved. At the same time information about the users can give more insight in what Facebook actually offers to people. Do users really have it better than non-users or are there also downsides to Facebook use, like loss of privacy or depersonalization of people's social life. Furthermore looking into the social lives of both users and non-users can provide insights on which effects Facebook actually has on people social lives and their relationships.

Information was gathered by means of a questionnaire for people (N=122) between 16-65 years old, about determinants and possible reasons for (non-)use looking at socio-economic and socio-cultural determinants, personality traits and behavioural, functional and social factors. Additional information about what the effects are of the (non-)use of Facebook on people's social life was researched by means of interviews with both users (N=10) and non-users (N=11).

The results of the questionnaire indicate that the desire to communicate with friends, having friends that live further away, social identity and openness (to new experiences) have a positive influence on Facebook use. Desired functions, use of alternatives, gender and age showed a negative influence on Facebook use. The interviews show that there is no real difference between users and non-users satisfaction with their social life. An important reason to start using Facebook was social pressure, though users also indicated to mostly use Facebook because it provides an easy means of communication and keeping informed about their friend's lives and their environment. Non-users tended to have a dislike to Facebook because of privacy reasons and a preference for more personal face-to-face contact. There non-user furthermore does lead them the miss out on certain invitations and events that are only shared via Facebook, but most of the time this does not bother them. Only the exclusion from company actions and activities was something that tended to bother them.

Some of the main conclusions of this study are that one of people's main concerns with Facebook is the safety of their privacy and personal information. Further both users as non-users recognize a change in the way people communicate with each other by less direct and personal communication and effort in maintaining relationships. A limitation of this study is the sample size and diversity. Further research should be done to follow up on the result of this study and look into the interesting new developments of the shift age groups among the users and look further into the effects of image crafting and the change in communication that was observed.

Keywords: Facebook, Social exclusion, Social life, User types, Non-user types

#### Introduction

The society we live in is becoming more and more digitized and technology is shaping our daily lives, without us always realizing it. One of those shaping technologies is the internet, which offers endless possibilities to its users. A main player here is the growing development of social media offering all sorts of communication options through digital devices like smart phones (Wyatt et al., 2013). A subpart of social media are social networks, like Facebook and MySpace (Kaplan & Haelein, 2010). Social networks are defined by Boyd and Ellison (2007) as: "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (p.2). The most popular social network platform in the Netherlands is Facebook. In 2015, 9.4 million Dutch people made use of Facebook, which was 8% more than in 2014. This indicates that this popular platform for social networking is still growing. Research further indicates that people between 18-35 years old have the highest percentage of Facebook use (Duggan & Brenner, 2012).

However not everyone makes use of the internet and its possibilities to communicate with people and managing their social life (Wyatt, 2005; Selwyn, 2006; Portwood-Stacer, 2013). For some this is because they lack the means or access to the internet or needed devices (Van Dijk, 2006; Liao et al., 2015). For others however it is a voluntary and informed decision not to participate in the use of social media like Facebook (Wyatt, 2005; Selwyn, 2006; Portwood-Stacer, 2013). Factors that seem to be of influence on the choice to use or not use Facebook are demographics like age, gender, education, employment and level of income (Van Deursen, Van Dijk & Ten Klooster, 2015), and differences in personality (Sheldon, 2012).

More elaborate research into the reasons for people to use or not use certain communication technologies like Facebook has only started receiving a growing attention in the last years, with the attention for non-users being the most recent (Liao, Luo, Gurung & Shin, 2015; Lin & Lu, 2011; Brandtzaeg & Heim, 2009; Pempek, Yermolayeva & Calvert, 2009 ). The long existing assumption seemed to be that user's choices were based on a voluntary choice to become users (Wyatt, 2005; Selwyn, 2006) and for non-users that they wanted to be users, but couldn't. Here it is important though to make a distinction between 'have nots' and 'want nots' (Wyatt, 2005). Those who don't use, because they are hindered somehow and those that don't use, because they don't want to. 'Want nots' specifically use themselves not to become user, but the overall idea tends to be that digital exclusion leads to social exclusion and isolation, which causes policy makers to focus on trying to make all non-users users, without really thinking about if people actually want to become users. They might actually have some very good and thought of reasons for their non-use, which might give some important insights into possible shortcomings or effects of those products and technologies.

In addition, companies are also mainly focused on their users in trying to improve and sell their product by means of design methodologies like user-centred-design (Oudshoorn, Rommes & Stienstra, 2004; Holtzblatt & Holtzblatt, 2014). Again it might be much more useful though to uncover the reasons for non-users not to use certain products or technologies, like Facebook, to get a better picture of possible shortcomings and as such being able to improve its quality and use (Wyatt, 2005; Birnholtz, 2010). People may want to use Facebook and have the all the necessary skills and tools to do so, but still choose not to use because of factors like privacy, security or maybe

<sup>&</sup>lt;sup>1</sup> http://www.redmax.nl/nieuws/social-media-in-nederland-in-2015-de-laatste-cijfers

insecurity about one's own skills. Finding reasons like these, gives the possibility to remedy them through for example improving the privacy or security settings of Facebook. This way social exclusion for some people through the non-use of Facebook might be resolved. From another viewpoint paying more attention to both users and non-users may give more insights into what advantages or possibilities users might have that non-users don't or vice versa (Wyatt et al., 2013).

To get a better understanding about the choices of users and non-users concerning Facebook and which factors might have an influence on those choices the first, quantitative, part of this study has addressed the following research questions:

1. What determines the choices of people to use or not use Facebook?

Determinants that were researched are behavioural factors, like social pressure and social identity and connecting and communicating with friends. Further, functional factors were looked at, like what functions Facebook offers and how Facebook is used on a daily basis. Last, attention was paid to social factors, like the importance of face-to-face contacts and the influence of Facebook on people's daily activities.

**2.** Which socio-cultural and socio-economic determinants and which personality traits are of influence on the (non-)use of Facebook?

The socio-cultural and socio-economic determinants that were used are: age, gender, education and income. The personality traits that were focused on are the Big-Five; extraversion, agreeableness, emotional stability, conscientiousness and openness (to new experiences).

In the second, qualitative, part of this study, attention was paid to how Facebook (non-)use affects our social life. Facebook is a social network and therefore aimed at people's social connections. One of the main reason for people to use Facebook is also to communicate with friends and meet new people (Brandtzaeg & Heim, 2009; Pempek et al., 2009). If this is the case, and with so many people using Facebook, the question can be asked if people using Facebook have a different kind and maybe more fulfilling social life than there non-user counterparts. Are non-users for example really socially excluded or is the picture more nuanced than that. To try and get a better idea of the possible differences the following research question was framed:

**3.** How are people's social lives' affected by their choice to become a (non-)user?

The group that was focused on are people between 16-65 years old, in order to get a broad picture of the (non-)users in the Netherlands. The age group from 16-65 is contains a large number of user which makes it interesting to see why some people in this group specifically choose not to use Facebook, deviating from the general popularity of Facebook use in their age group. The age group from 36-65 in addition can provide information on older (non-)users in group that has a smaller number of users, but is growing rapidly.<sup>2</sup>

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<sup>&</sup>lt;sup>2</sup> http://www.redmax.nl/nieuws/social-media-in-nederland-in-2015-de-laatste-cijfers/

#### **Theoretical Framework**

In this section a theoretical background will be provided for the main concepts of this study. First an overview will be given of the different types of (non-)users that are mentioned in literature. Next attention will be paid to the possible reasons for people to use or not use Facebook, looking at behavioural, functional and social factors, socio-cultural and socio-economic determinants and personality traits, followed by a conceptual model. Last the effects of Facebook on social life will be treated.

#### Types of users and non-users

Since there are differences between users and non-users, there are of course also different types of users and non-users. One description for non-users of the internet is given by Wyatt (2005) who makes a distinction between the 'excluded' and the 'expelled'. The first group wants to become a user, but can't and the second group were previous users, but lost access. These two groups of non-users would both like to use, but are somehow hindered. Whereas there are also the 'resisters' and 'rejecters', who both don't want to use even when they can. The 'resisters' have never been users and never want to and the 'rejecters' have been users, but decided they didn't need or want it anymore. So on the one side there are the 'have nots' and on the other side the 'want nots'. Lenhart et al. (2003) makes a similar distinction with 'evaders', 'dropouts', 'intermittent users' and 'the truly unconnected'. These groups are however all based on people who mostly just don't (want to) use or stopped using and not on 'have nots' like the excluded or expelled.

There is however also research that is more focused on defining specific roles for users based on user behaviours, like frequency and variety of use (Brandtzaeg, Heim & Karahasanovic, 2010).Brandtzaeg et al. (2010) define the following roles: Non-users, Sporadic users, Debaters, Instrumental users, Entertainment users, Socializers, Lurkers and Advanced users. Interesting is however that in their research the biggest group were the non-users; 42%. In the Netherlands 81 % of all Internet users used social media in 2015<sup>3</sup>. The biggest participants of this group are people between 18-25 years old, from whom 99% used social media<sup>4</sup>.

# **Reasons and motivations for use and non-use** *Behavioural factors*

Though the specific research into the non-users has only more recently started growing, there is already quite some research about users, and why they decide to use social, media like Facebook (Brandtzaeg & Heim, 2009; Pempek et al, 2009; Cheung & Lee, 2010; Kietzmann et al., 2011). The focus on the type of reason however varies and the picture doesn't seem to be complete yet (Cheung, Chiu & Lee, 2011). There are reasons specifically focused on social activities, like communicating with friends or getting in contact with new people (Brandtzaeg & Heim, 2009; Pempek et al., 2009). Especially communicating with people that are already friends or acquaintances seems to be an important reason why people use Facebook. Facebook also appears to be specifically useful to keep in touch with friends that live far away (Sheldon, 2008). So a main reason for people to use Facebook seems to be to communicate with friends and maintaining their social life, also with friends that they may not see so often and live further away. So the first hypotheses state:

<sup>&</sup>lt;sup>3</sup> http://www.redmax.nl/nieuws/social-media-in-nederland-in-2015-de-laatste-cijfers

 $<sup>^4\</sup> http://www.cbs.nl/nl-NL/menu/themas/bedrijven/publicaties/artikelen/archief/2015/gebruik-sociale-netwerken-sterk-toegenomen.htm$ 

**H1a.** The desire to communicate with friends has a positive contribution to Facebook use.

**H1b.** Having friends that live further away has a positive contribution to Facebook use

There are however also more random reasons like playing games and time-killing, even though these seem to be of less importance than the specific socializing reasons (Sheldon, 2008). The reasons mentioned are all focused on specific goals, with a mainly intrinsic motivation. Although some actions may of course also be influenced by the environment by e.g. social belonging or group pressure (Cheung & Lee, 2010; Cheung et al., 2011). There is research that focuses more on explaining why people use or not use social media like Facebook based on behavioural research like the Theory of Planned Behaviour (Cheung & Lee, 2010) and the Technology Acceptance Model (Burton-Jones & Hubona, 2006). Looking at the Theory of Planned Behaviour, social media (non-)use is explained mostly by compliance, internalization and social identity, whereas the research of e.g. Brandtzaeg and Heim (2009) is much more focused on more direct and material reasons, like communicating with friends or killing time. The research of Cheung and Lee (2010) gives an insight into the adoption of social media which indicates that people often start to use social media by complying to their environment and/or group pressure. Social pressure can play an important role in people's decision to start using Facebook (Pelling & White, 2009). This however does depend on level of desire to belong a person feels. Someone who has a lower desire to belong to a certain group will be less likely to succumb to group pressure and become a Facebook user. When someone does decide to become a Facebook user, the next step is the internalization of the use when the user starts to understand and appreciate Facebook (Cheung & Lee, 2010). This is influenced by the perceived behavioural control, which focuses on the ease or difficulty of a certain behaviour (Pelling & White, 2009). So the amount of difficulty people perceive to use Facebook will likely influence their (amount) of use. When the perceived difficulty is too high people can decided to not use of stop using Facebook. When people keep using Facebook, extended use can make Facebook become a part of a person's social identity (Cheung & Lee, 2010). Facebook offers a lot of options for personalization of one's profile, giving the possibility for people to express their social identity (Pelling & White, 2010). People who indicate that Facebook use is an important part of their selfconcept will most likely make greater use of the network.

Looking at the information available is seems plausible that:

- **H2.** Compliance to the environment or social pressure has a positive contribution to Facebook use.
- **H3.** Internalization has a positive contribution to Facebook use.
- **H4.** The integration of Facebook to one's social identity has a positive contribution to Facebook use.

#### Functional- and Social factors

Next to the behavioural factors there are also functional and social factors that influence Facebook use. In this area there are also more specific reasons mentioned why people decide not to use Facebook. Research on this topic however is scarcer than that of use. There is some research done about specific technologies that aren't used or get rejected, but this doesn't always focus on social media. Portwood and Stacer (2013) pay special attention to the non-use of Facebook. However this research is only focused on active Facebook refusers, who are very adamant about their decision,

with little attention for less extreme refusers. The results show that people seem to have an objection to the digitization of social contacts and spending more time in online conversations than actually having contact in real-life. Other research has also indicated that people seem to have a preference for communicating 'in person' with people instead of by long distance media (Matzat, 2010; Mesch & Talmud, 2006). Important factors that seem to be of influence on close relationships seem to be participation in shared activities and the discussion of personal issues and concerns and time shared together, which are usually most present in offline relationships (Mesch & Talmud, 2006). Research of Buote, Wood and Pratt (2009) gives further support for these factors as an explanation for more and stronger offline than online relationships. Based on this apparent preference for offline relationships the following hypotheses is posited:

**H5.** The importance of real-life contacts has a negative contribution to Facebook use.

However, the participants in the study of Portwood and Stacer (2013) seem to have a general aversion of the digitization and technologization of society which may not give the valid information on the specific non-use of Facebook. It does though indicate that people who have an aversion to technology in general will be less likely to use Facebook. This aversion may be caused by the possible dangers of the internet in general like the loss of privacy and being misinformed or scammed (Wyatt et al., 2013; Helsper, 2012), with especially privacy being a possible reason for specific non-use of social media, like Facebook. People are afraid that their personal life might be invaded, because their personal information like addresses, photographs etc. aren't secured well enough by Facebook, or because they don't know how to improve the security themselves (Gross & Acquisti, 2005). Hypotheses that can be posited based on this information are:

**H6.** Having an overall low use of technology has a negative contribution to Facebook use.

**H7.** Fear for privacy and security risks on the internet has a negative contribution to Facebook use.

Research of Lenhart et al. (2003) focused on the use of internet in general. Reasons for people not using were simply that they didn't want to, that they didn't need it or that they were worried about online risks like fraud, which corresponds with the above mentioned research of Wyatt et al. (2013) and Helsper (2012). Other reasons were related to access problems, like not having a computer or not having the skills to use it. The first mentioned reason of 'not wanting' and 'not needing' are of course very general and don't really give a real idea about why they don't want or need it.

Taking a look at the Technology Acceptance Model (TAM), the perceived usefulness and perceived ease of use can influence people's decisions to start or stop using a technology (Burton-Jones & Hubona, 2006), and is also applicable to communication technologies like Facebook or Instant messaging (IM). In a study about the use and abandonment of (IM), Birnholtz (2010) gives some reasons why people stopped using this way of communication. His research showed that people were first attracted to the use of IM, because it allowed frequent and easy access to their friends in their free time, providing a positive perceived usefulness and —ease of use (TAM). In other contexts it however became annoying and distracting. The users tried to adapt their behaviour to avoid these unwanted interruptions, but the IM application did not support the adoptions they wanted to perform. This meant the perceived ease of use was diminished (Burton-Jones & Hubona, 2006) and led them to ultimately abandon the use of IM (Birnholtz, 2010). So not meeting people's wishes and expectations and unwanted interruption can have a negative effect on the use of that technology and can possible give an explanation for people's (non-)use of Facebook. Also paying

attention to those people who stopped using seems an important step in improving those technologies. Based on this information the following hypotheses can be posited:

**H8.** Lack of desired user functions has a negative contribution to Facebook use.

**H9.** Interruption and distraction by Facebook (notifications) has a negative contribution to Facebook use.

Finally the research of Liao et al. (2015) gives some insight in why people may decide not to use a new technology replacing an old one. They did research into the low adoption of Wi-Fi at a university campus. Their research showed that several factors were of influence of the choice to adopt the new Wi-Fi system or not. These were: satisfaction with the current technology, the perceived cost of the new technology, enablers concerning resources and knowledge needed for the new technology and motivators concerning encouragement from their environment and the expected enjoyment received from the new technology. Again access and skills seem to play a role in the choice of non-use. However the social environment concerning the motivation to use and already having access to a satisfactory alternative also seems to play a role. Looking at Facebook and its widespread use, people rather stand out when they are non-users. It is mostly assumed that non-users are either excluded or expelled or rejecters or resisters (Wyatt, 2005). Looking at the study of Liao et al. (2015) however, a possible explanation could also be given by the fact that they don't need it, because they already use another alternative that they are satisfied with. A plausible hypothesis based on this research is:

**H10.** Use of already pleasing alternatives has a negative contribution to Facebook use.

#### Socio-cultural and Socio-economic determinants

When it comes to types of users there is mostly attention for socio-cultural and -economic determinants of users like level of income, age, gender, ethnicity, education and employment (Van Dijk, 2012; Van Deursen et al., 2015) in determining the different kind of users and the amount of use of the Internet. Looking at this the most likely users is a white younger man with a higher level of education and income. Specific statistics about Facebook use however indicate a slightly higher use by women<sup>5</sup>. Research of Duggan and Brenner (2013) also shows that women make a greater contribution to Facebook use than men.

**H11a.** Female users make a greater contribution to the use of Facebook.

Looking at age, especially older people are less likely to use the Internet (Van Deursen & Van Dijk, 2012). A probable reason is that older people tend to lack operational and formal Internet skills (Van Deursen & Van Dijk, 2014). There is also research that indicates an effect of parental education on Facebook use (Hargittai, 2007). People with parents that were higher educated were more likely to use Facebook than other social networking sites. However there are also indicators that people with a lower level of education make more use of social interacting activities and gaming online that people with a higher level of education (Van Deursen & Van Dijk, 2014). Based on this it seems more likely that a large number of Facebook users will have a lower level of education. The same kind of relationship is visible between people with a low income vs. people with a higher income. Looking at whether someone is a Facebook user or non-users the following hypotheses are posited:

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<sup>&</sup>lt;sup>5</sup> http://www.marketingfacts.nl/berichten/nationale-social-media-onderzoek-2014

- **H11b.** Higher age has a negative contribution to the use of Facebook.
- **H11c.** A higher level of education has a negative contribution to the use of Facebook.
- **H11d.** A higher level of income will have a negative contribution to the use of Facebook.

#### Personality trait determinants

Another area of research focuses not only on demographics but also on specific personality traits of both users and non-users of social media like Facebook (Ross et al., 2009; Sheldon, 2012; Skues, Williams & Wise, 2012). Research of Sheldon (2012) showed that comparing users and non-users the latter tends to be significantly older, more shy and lonely, less socially active and less susceptible to sensation seeking. They concluded that Facebook is not a substitute channel of communication for people who are shy and lonely. In research of Skues et al. (2012) the level of openness of users determinates the amount of time they spend on Facebook and the number of friends they have on Facebook. However users with a higher level of loneliness reported having more Facebook friends. So loneliness might not necessary be a likely predictor of a non-users as seen in the research of Sheldon (2012). Furthermore Skues et al. (2012) found that extraversion, emotional stability, self-esteem and narcissism didn't have significant connections with Facebook use. They concluded that people who are high in openness use Facebook to connect with others to discuss all sorts of interests, whereas the people that are lonely use their Facebook connections to compensate their lack of social contact and relationships in the offline world. Other research showed that people who score high on the level of agreeableness posted more on Facebook than people with a lower level of agreeableness (Moore & McElroy, 2012). In contrast people that score high on conscientiousness are much less active posters about both themselves as others.

So there seems to be thought about what type personality traits predicts use of social media like Facebook. However there doesn't seem to be a complete and clear picture yet about which personality trait has which influence on use and non-use. To try and get a little more clarity about this the following hypotheses are posited based on the Big-Five personality traits (Gosling, Rentfrow & Swann, 2003).

- H12a. Extraversion has a negative relation to Facebook use.
- H12b. Agreeableness has a positive contribution to Facebook use.
- H12c. Emotional stability has a negative contribution to Facebook use.
- **H12d.** Conscientiousness has a negative contribution to Facebook use.
- **H12e.** Openness (to new experiences) has a positive contribution to Facebook use.

#### **Conceptual Model**

Based on all the information and hypotheses, a conceptual model can be build. The independent variables in study 1 all have of positive or negative contribution to Facebook use. These are the behavioural factors (H1a-H4), functional and social factors (H5-H10), socio-cultural and —economic determinants (H11a-H11d) and personality traits (H12a-H12e). These independent variables are used to try and predict the dependent variable, Facebook use. In turn study 2 will focus on the effects of the Facebook use as an independent variable on the dependent variable, social life. It is expected that Facebook use will have an effects on the activeness of people's social life and their satisfaction with their social life. The conceptual model is visible in Figure 1.

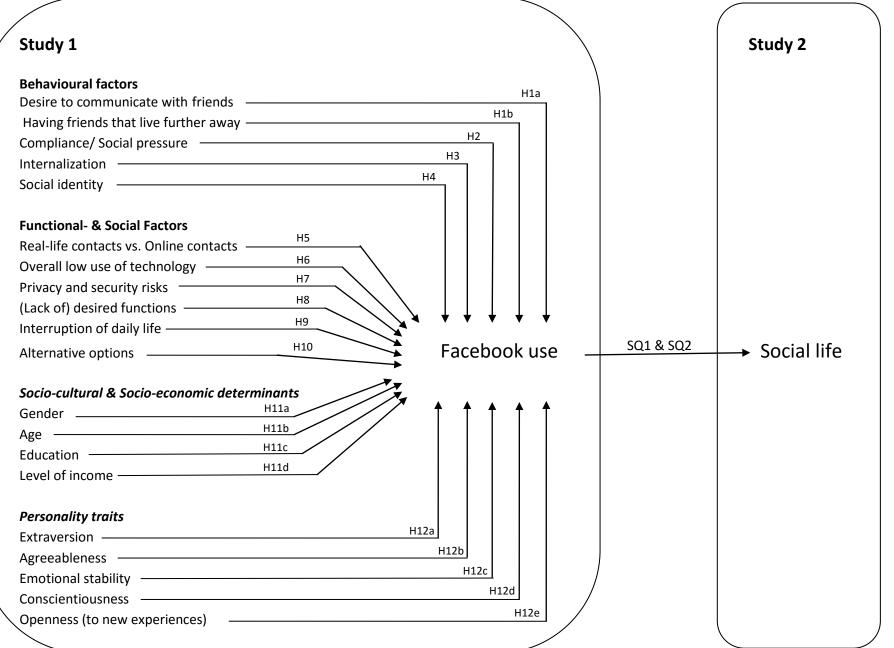


Figure 1.

#### Effects of Facebook use on social life

The second part of this contribution focuses on how Facebook use affects one's social life. Social exclusion is defined by Gordon et al. (2000) as the: "deprivation from goods, services and activities which the majority of the population defines as being the necessities of modern life" (p.5). This covers not only social exclusion concerning one's social life, but also economic, cultural and personal exclusion. Social outcomes concern: informal ties, formal ties and political networks (Helsper, Van Deursen & Eynon, 2015). Economic outcomes concerns: income, employment, education and property. Cultural outcomes concern: Belonging and identity. And personal outcomes concern: Health, leisure and self-actualisation. All these outcomes can possibly be affected by Facebook use. From this point the general term of social life will be used to cover all outcomes. Looking at the social exclusion of people in the light of technology, the assumption seems to be made that being a user is always better that not being a user and an improvement to one's social life (Helsper, 2012; Wyatt, 2005). There is for example research that shows that the use of social media can be effective in building friendships and contribute to a person's well-being (Sheldon, 2012). But when not knowing the reasons for people's choices not to use, you can't really say anything about the possible lesser well-being or the quality of the non-user's social life. People who don't use social media might have a very active social life, just not in the digital world but in real-life. Being a non-user doesn't always have to mean something negative (Satchell & Dourish, 2009). So it seems interesting to take a better look at this and not only see if non-users maybe have a less active social life or are less satisfied with it, but also if the reverse is true for users.

Apart from the types of use that are mostly focused on, a general active participation in society and good citizenship, attention for the consequences of being socially excluded or included concerning people's informal social ties or their personal well-being seems to be lacking. Research of Pempek et al. (2009) showed that Facebook was mostly used for social interaction with friends they already knew from the offline world before they started using Facebook. Looking at this the importance of using Facebook doesn't seem that urgent for having a fulfilling social life, though with the continuing growth of online communication possibilities this may change in the future. Furthermore social activities in the online and offline world seem to overlap (Subrahmanyam et al., 2008). This may mean that people who have a less active social life in the offline world might also have a less active life in the online world. This seems to be consistent with the findings of Sheldon (2012) which showed that social media is not a substitute to create a more active social life for people who are shy and lonely and have few face-to-face contacts in the offline world.

Other research has suggested that people, who are socially excluded, sacrifice personal and financial well-being in return for a feeling of social well-being (Mead et al., 2011). However empirical research suggesting that using social media can remedy this specific phenomenon doesn't seem to be available. The research of Sheldon (2012) did show findings that suggested that the use of social media can help creating friendships and improving a person's well-being, but this was primarily the case for people who already had a rich social life and not for those who are shy an lonely and have few social relationships to start with. In general however research that gives more insight into the positive or negative effects of the (non-)use of social media seems to be lacking. Based on the research that is available the following sub questions will be addressed:

SQ1. Which positive or negative effects does Facebook (non-)use have on having an active social life?

**SQ2.** Which positive or negative effects does Facebook (non-)use have on people's satisfaction with their social life?

#### Method

#### Study 1

#### **Sample**

In study 1, a questionnaire was used to gather data from both users and non-users. The non-users that were researched are the resisters and rejecters classified by Wyatt (2003). These are the people that do have access to Facebook, in contrary to the excluded and expelled, but voluntary choose not to use Facebook or did once use it, but stopped. For the users the user types of Brandtzaeg et al. (2010) are used as a guide to define different types of users.

The respondents for this research were 122 Dutch people between 16 and 65. This group was chosen to get as much data as possible and a broad insight into both the use and non-use in the Netherlands. The respondents were reached by requests in Facebook groups and the sharing of people to people to gather as many responses as possible. The largest group of respondents were female (64%). Most of the respondents were between 16-30 years old (76%) and followed a higher level of education (64). And last, the largest group concerning level of income was represented by people earning between 0-30.000 euro's a year (75%). In total there were 107 users and 15 non-users.

Table 1

Demographic profile

Characteristic	N	%
Gender		
Male	44	36
Female	78	64
Age		
16-30 years	91	76
31-45 years	16	14
46-65 years	12	10
Education		
Lower level	16	13
Mid level	28	23
Higher level	78	64
Income (in euro's per year)		
0-30.000	91	75
31.000-50.000	11	9
>50.000	8	7
Not listed	12	9
Users	107	88
Non-users	15	12

#### **Measures**

The dependent variable that was used was 'Average Facebook use' (M=.998, SD=1.001, Skewness=2.19). This variable measures the hours a person spends on Facebook on a general day, including zero hours for non-users. The independent variables belonged to the constructs in the questionnaire, which will be described next. A descriptive analysis of the dependent variable and the independent variables can be seen in Table 2.

Table 2

Descriptives

Variable	M.	SD	α
Average Facebook use	0.99	1.0	-
Behavioural factors			.75
Desire to communicate with friends	3. 21	.94	.70
Friends far away	3.75	5	.61
Social pressure	2.93	.63	.61
Internalization	3.71	.76	.37
Social identity	2.61	.90	.76
Functional factors			.55
Privacy	3.11	.62	.47
General use of technology	3.78	.58	.06
Functions	3.63	.94	.53
Alternatives	3.65	.67	.53
Social factors			.78
Real –life vs. Online contacts	3.23	.54	.46
Interruption daily life	3.25	1.11	.85
Personality traits			-
Extraversion	3.54	1.09	-
Agreeableness	3.88	.95	-
Conscientiousness	4.41	.89	-
Emotional Stability	3.91	1.03	-
Openness (to new experiences)	3.27	.91	-

The questionnaire consisted of two sections based on the model in Figure 1. Most of the questionnaire consisted of answering questions and statements through a five-point likert scale going from; 'totally disagree 'to 'totally agree'. The first section of the questionnaire consisted of Socio-economic and socio-cultural characteristics, like age, gender and level of income, which can also be seen in Table 1. Next there were questions about personality traits. The questions of the tenitem-personality-inventory (TIPI) were used for this. TIPI is a shortened personality measuring questionnaire based on the Big –Five questionnaires (Gosling et al., 2003), which measure the five most important personality traits; neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (White, Hendrick &Hendrick, 2004).

The second section consisted of questions about the reasons for the (non-)use of Facebook, based on the constructs; behavioural factors (M=3.24, SD=.69,  $\alpha$ = .75), functional factors (M=3.54. SD=.45,  $\alpha$ =.55 ) and social factors (M=3.24, SD=.73,  $\alpha$ =.78). The questions were based on what is known from the literature about reasons for use and non-use of Facebook, social networks in general and the Internet. Multiple questions were asked concerning each hypothesis to measure the related constructs. Questions that were asked were for example: 'I need to use Facebook to be able to stay in contact with my friends'. Or: 'I feel that Facebook threatens my privacy'. An overview of the constructs and all variables is visible in attachment A in the appendix.

A factor analysis was performed in order to see if the tested variables from the conceptual model were relatively compact or that there were smaller variables hidden within the larger

variables. Because the socio-economic and social-cultural questions were basic questions for this topic, like age and gender, this construct was not included in the factor analysis. Same goes for the construct of personality traits, because a special standardized test was used to measure this. The factor analysis was performed on the behavioural, functional and social construct. As part of the factor analysis, the KMO test was performed which show if the patterns of the correlations are relatively compact. The KMO value should be no less than .5 for the outcomes of the factor analysis to be reliable. A principle component analysis with varimax rotation was performed, with extractions based on eigenvalues larger than 1 and suppressing coefficients under .4. The results delivered a KMO of .72 and 5 factors with a total explained variance of 37.77 percent. Without rotation the explained variance was 44.53. The five factors that were extracted only partially matched with the existing three factors. Because the difference between the original constructs and the newly found factors was rather large, the new factors could not be used in the further analysis of the data and the testing of the hypothesis, therefore the original constructs were used.

The questionnaire was tested beforehand by means of a pilot with 15 participants in order to check for possible misinterpretations or misunderstandings of questions. The reliability of the questions in the questionnaire was measured with the Cronbach's Alfa, using the statistics program, SPSS. Based on the information gathered from the pilot, some small changes were made to some of the questions based on feedback from the pilot participants, before the actual questionnaire was activated.

#### **Analysis**

The questionnaires are analyzed using the statistic program SPSS. With the use of statistical tools the results were analyzed for the occurrence of certain answers and examined if there are causalities or correlations between the results. First the correlations between the variables were measured using Pearson's correlation coefficient to get insight into the possible cohesion between the different variables. This way connections between variables that are not specifically measured can become visible and give additional information about the relationships between the variables. Next regression analyses were performed to test for specific connections between the different variables. This way the relationships in the conceptual model could be tested.

#### Results

#### Study 1

#### **Users types**

In order to get an idea which user types are visible in the results, the work of Brandtzaeg et al. (2010) is used. The percentages of user actions in this study are visible in Table 3. Based on the descriptions of the user types (Sporadic users, Debaters, Instrumental users, Entertainment users, Socializers, Lurkers and Advanced users) of Brandtzaeg et al. (2010), three types can be clearly recognized in the gathered data. These are debaters, socializers and instrumental users. Looking at the debaters, 33.96% of the users state that they use Facebook to share interesting articles and video clips with others. For socializers there is more than one action that scores high, but the most prominent is the 52.83 % of the users that indicate they use Facebook to chat with friends. The instrumental users seem widely present based on the high scores on looking up information about people, activities or other interests (53.77%), communicate for work/study related issues (37.74%) and maintaining a club or business page (27.36). Looking at the data it seems that socializing and instrumental use are by far

the most present among the users. Also most users indicated that they use Facebook daily (40%) or even multiple times a day (40.95%), and most people spend about 0.5 (38.1%)to 1 hour (36.19) a day on it.

Table 3

Occurrence of user actions

User actions	%
Chat with friends	53
Look for contact with new people	5
Play games	6
Look at profiles	44
Sharing of personal events	35
Sharing of interesting video clips and articles	34
Sharing of funny video clips and articles	16
Look up information about people, activities or other interests	54
Follow other Facebook users and/or groups	68
Communicate for work/study related issues	38
Maintaining a club or business page	27
Maintaining an interest page	4
Organize activities	25
Participate in activities	46
Participate in special actions of organization	6
View timeline messages	66
Other	8

### **Correlation analysis**

The Pearson's correlation coefficients are visible in Table 4. The correlation coefficients show that there are several correlations between a person's average Facebook use and the variables that are expected to influence this use. The correlation matrix shows there are significant positive correlations between Facebook use and the desire to communicate with friends, having friends that liver further away, social pressure and social identity. A significant negative correlation is seen between Facebook use and the functions Facebook offers. However even though most of the correlations are significant at a .01 level, the correlations are not very strong. General rule is that correlations of .3 to .5 are low and of .5 to.7 are mediocre (Field, 2009). Two other correlations that stand out are the correlations between the desire to communicate and having friends that live far away and between desire to communicate and social identity. With correlations of .56 and .55, there seems to be a relatively strong correlation between these variables. Same goes for the correlations between social identity and internalization, social pressure and friends far away, with all correlations of .5.

Table 4

Correlation matrix

Correlation matrix												
	1	2	3	4	5	6	7	8	9	10	11	12
1. Average	-	.30**	.28**	.23*	.06	.48**	07	.06	09	20 <sup>*</sup>	.07	.16
Facebook use												
2.Desire to	-	-	.56**	.46**	.46**	.55**	.23**	.14	.20*	12	.21*	.10
communicate												
with friends												
3.Friends far	-	-	-	.35**	.49**	.52**	.05	.10	01	24**	.10	08
away												
4.Social pressure	-	-	-	-	.25**	.53**	.36**	.11	.17*	09	.21**	.15*
5.Internalization	-	-	-	-	-	.52**	.15*	.10	.19*	06	.18*	.13
6.Social identity	-	-	-	-	-	-	.22**	.20*	.13	12	.21*	.24**
7.Privacy	-	-	-	-	-	-	-	.12	.37**	.29**	.407**	.31**
8.General use of	-	-	-	-	-	-	-	-	10	.05	.17*	.13
technology												
9.Functions	-	-	-	-	-	-	-	-	-	.38**	.44**	.51**
10. Alternativees	-	-	-	-	-	-	-	-	-	-	.30**	.44**
11.Real-lif vs.	-	-	-	-	-	-	-	-	-	-	-	.51**
Online contacts												
12.Interupption	-	-	-	-	-	-	-	-	-	-	-	-
daily life												

Note.\* Correlation is significant at the 0.05 level (1-tailed).

Note. \*\* Correlation is significant at the 0.01 level (1-tailed).

#### Model and regression analysis

In order to test the model in figure 1 regression analyses were performed for the variables and posited hypotheses. The results are visible in Table 5 and 6. Six of the hypotheses have a significant positive relation to Facebook use. First is hypothesis 1a, positing that the desire to communicate with friends has a positive contribution to Facebook use. Next is hypothesis 1b, positing that having friends that live further away has a positive contribution to Facebook use. Thereafter comes hypothesis 4, positing that the integration of Facebook to one's social identity has a positive contribution to Facebook use. These three hypotheses fall under the main construct of behavioural factors. Next to these there is one hypothesis confirmed of the socio-economic and social cultural construct, namely hypothesis 11a, positing that female users make a greater contribution to Facebook use. Last is hypothesis 12a from the construct personality traits, posting that openness (to new experiences) has a positive contribution to Facebook use.

Next to the positive related hypotheses there are three significant negative related hypotheses. Two fall under the construct of functional factors. First is hypothesis 8, positing that not offering desired user functions has a negative contribution to Facebook use. The second is hypothesis 10, positing that the use of already pleasing alternatives has a negative contribution to Facebook use. The last falls under the socio-economic and social cultural construct and concerns hypothesis 11b, posting that higher age has a negative contribution to Facebook use.

The other hypotheses are not confirmed and five of them have a different direction than posited. These are: Hypothesis 3, 6, 11c, 12a and 12d.

Table 5
Results Multiple Regression Analysis

Independent variable	β
Desire to communicate with friends	.19*
Friends far away	.25**
Social pressure	.11
Internalization	03
Social identity	.27**
Privacy	14
General use of technology	.09
Functions	29**
Alternatives	36**
Real-life vs. Online contacts	16
Interruption daily life	15
Gender	.19*
Age	59**
Education	.12
Level of Income	42
Extraversion	03
Agreeableness	.17
Emotional Stability	01
Conscientiousness	.00
Openness (to new experiences)	.21*
R <sup>2</sup>	.41
F	3.45

Note.\* Hypothesis significant at 0.05 level Note. \*\* Hypothesis significant at 0.01 level

Table 6
Overview Hypotheses

Hypothesis	
H1a: Desire to communicate with friends has a positive contribution to Facebook use.	Accepted
H1b: Having friends that live further away has a positive contribution to Facebook use.	Accepted
H2: Compliance to one's environment or social pressure has a positive contribution to Facebook use.	Rejected
H3: Internalization has a positive contribution to Facebook use.	Rejected
H4: The integration of Facebook to one's social identity has a positive contribution to Facebook use.	Accepted
H5: The importance of real-life contacts has a negative contribution to Facebook use.	Rejected
H6: Having an overall low use of technology has a negative contribution to Facebook use.	Rejected
H7: Fear of privacy and security risks on the internet has a negative contribution to Facebook use.	Rejected
H8: Lack of desired user functions has a negative contribution to Facebook use.	Accepted
H9: Interruption and distraction by Facebook (notifications) has a negative contribution to	Rejected
Facebook use.	
H10: Use of already pleasing alternatives has a negative contribution to Facebook use.	Accepted
H11a: Female users make a greater contribution to Facebook use.	Accepted
H11b: (Higher) Age has a negative contribution to Facebook use.	Accepted
H11c: A higher level of education has a negative contribution to Facebook use.	Rejected

H11d: A higher level of income has a negative contribution to Facebook use.	Rejected
H12a: Extraversion has a negative contribution to Facebook use.	Rejected
H12b: Agreeableness has a positive contribution to Facebook use.	Rejected
H12c: Emotional Stability has a negative contribution to Facebook use.	Rejected
H12d: Conscientiousness has a negative contribution to Facebook use.	Rejected
H12e: Openness (to new experiences) has a positive contribution to Facebook use.	Accepted

#### Method

# Study 2

### **Sample**

In study 2, semi-structured interviews were used. The interviews were conducted to get more indepth information about the (non-)use of people and the influence on their social life. Reason for the use of interviews was to get more information about the more ill-defined concept of the effect of (non-)use on social life, because the lack of information made it hard to create questionnaire questions for it. Goal of the interview was to try and find some common reasons for (non-)use, which in turn may lead to some general (non-)user categories.

Both users and non-users were interviewed, ten users, and eleven non-users of which three had had a Facebook account in the past. The interviewees were selected by asking people, who chose to participate in the questionnaire, if they were also willing to participate in the interview. The demographics of the interviewees are visible in table 7.

Table 7

Demographic profile

Characteristic	N (Non-users)	N (Users)
Gender		
Male	4	6
Female	7	4
Age		
16-30 years	9	8
31-45 years	-	2
46-65 years	2	-
Education		
Low	2	-
Middle	-	-
High	9	10

#### **Measures**

The semi-structured interviews were focused on the effects on the (non-)use of Facebook on social life. Next to prepared questions extra follow up questions were sometimes asked to get a more elaborate response or explanation from the interviewees. The interview questions were created on basis of what was know from literature, like the effects of social pressure and social identity on Facebook use, and more basic question like reason for (not )having an account and effects on daily life through (non-)use. The interviews consisted of two parts, general questions for all interviewees and specific questions for users and non-users. Most interviews were conducted by means of e-mail to create a low threshold for people to participate. Interviewees received a document with the drafted questions, which they answered and send back. When extra information was needed, follow-up questions were asked.

Before the actual interviews were conducted the interview questions were reviewed in a test interview with feedback to ensure the gathering of the desired information.

#### **Analysis**

The interviews were analyzed using the coding program Atlas Ti. An open coding approach was used. By coding the interviews, analyzing them and recoding again, the coding scheme becomes step-by-step more complete and specified. The focus first lies on finding relevant information related to the research question after which the data is ordered and categorized into large concepts. Finally these concepts are used to create an explanatory theory by for example creating a model or describe different categories that are present in the data, in this case categories for different (non-)user types and effects on social life. This approach is called grounded theory (Baarda, De Goede & Teunissen, 2009). The results from the interviews are not enough to establish a complete all covering theory, but a first concept has been made, which can be used for further research. As a guideline for parts of the coding the same literature was used as for creating some of the questions, like social pressure. Further returning concepts and answers across the interviews were used to build new codes.

Because there was no coding scheme to start with it was not possible to do test-codings beforehand and change the scheme if necessary. Therefore a second rater was used after the coding to test the inter-rater reliability by means of the Cohen's Kappa. Purpose of this was to prevent bias of the researcher and ensure the quality of the data. The general aim is to reach a score of at least 0.7. The measured Cohen's Kappa for the user's coding was .92 and for the non-user's coding .83, based on two coded interviews for each. These are very high scores and can partially be explained by the fact that the coding scheme used relatively straightforward and recognizable codes instead of larger more abstract codes, which make it easier to reach consensus between raters.

#### Results

Study 2

#### **Interview results**

#### **Non-users**

Among the non-users one of the most mentioned reason for not using Facebook were privacy issues. People indicate that they do not like their personal information being spread over the Internet or their activities being tracked. A second communality between most non-users was that they indicated they preferred more personal and direct contact, most preferably face-to-face contact, and also more meaningful contact. Furthermore several non-users for example indicated that not using Facebook saves a lot of time and useless spam. In general most of the non-users also indicated that they did not think Facebook had much added value and it is not so bad to miss some things sometimes, because the important stuff tends to get through anyway. This is however not always the case, as it was also mentioned that sometimes people do miss out on important things, because, for example, their non-use wasn't taken into account. None of the non-users however had a real tendency to start using Facebook. Reasons for starting to use, that were named a view times were keeping in contact with new friends that live abroad or when Facebook was the only communication channel possible for certain friends.

Based on all the interviews four non-user types could be discerned, which will be described below. These types are created based on the most important and returning codes in the interviews that are grouped together into a non-user type. The used quotes in the interview results are translated from Dutch.

Two interviewees related to this user type. This type of user can see the positive sides of a social network like Facebook, but is very motivated in his non-use because of privacy issues. But other than simple fear or lack of knowledge this user is actually very informed about what the risks really are and what they can mean. This is one of the main reasons for their non-use as indicated in the following quote: "...whereby lack of safeguarding of privacy is an important reason for me not to create an account now. In essence this goes for each social network, making that I'm hardly to find online, which is fine by me" (Interviewee 3, personal communication, December 28, 2015). As a second point they put high value on face-to-face personal contact and body language. More than the other users they are aware of an anti-social effect created by Facebook, not only by means of exclusion for non-users, but also in a change of communication. What is mentioned is that people only superficially communicate via Facebook and real effort in maintaining relationships is replaced with timeline updates and likes. One of the interviewees expressed the hope that without Facebook people would put more effort in personal communication again; "I hope that the question: 'How are you?' gets a more elaborate answer again than good/bad. Now people expect that you know exactly how they are doing while you're just the one that doesn't have Facebook. When you don't have Facebook you actively have to pursue information instead of friends telling you themselves" (Interviewee 1, personal communication, December 9, 2015) Another interviewee said about the change in communication: "...[without Facebook] people will start communicating with each other more bidirectional again instead of unidirectional posting/spamming things were most people are not interested in (e.g. invitations for games, 'vote for my baby', etc.)" (Interviewee 3, personal communication, December 28, 2015).

Non-user type - 2 The indifferent, not influenced non-user

Three interviewees related to this user type. This user type has a rather stoical attitude about Facebook. Privacy again plays a role, as well as the preference for more personal face-to-face communication, but they don't really care about Facebook at all and don't mind missing out on certain things every now and then. On the contrary they feel it saves them a lot of time and makes their life a bit more nice and quiet, away from the constant spam and need to keep informed about everything through Facebook. One of the interviewee said: "I spend less time behind a computer than most people I know, and I like that very much since I have more time to spend on other hobbies" (Interviewee 2, personal communication, December 20, 2015). This type of user has a very low sensitivity to social pressure and the need to belong. They do however mention receiving complaints that they don't have Facebook or missed an event, but they are rather resilient in their response. They for example said: "Maybe it's nice that you're not reproached by people when you have 'missed' an event. What actually is also a bit funny, because I don't tend to find that a problem, other people find it rather inconvenient/a problem" (Interviewee 8, personal communication, February 1, 2016) And: "people who almost resent me for not having Facebook are not the type of people I want to be friends with. If they really like me you there are many other ways to get in touch with me" (Interviewee 2, personal communication, December 20, 2015).

Non-user type 3 – The privacy aware and critical non-user

Two interviewees related to this non-user type. In contrary to non-user type 1, this type of user has serious privacy concerns, but is much less informed about what the risks really are. They don't trust Facebook, but don't really know how it all works; "...because of privacy and sharing of personal information I don't trust online networks like Facebook" (Interviewee 6, personal communication, January 29, 2016). They do also prefer more personal, face-to-face and direct communication, but

next to that also indicate that they have absolutely zero interest in using Facebook. "I have no need for those modern communication tools like social networks... it also just differs a bit per person, one likes to use modern media like Whatsapp and other prefer to used older means like calling" (Interviewee 5, personal communication, January 28, 2016). They indicated that they don't need it at all and the only reason to start using it would be if it was the only possible option left. Another characteristic of this type of users is that they feel that Facebook causes people to be left out by for example actions and special deals from organizations, because they only execute or share these by means of Facebook. They feel that if they are a loyal customer to a certain company they should also be included or informed, while anyone with a Facebook account, who maybe never comes in a certain store, can simply join by pushing the 'like' button. Something that was said was for example: "... sometimes in the manner that a lot of companies simply pass over people who don't have Facebook with things like reductions and actions. This is actually a kind of non-Facebook [-user] discrimination" (Interviewee 5, personal communication, January 28, 2016).

Non-user type 4 – Adamant non-user

This last non-user type has absolutely zero interest in Facebook and sees it as a pure waste of time. They feel that it has nothing interesting to offer, evokes study avoiding behaviour and has an addicting effect. They feel that all the important stuff that they need to know reaches them and that Facebook is only an unwanted distraction providing shallow communication. Four interviewees related to this type. Something that was said about not having Facebook (anymore) was:"I don't have the feeling that I'm wasting my time on something that I don't support. That also makes that I now for example read more, and the time I have for studying also really spend on studying, so it also saves 'study avoiding behaviour" (Interviewee 4, personal communication, January 17, 2016). And: "I spend too much time on it, few interesting messages were posted and it is made to be addicting and that's something I don't want to go along with" (Interviewee 7, personal communication, January 30, 2016). Or: "I already have enough things I waste my time on, that does not need to be extended with endless Facebook scrolling" (Interviewee 9, personal communication, February 18, 2016).

#### **Users**

The most mentioned reasons for people to use Facebook were keeping in contact with friends and family, especially those that live further away or abroad, keeping informed about one's environment and occurrences in their friend's lives. What is interesting though, is that most of the users also indicated that they could do fine without Facebook and for a large part only use if because they have to, in order to not miss out on things. And those that might want to quit keep getting pulled back by a fear of missing out. Also most users indicated some type of social pressure to start and keep using Facebook. There are also users that do sincerely like using Facebook, either for their social life or simply keeping informed about groups or subjects that they are interested in.

An interesting observation is that it was also mentioned that Facebook sometimes decreases the amount of (valuable and substantive) communication. Because there arises a sort of silent expectation that everyone reads what other people have posted or shared, people assume that their friends know certain things that they might actually have missed. Furthermore the easy way of sharing information with a large amount of friends at once, sometimes lessen the more deepened and personal communication between friends.

Something else that is rather remarkable is that is that even though Facebook is a social network, there does not seem to be a lot of new contacts made with new people. All users indicate that pretty much all their Facebook friends are people they already knew before they connected on

Facebook. Only a few indicated that on a very sporadic occasion they met someone entirely new via a shared interest (group) on Facebook who became an actual friend.

Based on all the interviews five user types could be discerned, which will be described below. Comparing these user types with those of Brandtzaeg et al. (2010) (Sporadic users, Debaters, Instrumental users, Entertainment users, Socializers, Lurkers and Advanced users) results in some similarities, even though the types in total don't match with the results. The user type that is visible in almost all users in this study is the socializer. This is a user whose main motivator is to socialize with others. A second user type that is recognizable is that of the debater. This type partially matches with user type 2, the active debating user. Both share ideas and information to start a discussion about subjects. Last is the instrumental user. This user type's main goal is utility and access to information, which partially corresponds with user type 3, the practical user. The eventual types were again created based on the most important and returning codes in the interviews that are grouped together into a user type. Users with very characteristic differences like the debater and social pressure users, were sometimes used to create a specific user type, because they were significantly different from other users and contained are large concept that did not match with the other user types, but played a very important role in their use.

User type 1 – The positive social user

This first type of user has the most positive attitude about Facebook and enjoys and appreciates its use. Two interviewees fall within this type. They like to use Facebook to stay in contacts with their friends and family and keep informed about their environment and see Facebook as an added value. "I like to see what keeps my friends and family busy. Furthermore it is an easy way to stay in contact with people you otherwise would not or only sporadically see. It is also a way of keeping informed about the area I live in. In my opinion people sooner put information on Facebook than that they would tell this personally to all their friends and family" (Interviewee 12, personal communication, December 16, 2015). Asked if Facebook added something important to their life an answer was: "Yes! I like seeing pictures and messages from family. A funny post can improve the mood and every now and then it's still possible for an important message to arrive" (Interviewee 18, personal communication, February 9, 2016). They would also sincerely miss Facebook if it was gone. Even though they would not be devastated about, only disappointed, and look for another alternative as a replacement.

User type 2 – The active debating user

One interviewee was specifically covered by this type. This type of user has a semi-positive attitude about Facebook, saying: "It's easy to keep informed about the ups and downs of people, and there are a lot of interesting articles available[...]a Facebook post is often a reason to start a conversation with a person" (Interviewee 16, personal communication, January 24, 2016). They actively use Facebook to post interesting articles and share remarkable things that have happened during their day, with an interest in striking up a conversation or discussion with other people. They also spend a relatively large amount of time on commenting on reactions to their own posts, as well as reactions to other people's or group's posts. At the same time however, Facebook is only a means to an end for them, and on its own is not seen as a very important part of their life. When asked if Facebook added something important to life, the answer was: "To be honest, not really" (Interviewee 16, personal communication, January 24, 2016).

User type 3 – The practical user

The practical user is seems to be a larger part of the Facebook users, present among three interviewees. What is characteristic for this type of users is that they don't necessarily like or dislike

Facebook, but is mostly just a simple way of keeping in touch and informed about friends and family, providing a form of social management for their social life, like birthday notifications, or having access to interest pages. "I actually only use Facebook for alerts for birthdays, and occasionally look what people are/have been doing" (Interviewee 15, personal communication, January 20, 2016). Social pressure can also play a role here, for example by means of needing Facebook to keep informed about study activities or information about events, but the users don't really feel forced or unpleasant by using Facebook. They mostly see it as a means to an end or a necessary evil. What is also striking about this type of user is that they do not necessarily use it for social contacts and management, even though it is primarily a social networking site, but sometimes only to keep informed about subjects, associations or events that they are interested in. "I follow some pages that are connected to my interests, of which I would miss the information or it would be more difficult to reach if I would not have an account anymore[...]in general I don't communicate with friends via Facebook" (Interviewee 17, personal communication, February 3, 2016).

#### User type 4 – The habitual user

Two interviewees relate to this user type. The habitual user is slightly similar to the practical user, in the way that Facebook is an easy way of communication and getting information about friends, family and events. However other than the practical user, the habitual user does not really feel the need any more to use Facebook and thinks about using it less or quit using it all together. Something that was said when asked how life would look like without Facebook was: "I honestly think it would be a bit better. I would be distracted from my work less quickly (well, have less cause to, maybe. Plus I sometimes find that I actually get a bit less happy when I scroll through Facebook, because of the high amount of image crafting: people only put positive things online, which makes it look that everyone is leading a happier life than you. For that matter I am walking around a while now with the idea to close my account...and still I have not done it" (Interviewee 19, personal communication, February 17, 2016). The habit of using Facebook however, and the easy access to information and communication, makes it hard to actually carry out that decision. Together with a fear of missing out they keep getting pulled back to Facebook. "My use of Facebook has changed in the past years. Previously I sometimes spend entire evenings chatting with friends all over the world, but nobody has time for that anymore now (hands full with kiddo's who tear down the house, where also pictures are being shared of). Now there is also so much meaningless crap that is shared that keeping track of who shared what is also not very meaningful anymore. When I have not checked Facebook for a day I haven't missed anything, but fear of missing out however keeps pulling me back to Facebook" (Interviewee 14, personal communication, January 18, 2016).

*User type 5 – The social pressure user* 

This last type of user, different from the other types, primarily only uses Facebook because of social pressure. One interviewee specifically fell under this user type. If these users do not have Facebook there are either people who nag them for their non-use or they miss out on important things they really need or want to be part of or informed about. When asked why the interviewees created a Facebook account (and still have it), the interviewee responded with: "If I would not do it, someone else was threatening to do it for me [...] people expect me to be reachable via Facebook for invites and such." This type of users will therefore also be the first to stop using as soon as the social pressure or their own necessity to use Facebook disappears. Not having Facebook anymore would make them feel: "I think kind of relieved. I would no longer have to keep an eye on Facebook in case people talk to me, and I can no longer use it as useless time spending" (Interviewee 13, personal communication, December 22, 2015).

#### **Effects on social life**

The different user and non-user types all have their own reasons for using or not using Facebook, but when their social lives are compared there seem to be less differences. Even though research indicated that there would likely be differences, no real results for this are found. Both the users and non-users are happy and satisfied with their social lives. Users do in general appreciate the use of Facebook and the ease of use it offers in keeping in contact with friends and staying informed about their environment and their friends lives. "Some friends you simply don't talk with often when they live in another country, but when you see certain things they experience on Facebook you can still use a short message to let them know that you sympathize" (Interviewee 18, personal communication, February 9, 2016). However most of the users don't feel they would actually miss out on important things if Facebook wouldn't exist anymore and indicate that it would have a minimal effect on their life. So instead of playing an important role in the maintenance of their social lives, Facebook mostly just seems to be an easy, fun or practical tool, but not necessarily changes their relationships and the activity of or satisfaction with their social lives. "The updates of people who are important to me I also get to hear from them if I speak with them in real-life and the things I see on Facebook from people I once knew but not really speak with anymore, rarely ever do something to me" (Interviewee 19, personal communication, February 17, 2016).

On the other hand are the non-users who are expected to be a least partially excluded of certain social activities, because they don't have access to Facebook and the information that is shared there about social activities. However none on the non-users feel that they really miss out on anything or feel excluded. It is indicated several times that, especially concerning invitations and events that are sent and shared via Facebook, they do tend to be forgotten, but most of the time they don't really care. There have been moments that some of them did feel left out, but they also felt that if people didn't want to make the effort to inform them, by other means than Facebook, they weren't really friends anyway. "Very sporadically I'm disappointed that I did not or too late get an invite. Most of the time I am just glad that I don't constantly get to hear when people have been to the Subway or that the world is such a bad place. With people that are really important for me I keep active contact and try to keep a status of their life myself" (Interviewee 1, personal communication, December 9, 2015. For less personal invitations like activities of study or sport associations and companies, this is a bit more difficult because it does not concern specific people but groups. Concerning the first two, the non-users tend to be informed by their user friends about certain activities, limiting the amount of activities they actually miss. Concerning companies this is not the case. The information they are excluded from are special actions and discounts that are only shared via Facebook, and you have to like their Facebook page or a certain post for example to be able to participate, which means you need to have a Facebook account yourself. This is something that makes people feel excluded, but in much less personal way then when supposed friends neglect to share information or invitations.

#### **Sub-questions**

If we now look back at the sub questions that were asked, we can try and answer them. The first was which positive or negative effects Facebook has on having an active social life. Looking at the amount of communication, received invitations and participation of events that they are invited for varying results were found all around. The users did not have evident more communication with friends or more invitations to social events. Some of the users did receive a lot of invitations, but only went to a very small part of them. Mostly it was indicated that people went to special events of friends, like

birthdays or events they are specifically interested in like a performance of a band or an activity of an association they are a member of. This was both the case for the users as the non-users with the difference that the non-users did not get their invite via Facebook. Overall both sides simply seem to be happy with their social life.

A point that may differ is that non-users feel that they simply miss out on a lot of useless information and spam, and not using Facebook therefore has only a very small effect on their lives and mostly just saves them time. The users in general have some more positive attitudes about Facebook, but do not give any indication that they have a more active social life that the non-users. They do indicate that Facebook gives them quick and easy access to information about friends and means of communication, providing them with an addition to their social communication, but they also said that when it really came to it they did not actually need Facebook for their communications and social life, it's mostly just easy. So based on the results of this research there don't seem to be real differences in the activeness of users and non-users social lives, but more that they choose to communicate in different ways.

Continuing to the second sub question; 'Which positive or negative effects does Facebook have on people's satisfaction with their social life?', again there doesn't seem to be a real difference. Next to what was already mentioned with the first sub question, non-users sometimes may be less satisfied because they do sometimes feel left out when they miss certain invites or information that is only shared via Facebook. This feeling however does not have a very large impact on their social life, they mostly feel that 'real' friends take their non-use into account and what they do miss out on most of the time simply wasn't worth it. Looking at the users, their use does not seem to make them more satisfied with their social life. For some it is a more important way of communication, especially for friends that live further away, but they would not be really broken up about it if Facebook would no longer exist, they would simply go looking for an alternative. For the main part it is mostly a more or less appreciated means for an end. Only the social pressure user, who uses Facebook because of direct pressure from others and would very much prefer not to have an account, shows real signs of being less happy and satisfied. This is not necessarily the case for their social life, but since a part of their social relations are the ones that are pushing them, it is possible that they're not entirely satisfied. Furthermore there are also some other small indications that the use of Facebook can actually make people a bit less happy. Possible stress or discomfort experienced by fear of missing out might have a negative effect on people lives, because they feel they should always be informed about everything and everyone, possibly effecting social relations when they are not. Last is the phenomenon of image crafting. As was also indicated by an interviewee; the continuous seeing of happy, positive, exiting and special messages and posts can have a bit of a depressing effect on other users, looking at everyone's happiness all the time. This can give other users the feeling that they're the only ones that are not or less happy or who experience setbacks, possibly having a negative effect on their self-image. So all and all both users and non-users in general seem to be equally happy with their social lives, but other side effects of Facebook might be of influence on the users overall happiness.

#### **Discussion**

### **Main findings**

This study investigated determinants for Facebook (non-)use and related effects on social life using a conceptual model with multiple constructs and variables. The main constructs in the quantitative study were socio-economic and socio-cultural determinants, personality traits, behavioural factors, functional factors and social factors. The qualitative study focused specifically on social life.

Answering the first research question we can say based on the results that the desire to communicate with friends, having friends that live further away, seeing Facebook as part of one's social identity, the match between user's wishes and offered functions and the use of already pleasing alternatives play a role in determining the choices of people to use or not use Facebook.

The first two findings concerning communication with friends is in line with previous research indicating that communicating with friends in general (Brandtzaeg & Heim, 2009; Pempek et al., 2009) and keeping in touch with friends who live far away (Sheldon, 2008) are important drivers for people to use Facebook.

Second, the results of this study have shown that social pressure is an important reason for people to start using Facebook as also seen in the work of Pelling and White (2010). People often indicated that both direct as indirect social pressure tended to be the reason why they started using Facebook and/or kept using Facebook. The concept of internalization that usually follows when someone experiences a product as easy to use and starts appreciating its use was not visible in this study. On the contrary, the results showed that internalization had a negative effect on Facebook use. This is a rather surprising finding, but might be explained by the fact that even though people might find it easy to use and appreciated certain aspects of it, doesn't necessarily mean that they will use it more. People in the interviews for example indicated that even though Facebook was an easy tool for certain actions and communications and that they tended to appreciated those functions, they did not feel a strong connection to Facebook or would feel greatly affected when Facebook would not exist anymore.

At the same time the results did show that the connection of one's social identity to Facebook has a positive effect on its use. Because of the amount of options Facebook offers for personalization of one's profile people have a lot of possibilities to express their social identity (Pelling & White, 2010). However if we take into account the remarks made on image crafting in the interviews, with people pretending to be something that they are not, the question is raised if people really show and share their social identity on Facebook or only a better or censured version of themselves. Next the question can then also be asked what kind of effects this has on not only other users, but also the image crafting user himself.

Third, the importance for real-life contacts (Matzat, 2010; Mesch & Talmud, 2006) and the fear for privacy and security (Wyatt et al., 2010; Helsper, 2012) were both present in the results of this study as having a negative effect on Facebook use. People indicated that they missed physical parts of communication like body language when using Facebook. Most of the time they also preferred to talk with friends face-to-face because of these physical parts, but also because they felt face-to-face conversations were more personal and meaningful. Concerning privacy most people indicated that they did not trust Facebook with their personal information and that privacy issues were some of the main reasons for not using Facebook.

Fourth, an overall low use of technology was expected to have a negative effect on Facebook use (Portwood & Stacer, 2013). This was not visible in the results and even showed a slight positive effect. An explanation for this may be that even though some people have a fear or dislike of

technology it is pretty much impossible to avoid in our daily lives. So an overall low use of technology is rather unlikely to be found nowadays, especially among younger people who made out a large group of the sample.

The three last reasons for (not) using Facebook were; offered functions, interruption and distraction of people's daily lives (Birnholz, 2010), and the use of already pleasing alternatives (Liao et al., 2015). Not being able to adjust privacy settings in a satisfactory way was a main reason for people not to use Facebook. Interruptions and distractions by Facebook were multiple times mentioned in the interviews. People felt that Facebook is addicting, costs too much time and has a negative influence on concentration and work. Last, both the questionnaires and interviews showed the negative effect of the use of alternatives on Facebook use. People specifically indicated that a reason for not use Facebook was indeed because they already used other forms of communication and did not need Facebook or found it a better alternative, their communication needs and tools were already saturated.

Turning to the second research question there were two constructs that played a significant role. First were the socio-cultural and socio-economic determinants. The results show that there is a positive connection between females and Facebook use and a negative connection between higher age and Facebook use. These results match with earlier findings in literature (Duggan & Brenner, 2013; Van Deursen & Van Dijk, 2014). In short this means that female are more likely to be or become a Facebook users and that older people are less likely to be or become a Facebook user. A higher level of education did not show the negative effect that was expected, but a slight positive effect. This can most likely be explained by the fact that the largest part of the sample existed out of people with a higher level of education and also with a lower level of income. The latter is interesting when we looked at the results of income of the use of Facebook. Even with only a small group of people with a higher level of income in the sample, a rather strong negative connection was found. So it is to be expected with a larger sample of this group that connection will only become stronger.

The other construct that was part of the second research question was personality traits. Research of Sheldon (2012) and Skues et al. (2012) gave indicators for personality traits being of influence on Facebook use. Skues et al. (2012) specifically indicated that the level of openness of users has a positive effect on Facebook use. Of the five traits that were researched this was also the only one that gave a significant result. Extraversion, agreeableness and emotional stability did give expected results, but not significant which may be an effect of the sample size or because their influence simply isn't large enough to have a real impact on Facebook use. This may also be an explanation for the slight positive effect of conscientiousness that was visible in the results instead of the expected negative effect. Research in personality traits in general has also given mixed results, so a definitive answer is not yet possible to give.

Finally we can look back at the original research question of the second study; 'How are people's social lives affected by their choice to become (non-)users (of Facebook)?" and try to answer it. Based on the results of the interviews and the answers to the sub questions there are a few effects to be recognized. For the non-users the main effect seems to be that they sometimes miss out on events in their social life and that every now and then causes disappointment or a feeling of exclusion. However for most of the time they themselves do not feel the miss out on anything important. The mostly feel that if saves them a lot of useless spam and time, allowing them to spend their time with their friends in real life, face-to-face instead of having a lot of less important contacts via Facebook.

For the users the most important effect seems to be that they have an easy way of keeping in touch with people and staying informed about their environment and interests, which means that Facebook does provide with some benefits for their social life. There is a part that actively and with appreciation uses Facebook and there is a part that uses it out of habit, practical reasons or because social pressure. However everyone indicates that if Facebook wouldn't exist anymore it would not really impact their social life. Those that really use it for communication with, for example, friends abroad indicated that they will simply find another alternative. And some of the other simply react that it would safe them a lot of time. So in general there are defiantly some effects on people's social life, but they do not seem to be of a very high impact, let alone lead to an actual feeling of social exclusion.

Now we have answered the research questions we can take a look at what was found in the literature and relate this to the results from this study. The general idea in research and society seems to be that digital exclusion leads to social exclusion. This study shows that this does not have to be the case. None on the non-users feel they really miss out on the important things or are dissatisfied with their social life. Some even indicated that they have a more fulfilling social life without Facebook, because the keep more personal and direct contact with friends. Something people did sometimes indicate was that they were disappointed in missing out on information and activities of companies that are only shared via Facebook, feeling left out as loyal customer.

Literature also showed that companies are mainly focused on their users and creating products that fit their wishes and needs (Oudshoorn et al., 2004; Holtzblatt & Holtzblatt, 2014), but also gave indications that focusing more on the non-users could be a good way to improve the quality and use of their products (Wyatt, 2005; Birnholtz, 2010). The results of this study show that one very important reason for people not to use Facebook is that they feel it does not take good care of personal information and that they are concerned for their privacy. Even without specifically asking about privacy, this was one of the first things people mentioned when asked why they choose not to use Facebook. So if Facebook wants to convince these people to start using Facebook, one of the first things they should do is improve the protection of people's privacy and personal information or at least make it more clear and transparent to them how they can guard their privacy and which information for example is used or sold by Facebook. This way some of the non-users who would like to use Facebook might feel more save in doing so.

Something else that was mentioned in literature were possible disadvantages non-users have in comparison to users (Wyatt et al., 2013). This study shows that both the users and the non-users see a change in the way people communicate with each other. The non-users feel that communication via Facebook is impersonal and prefer more direct and face-to-face communications. It was also mentioned that Facebook is more an 'a-social network' than a social network, because people put less effort in communication with friends and simply post a message to share with everyone, except the people that don't have a Facebook account are forgotten. The users however also see this change in communication. When they for example in the past communicated by personal and elaborate emails with friends abroad, now everyone simply puts a general post on Facebook for all their friends and the more personal communication deteriorates. Furthermore is was also mentioned that Facebook seems to be mostly used for image crafting, making it look like everyone is always happy and doing well, giving an incomplete picture of friends well-being and sometimes having a depressing effect on other users. So this raises some questions like, what a social network actually means and if Facebook still is an efficiently working social network or that some changes maybe can be made.

Another reason that was mentioned in research was social pressure (Cheung &Lee, 2010). The results of this study show that social pressure indeed is a reason for people to start using Facebook, even thought the results in the quantitative study were not significant, it was multiple times mentioned in the interviews. This was sometimes in more subtle ways like for example not wanting to miss out on things, because people only post things on Facebook, but also by applying direct pressure in pushing people to use Facebook. Non-users also indicated that people were not always equally understanding for their non-use and did not always take it into account with for example sending invitations. This may indicated that there are current users that actually prefer to be non-users. This was also partially indicated by some of the users in the interview, but besides social pressure, also a fear of missing out kept pulling them back to Facebook. This however is also dependent on the level of desire one feels to belong (Pelling & White, 2009). For example the indifferent, not influenced non-users and the adamant non-users seem to have a much lower desire to belong than the other (non-)user types. They have a low sensitivity to social pressure and don't feel they miss out on anything by not using Facebook.

#### Limitations

This research has used a model composed of several separate research subjects to create a larger model that covers multiple possible influences on Facebook use. However since there are so many subjects that could possibly influence Facebook use in different ways, it is not likely that this model covers all possible options. For example the research of Skues et al. (2012), which not only looks at the big-five personality traits, but also pays specific attention to phenomena like loneliness and self-esteem. Or the research of Pelling et al. (2009) who pay attention to the possible addictive effects of Facebook. Also research focused on the role of Facebook in for example the promotion of organizations could be interesting (Mangold & Faulds, 2009), since in the interviews it was mentioned that people sometimes miss out on things, because organizations only share actions or information via Facebook.

Going from the model to the instruments used, there are also a few limitations to mention. First is that even though questionnaire was tested and has been based on literature, it was still used for the first time, which means it could uses several revisions to reach the most desired form. The results of the factor analysis also show that, even though the reliability of the original constructs in general were sufficient, there were more constructs found in the results and those constructs only partially matched with the original constructs. This could possibly mean that the questionnaire has not measured the constructs as well as was intended. Most of the reliability scores of the sub constructs did show a reasonable score, except internalization and general use of technology. These two constructs will need a strong revision concerning the used items for a next study.

Next to some limitations of the model that was used there are also some sample related limitations. Testing the hypotheses of the model on a much larger population could for example give some more definitive information about the confirmations and rejections of the hypotheses, because a larger population gives a more representative image of the total population. Related to this, is the need for a more diverse sample concerning age, level of income and education and preferably a larger group of non-users. Since the amount of non-users in total is rather small however, the last option might in itself be limited. This limitation with the sample also asks for an important side note with some of the results of this study. Because especially the range of age, education and income are confined to a rather small group (mostly young people, with a higher education and low income), no real conclusions can be drawn about these hypotheses. Higher age having a negative influence on

Facebook use was already confirmed however, meaning that with a larger sample this connection will most likely only be strengthened. This however remains speculation until further research has been done.

These same limitations are partially the same for the interview. Here also the sample was not entirely in balance concerning age, level of education and level of income, giving an incomplete picture of the population. Furthermore the open coding approach leaves a lot of space for subjectivity because an entirely new and untested coding scheme has been made, so further research would be very valuable to develop the coding scheme further and get more insights into the relation between Facebook (non-)use and people's social life.

#### **Implications for further research**

Looking at the results of the questionnaire there are some things that are rather striking and could be interesting to investigate further. Even though the predictions of the hypotheses were based on research with similar backgrounds, like social media, the Internet in general or people's relationship with technology, the results deviated. Internalization was predicted to have a positive effect to Facebook use. The results however are reverse. An overall low use of technology, a higher level of education and conscientiousness were predicted to have a negative effect on Facebook use, but showed a positive one. These first two might be explained by the sample, because a large number of them were young and highly educated Facebook users, possibly creating a skewed result. Also the lack of a strong connection with Facebook, visible in the interviews, might be an explanation for the negative effect of internalization. These are however only possible explanations and there doesn't seem to be anything directly explaining the deviating result of conscientiousness, so it would still be very interesting to do further research into these hypotheses. Especially the effects of personality traits have given mixed results in literature, even though a lot of research has been done into this concept. Also based on the results of this study, with only openness (to new experiences) haven an significant effect, further research is needed to find more definitive answers concerning the actual influence of the different personality traits.

Concerning the interviews a first step to be made would be conducting more interviews, also with a broader sample, to cover the entire population and work to complete, definite categories of (non-)users, with clear descriptions. When this picture is more complete, this information can be used to perform a much wider research, using for example questionnaires, to gather data from a much larger sample. This could lead to much more insights about the (non-)use of Facebook and the effects is has on people's social lives. This way a more definitive answer can maybe also be found for the question if not using Facebook leads to social exclusion or not.

Furthermore, interesting points that were mentioned in the interviews about Facebook being an 'a-social network', and the presence of image crafting are interesting subjects to investigate further. Concerning the first, research can be done about what a social network actually should look like, if Facebook matches that description and which possible changes can be made. But also how this change of communication that is mentioned; less personal, less effort, more superficial, effects not only people's communication in general, but also their relationships and the strength of bonds between people. Does Facebook for example cause people having lots of casual friendships and decreases the amount of 'real' friendships. Partially related to this is the idea of image crafting. How does this not only affect the relationships with people, but also other users and the user himself. Do other users feel they can't measure up and feel forced to only post happy and positive posts. Or does

the image crafting person himself loose part of his identity by continuously pretending to be someone else, or simple better and happier than they really are.

A last topic that might be interesting for further research is the shift in age groups that is recently taking place among Facebook users. <sup>6</sup> Even though in 2015 there was still a small growth among the younger user groups, in 2016 this growth seems to have stagnated. However, among older users from 65 years and older, and especially people over 80, there is growth of relatively 9 and 52 percent. Because these are of course entirely different user groups than researched in this study, it is very interesting to research what they expect from Facebook, what makes them decide to become users and what kind of effects this has on their social life. Also it raises the question if it is interesting for Facebook to make changes to their interface and what they offer to their users, to accommodate these user groups instead of the younger ones.

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<sup>&</sup>lt;sup>6</sup> http://www.marketingfacts.nl/berichten/social-media-in-nederland-2016-whatsapp-overstijgt-facebook

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# Appendix Attachment A

Table 8
Overview constructs and items questionnaire

Overview constructs and items questionnaire			
Constructs and items	M	SD	Alpha (α)
Facebook use			
Do you have a Facebook account?	1.17	.476	
I use Facebook (never, 1x per month, 1x per week, multiple times			
per week, daily, multiple times per day)	3.65	1.574	
On average I use Facebook hours per day	.998	1.0001	
Behavioural factors	3.24	.689	.75
Desire to communicate			.70
I like to communicate with my friends via Facebook.	3.14	1.319	
It is easy to communicate with friends via Facebook.	3.78	.983	
Friends far away			.61
Facebook helps me to stay in touch with friends that live further			
away.	3.75	1.249	
Without Facebook I would lose contact with friends more easily.	2.70	1.278	
Social pressure			
A lot of my friends use Facebook.	4.37	.965	.61
I need Facebook to be able to stay in touch with my friends.	2.61	1.283	
People who are important to me would approve om me making use			
of Facebook.	3.93	1.054	
To stay informed about my environment I feel forced to use			
Facebook.	2.83	1.251	
To benefit from special reductions from companies it is necessary to			
use Facebook.	2.12	1.423	
If I do not use Facebook I miss out on social events (e.g parties).	2.70	1.190	
For my job/study it is necessary to use Facebook.	2.83	1.552	
Without Facebook I do not belong to groups of people I want to be			
part of.	2.07	1.165	
Internalization			.37
I understood everything about Facebook from the start.	3.59	1.278	
I appreciate the use of Facebook.	3.37	1.100	
Using Facebook does not cost any effort.	4.18	1.060	
Social identity			.76
When I haven't used Facebook for a day I feel like my day isn't			
complete.	1.81	1.255	
Facebook is an important part of my life.	2.50	1.235	
Loosing access to Facebook would have a big impact on my life.	2.26	1.212	
Using Facebook makes me happy.	3.11	1.198	
I identify myself as being a Facebook user.	3.39	1.364	
Functional factors	3.54	.45	.55
Privacy			.47
I feel that Facebook threatens my privacy.	3.47	1.077	
I am not afraid of being scammed by the use of Facebook.	2.59	1.245	
I don't believe I can become a victim of identity theft by using			
Facebook.	3.401	1.162	
On Facebook my personal information is safe.	2.44	1.213	
General use of technology			.06
Technology plays a daily role in my life.	4.39	0.849	
I like using technology to make my life easier.	4.06	.930	
Using technology makes my life less personal.	2.89	1.130	
Functions			.53
Facebook offers me all the functions I want.			

It is not possible to adjust certain settings in Facebook that I would			
like to change.	3.196	1.619	
Facebook could offer more possibilities to its users.	3.66	1.296	
Alternativees			.53
I prefer to communicate via another social network than			
Facebook.	3.48	1.166	
I prefer to use other forms of media to communicate. (e.g.			
Phone/calling, Skyp, textmessage/sms, whatsapp)	4.07	0.815	
Facebook offers nothing extra next to all the options I already			
have to communicate.	3.238	1.143	
Social factors	3.24	.73	.78
Real-life vs. Online contacts			.46
I find face-to-face contacts more important than online contacts.	4.46	.794	
Talking with friends via Facebook is just as nice as talking with			
them face-to-face.	1.97	1.067	
On Facebook I miss physical parts of communication like body			
language.	3.97	1.120	
Via Facebook I talk more freely than in a face-to-face			
conversation.	2.52	1.356	
Digitally I can express myself less good than in face-to-face			
conversations.	3.08	1.103	
In a Facebook conversation I think better about what I say than in			
a face-to-face conversation.	3.36	1.299	
Interupption daily life			.85
I am continuously spammed by people through Facebook.	2.65	1.477	
I feel obliged to answer when people send me a Facebook			
message.	3.53	1.319	
The use of Facebook distracts me from my daily tasks.	3.42	1.378	
Facebook asks more of my time than I want.	3.36	1.466	
Facebook has a bad influence on my concentration.	3.28	1.410	

# **Attachment B**

# Coding scheme interviews users

# Reasons for Facebook use

Code	Explanation	Example
Social pressure		
Direct pressure	Specific and clear pressure is applied, often negatively formulated.	'Without Facebook you don't belong with us.' Or: 'How boring that you don't have Facebook.'
Indirect pressure	More indirect indication that using Facebook is a good thing to do. Often positively formulated.	'Hey, It's fun, why don't you join?'
Sense of belonging.	No distinct pressure by others, but personally wanting to participate and belong with others.	'A lot of friends had Facebook so I decided to make an account also.'
Use and functions		
Entertainment	Use for a pleasant pastime or boredom.	'When I'm bored I often go roaming around Facebook and play games.'
Social management	Use to have an overview of friends and maintaining contacts.	'Via Facebook I can quickly and easily reach my friends and it keeps me informed of all the birthday's.'
News source	Use to keep informed about news/novelties.	'Via Facebook I'm kept a bit better informed of the news in general

		and personal news from people.'
Interesting articles	Reading interesting articles shared by friends or interest pages.	'I think that there are often interesting articles posted on Facebook and often share articles or clips etc. that I encounter myself.'
Interest(s) page(s)	Having access to interest pages of for example a band, but also an association/club.	'I use Facebook primarily to have access to certain interest pages, where I can difficultly find information about via other ways.'
Social management		
Lots of friends with Facebook	Use to participate or stay in contact with friends.	'Almost all my friends use Facebook, so I thought it would be fun to join also.'
(Lots of) friends/family far away	Use to stay in contact with people who live far/further away.	'Facebook is an easy way for me to stay in touch with family members who live abroad.'
Work/study	Use is necessary or useful for work/study.	'For my study we communicate a lot via Facebook, so it's nice to have an account.'
Easy communication tool	Use because it is an easy way to keep in touch/maintain contacts.	'For me Facebook is mostly a convenient tool that keeps me upto-date about events and birthdays of people.'
Invitations social matters/activities	Use to be informed about and invited to activities of others.	'I use Facebook among other things to prevent that I miss invitation for activities and parties.'
Information source (about friends)	Quick overview of activities friends.	'Via Facebook I keep informed of the ups and downs of friends and family.'

# Daily Facebook use

Code	Explanation	Example
Actions/communication		
Personal communication	Communication with friends by means of chatting and for example congratulatory messages for birthdays.	
Passive participation	Reading of updates and interesting posts on one's own timeline or of friends, groups etc.	
Active participation	Sharing messages, photo's or articles and more on timeline.	
Direct communication	React to posts of friends groups or interest pages.	
Indirect communication	Posts of friends groups or interest pages 'liken'.	
Personal effects		
Family- and friends relations	Keeping informed of the happenings/occurrences in the lives of friends and family.	'Facebook keeps me informed about friends I speak with less often.' Of: 'Ik vind het leuk om foto's en berichtjes familie te zien, zodat ik een beetje met ze mee kan leven.'

Affects/influences mood	Someone's mood can be improved when seeing a funny or positive post, but also worsened by a negative post.	'A funny post from someone can sometimes improve my mood a bit.' Or: 'Sometimes I get a bit tired of seeing all those positive posts/messages from everyone.'
Information source	Having knowledge of important live events like graduations or diploma's and driver license, but also when someone for example is sick.	'Facebook ensures that I'm kept informed of important occurrences in the lives of my friends.'
Tranquility/agitation	People experience pressure/stress to keep an eye on Facebook, for example to not miss messages from people.	'I don't find it necessary to be in continue contact with people, a moment of rest every now and then and no communication can also be nice' Or: 'I'm always afraid that I miss a message from someone, which sometimes makes that Facebook causes me to be a bit stressed.'
Easy communication tool	Facebook offers an easy and quick way for people to gain information about friends and family.	'Facebook is mostly an easy way to quickly search for information about friends like birthdays.'
Effects no Facebook anymore		
A pity/disappointment	People who find it a pity/be disappointed if Facebook would no longer exist.	'I would find it a shame if it would no longer exist, but I would go looking for an alternative.'
Looking for alternativees	If Facebook would no longer exist people would go looking for alternatives.	'Without Facebook I would make more use of other communication tools. 'Or: 'If Facebook doesn't exist anymore I would go looking for an alternative.'
No effect	No change in one's life at all. There is no real change in the use of time and people do not look for alternatives to replace Facebook.	'It would have absolutely zero effect on my life. Or: 'I use it so little that I would probably not even miss it if it would be gone.'
Small effect	Small changes in for example; use of time and social contacts, social management (e.g. personally keep	'Without Facebook I have an option less to avoid studying. 'Or: 'If I do not have Facebook it is
Time use	dates for birthdays.) keeping	sometimes harder to keep
Social contacts	informed about activities etc.	informed about events.'
Social management		
Events		

### **Effects of Facebook on social life**

Code	Explanation	Example
Personal contacts		
Familiar people	·	'I already knew all my Facebook friends before I became friends with them on Facebook.'
More contact	More contact with friends by the use of Facebook.	'Through the use of Facebook I have more contacts with some

		friends than without Facebook.'
New contacts	New contacts are made because of Facebook.	'I have once met someone new in a Facebook group who I later added to my own Facebook friends list.'
In-depth contacts	Maintaining (no) in-depth contacts via Facebook	'I have actually only few more indepth contacts via Facebook.'Or: I practically don't communicate with my friends via Facebook at all.'
Events		
Friends little/difficult contact	Keeping informed of happenings/events of friends/family who live far way and/or is little contact with.	'It is easy to stay informed about events/happenings of friends that I don't often talk to anymore.' Or: 'I stay informed about my family and friends abroad.
Environment/Living area	Keeping informed about events is one's living area	"Facebook helps me to stay informed about what is happening in my living area."
Daily activities friends	Keeping informed about daily activities of friends.	'Via Facebook I stay up to date about people's daily engagements and what they have experienced on a day.'
Multiple communication channels	Important things are often also communicated by other means, so Facebook isn't always necessary.	'The important things I almost always get to hear via other communication tools as well, so I don't really need Facebook for that.'
Communication		
Intensive communication	There is a lot and active communication via Facebook and it is the most used form of communication. Facebook has a large influence on the amount of communication that takes place.	'I make a lot of use of Facebook to communicate with friends.' Or: 'Without Facebook I would have much less contact with my friends.'
Normal communication	There is regular communication with people via Facebook, but also via other communication channels or face-to-face. There is not specifically more contact with people because of Facebook.	'I do often with friends via Facebook, but I also make a lot of use of Whatsapp and mail.' Or: 'Sometimes I communicate a bit more with friends via Facebook, but those are most of the time friends that don't live nearby.'
Light communication	There is occasional communication via Facebook, but mostly communication is done by other means. Facebook has zero influence of the amount of communication that takes place	'I don't really use Facebook to talk to people, but mostly to stay informed about birthdays and other events.' Or: I actually have only few real contacts via Facebook, with most of my friends I communicate in different ways.'
Communication factors		
Distance	More communication via Facebook tends to take place with friends/family who life far away.	'I usually communicate a bit more via Facebook with friends that live further away, but that also depends on which communication channel/tool they use.'
Person	Amount of communication depents on the person (eg vague acquaintance or good friend)	'The amount of communication depends a bit on the person; I spend more time on good friends

		than for example fellow students.'
Type of communication	Amount of communication depents on the goal of the communication (eg. Personal conversation or a short question.)	'People I only talk shortly with to for example discuss study matters I spend less time on than elaborate conversations with my best friends.'
Communication tool	When Facebook is the only way of communication with a certain person it is used more intensive.	'Ik often communicate a bit more with people that live further awyay, but that also depends on the communication tool they use.' Of: 'If Facebook is the only way to get in contact with certain people, I make more use of it.'
Invitations/events		,
Activities friends	Invitations to parties and activities of friends/	
Activities club/association	Invitations to associations where someone is a member of.	
Non-personal activities	Invitations of third parties with who is no direct personal connection, but the activity is relevant or interesting.	
Lots of invitations	A lot of invitations for event are received via Facebook.	
Little invitation	Few invitations for event are received via Facebook.	
Active participation	People go to a lot of their invitations.	
Selective participation	People only go to specific invitation of for example parties of friends.	
Little/no participation	People barely ever go to an invitation.	
Preferrerd type of ccommunication		
Personal, face-to-face	People prefer to communicate face-to-face in real-life.	'I prefer to talk in person with people, it's more personal and I immediately known about how and what and where I stand.' Or: 'I prefer to talk with people in person, because I like to see how people react so I can express myself better also.'
Whatsapp	People prefer rather to communicate via Whatsapp than Facebook.	'I prefer to use Whatsapp over Facebook, because it does what it should do without the distraction of all the other things that are present in Facebook.'
Skype	People prefer to rather communicate via Skype than Facebook.	'I prefer to use Skype over Facebook, because I can see a person for real and find that a nicer way of communicating.'

Letter/email	People prefer to communicate in	'Especially when I communicate
	writing via a letter/email.	with people over longer distances,
		and can't talk to them often in
		person, I like to write a letter or
		email. That way I can unhurriedly
		think about what I want to say and
		write my story without lapsing into
		an action/reaction conversation.'

# **Attachment C an**

# Coding scheme interviews non-users

# Reasons for (possible) Facebook use

Code	Explanation	Example
Social pressure		
Direct pressure	Specific and clearly applied pressure. Mostly formulated negatively.	'Without Facebook you don't belong with us.' Or: 'How boring that you don't have Facebook.'
Indirect pressure	More indirect indication that using Facebook is a good thing to do. Often positively formulated.	'Hey, It's fun, why don't you join?'
Sense of belonging	No distinct pressure by others, but personally wanting to participate and belong with others.	'A lot of friends had Facebook so I decided to make an account also.'
Use and functions		
Entertainment	Use for a pleasant pastime or boredom.	'I use(d) Facebook mostly to play games.
Social management	Use to have an overview of friends and maintaining contacts.	'I thought it could be useful to have a nice overview of all my friend and their birthdays etc.'
Interest(s)(page(s)	Having access to interest pages of for example a band, but also an association/club.	'I needed Facebook for my association.'
Social management		
Lots of friends with Facebook	Use to participate or stay in contact with friends.	'A lot of my friends had Facebook and it seemed like a handy way to maintain contacts.'
(Lots of) friends/family far away	Use to stay in contact with people who live far/further away.	'If I should go abroad sometime and meet all sorts of new contacts I might start using Facebook to be able to stay in touch with them.'
Work/study	Use is necessary or useful for work/study.	'A study group communicates via Facebook which means I can't participate with that.'
Easy communication tool	Use because it is an easy way to keep in touch/maintain contacts.	'Facebook looked like a fun and easy way to stay in contact with friends.'
Invitations social matters/activities	Be informed of/taking part in social happenings/events and other activities.	'An advantage of using Facebook would be that I would miss less invitation and stuff from people.'

# Reasons for not using Facebook (or to quit)

Code	Explanation	Example	
Privacy/information			
dissemination			

Personal information	Facebook asks for too much personal information, like name,	'The idea of Facebook itself kind of appeals to me, but they simply
	age, adress, phonenumber etc.	want to know too much from people.' Or: 'I don't have the feeling that Facebook takes good care of my personal information.'
Trust	Someone does not trust Facebook to take good and honest care of their personal data/information.	'Facebook always says all sorts of nice things, but I just don't trust them with my personal information.'
Undesired dissemation information in general	The selling of personal information and contact information of friends to third parties/companies.	'I don't appreciate that all sorts of personal information of myself and my friends is misused and sold by Facebook.'
Undesired dissemation information with unfamiliar people	The spreading of information via Facebook to unknown people through for example the sharing of messages.	'The dissemination of information via Facebook goes way to easily, sometimes information just ends up with people I don't even know or people who don't have to know those specific things about me.'
Tracking online activities	Tracking of people their activities on Facebook and the Internet in general.	'Everything you do nowadays is tracked, if I do not have Facebook I have an activity less that they can track me with.'
Online vs. Face-to-face		
Body language	People their facial expressions voice and intonation are all characteristic s of face-to-face communication and part of one's body language.	'With Facebook and other digital communication tools I miss people their body language; how the look and react and how their voice sounds.' Or: 'In a face-to-face conversation I can better express myself because I can also communicate with my body and voice, via a chat or SMS you miss all these things and misunderstandings tend to occur.'
Emotions and feelings	Communication via Facebook mostly takes places via textual communication and emoticons. Body language and emotions are not are much harder to detect, which sometimes leads to misunderstandings.	'Not everyone is equally good with text based communication which sometimes creates problems because people misunderstand each other.'
Digital persona	People can (re)present themselves differently online and create a digital persona. This way people can also use image crafting.	'I don't like it if people create an opinion of me based on the digital information of some website like Facebook.' Or: 'I sometimes get the feeling that people are keeping up appearances on Facebook, that everything is going well while in reality there is actually a lot wrongBut especially if you don't see people that often it is hard to see through that.'
Status sensitive	Influence(d) by digital 'achievements', for example as	'I attach no value to achieving 'likes' and such, that stuff is totally

	getting as much Facebook friends or 'likes' as possible.	not interesting for me.'
Facebook friends	Facebook friends are not always 'real' friends, but more a broad list of acquaintances.	'People are always so proud that they have 300 friends on Facebook, but those are by far not all 'real friends', often they only have frequent contact with a group of 10 or 20 people of those 300.'
Practical reasons		
No interesting information	No interesting articles or events/happenings etc. are being shared.	'I don't like seeing useless spam of people all the time.' Or: 'In the beginning there used to be some interesting articles posted, but later on most of it was just crap.'
Distraction	Messages and notifications distract from work/study and daily tasks.	'Notifications of Facebook and Whatsapp are annoying and distracting.' Or: 'Without Facebook I have a study avoiding activity less.'
Time	Facebook costs too much time and/or time can be spend better.	'It was actually starting to take up too much of my time because I was constantly busy with it.' Or: 'Because I don't use Facebook I have more time to do other fun stuff.'
Addicting	The use of Facebook has an addicting effect.	'Facebook is built to be addicting and I don't want to give in to that.'
Low use	Almost no use of Facebook (account).	'I was hardly using my account anymore; I looked at it now more than once a month or something.'
Inefficient communation method	A lot of extra, not useful options and window dressing that are not necessary for communication.	Facebook has a lot of fuss and unwanted information surrounding it, so I prefer to call or whatsapp.'
Withered contacts	Contacts that have been made with for example holiday friends wither over time.	'I had created an account to stay in touch with holiday friends, but those contacts were all withered after a while.'
Alternatives	Someone already has enough options and alternatives in use for communication and doesn't needed Facebook to be added to that also.	'I actually already have enough means of communication, so to also start with Facebook was a bit redundant.'

# Acceptance of and adaption to non-use Facebook

Code		Explanation	Example
Acceptance and u	nderstanding		
Understanding		People have understanding for someone's non-use of Facebook and accept explanations when given.	'It's not discussed much, but most people don't really find it a problem.'
No incomprehension	understanding/	People have no understanding for someone's non-use of Facebook and do not accept explanations when given.	'People find it weird that I don't have Facebook and don't understand why I don't want that either.'
Reactions		People react differently to non-use	'People react differently, an alpha-

Surprised Weird	of Facebook. Sometimes they are surprised or very sober/matter of	girl is often surprised a beta-guy often down to earth.'
Sober/down to earth	fact and other find it weird.	
Adjustment		
Alternatives	People use other alternatives to communicate.	'If people need to reach me they simply do that by mail or Whatsapp.'
Adjustment unknown	People don't really know if other adjust to their non-use. (by for example sending messages via other media)	'I have actually no idea if people really adjust themselves.'
Most of the time adjustment	For important moments/events people usually do adjust to the non-users.	'When it's something important like a party of a friend or something else personal, I'm almost always informed about it.'
Feeling (when yes/no adjustment)		
Excluded	People feel excluded when they are not invited or informed about certain things.	'When I'm not informed about things, because they were only communicated via Facebook, I have felt left out at times.'
Disappointed	People feel disappointed when there non-use is not taken into account by others.	'It is disappointing sometimes when people don't want to make the effort to send an email or Whatsapp.'
Sober/Don't care	People don't really care or worry about it (anymore) when they sometimes miss out on things.	'I actually don't really care anymore, if people don't want to make the effort to send me a message, I can't be bothered with it anymore when I miss their activity.'
Missed nothing	People don't feel that the miss anything because they don't use Facebook.	'I've actually never had the feeling that I missed anything because I don't have Facebook. It are usually other that think that I've missed something.'
Missing information and activities	People miss out on activities and information that is only shared via Facebook.	
Invitations for parties and activities		'Sometimes invites for stuff like parties is only shared via Facebook, when someone else does not inform me about that I miss these events.'
Information and events/happenings of others		'People sometimes expect me to know things that have happened to them or others, but that's than something that's been shared via Facebook, so I don't know about it.'
Not access to actions/services of organizations		'I find it annoying that companies sometimes have special actions that are only accessible via Facebook, which means I can't participate.'
Reproach/incomprehension missed event	People are reproached for missing (out on) an activity.	'If I would get a Facebook account I might be blamed less often for

		missing an activitiy.'
Effects no Facebook		
Code	Explanation	Example
Daily life		
Good feeling	A life without Facebook gives a good feeling.	'It would be a good thing if Facebook wouldn't exist anymore, that way people will hopefully start communication in more personal ways again.'
No effect	No change in life at al, Facebook already had a minimal impact on the non-user to start with.	'Ik zou niet eens merken dat het er niet meer is, omdat ik er nu eigenlijk al helemaal niks mee te maken heb.'
Small effect	Small changes in communication like talking to people in person/personally more often or less missed information/activities and for example less reproachment for missed events.	' Without Facebook I might have to say 'no' a little less often to all the activities I get invited to.'
Time	More time or other activities.	'If I don't use Facebook I have more time for other things like hobbies'.
Distraction	Less distractionof study/work without Facebook.	'Without Facebook I would probably be more effective in studying.'
Interaction and social interest		
Intensive interaction with(important) people	More often contact with good friends and family and have more meaningful and in-depth conversations.	'I have much more intensive communication now with people who are important for me and also spend more time on keeping informed on how they are all doing.'
More active social interest without FB	More and more active attention for well-being friends and family.	'Without Facebook I've started communicating with friends much more again and more frequently ask them how they are doing.'
Personal effort in maintaining relations	More personal effort in keeping in contact with friends/family by calling, mailing etc. yourself instead of only depending on Facebook.	'Facebook has caused people to become lazy in the maintenance of their contacts, I hope that their effort without Facebook will increase again.'
Amount of communication		
More communication	Not having/existing of Facebook makes that people communicate more and often on a more qualitative level.	'Without Facebook I speak with people more often! I noticed that people started to keep telling less themselves and then I noticed how much you actually hear about how people are doing through Facebook Now I communicate more with people by personally keeping myself informed on how everyone's doing.'

Same amount of communication	Not having/existing of Facebook does not create a change in the amount of communication.	'Without Facebook I would not all of the sudden communicate less with people, I think that would largely stay the same.'
Change in communication	Without Facebook people will (hopefully) communicate in more direct and personal ways again.	'I hope that the question: 'How are you?' gets a more elaborate answer again than good/bad. Now people expect that you know exactly how they are doing while you're just the one that doesn't have Facebook.'
Effects Facebook on social life		
Code	Explanation	Example
Change in social interaction	Facebook changes the way people communicate with each other, for example less personal via likes and emoticons and often more superficial communication.	'Because of Facebook people have started communicating with each other differently, it's more about the amount of likes you get than the real content of a conversation.'
(Social) information source	Facebook takes over the role of (social)information source of people. People hear/tell things no longer from/to each other but read and share everything via Facebook.	'You always used to hear from your friends what was going on in their life, but nowadays you're expected to be reading that on Facebook.'
Social laziness/effort	Facebook makes that it is easy to send a quick 'like' or short message rather than to put more personal time and effort into personal communication with friends.	'People have become kind of lazy through Facebook; they simply expect that everyone reads on Facebook what is going on with them and vice versa.'
Distraction	The appearance/look of Facebook and all the extra functions distract from the real social interaction.	'Ik vind alle extra informatie en functies op Facebook afleiden van de echte sociale interactie, daarom gebruik ik liever Whatsapp.'
Emotions/feelings	Emotions and feelings are often badly communicated via Facebook, because it is a text-based interface and works with emoticons, which cause emotions and feelings not always to be understood, sometimes leading to misunderstandings.	'People are not always able to handle text based interfaces; result is that emotions and feelings aren't always understood which sometimes leads to misunderstandings.'
Social brake	Because of the digital more distant way of communication people feel more 'safe' and less socially hold back, causing them to sometimes cross certain social borders that are accepted and appreciated by others.	'People don't seem to have a social break with digital communication; they seem to think that they can say anything they want what they would never do in a face-to-face situation.'
Addicting	Facebook works addicting causing you to be kept pulled back to it, instead of spending that time on more personal contacts.	'Facebook has kind of an addicting effect, even though you maybe do not want to spend that much time on it, it keeps pulling you back.'
Preferred type of communication		
Personal, face-to-face	People prefer to communicate on a personal ,face-to-face level with	'I prefer to always communicate 1 on 1 with people or in a small

	people.	group, that way you have much more substantive and valuable conversations.'
Calling	People prefer to communicate by phone/calling.	'Normally I prefer personal communication, but if that's not a possibility I prefer to call so I immediately have answers and don't have to wait for reactions on emails for example.'