# A Literature Review of Research on Facebook Use

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Abstract: This paper represents a review of more than one hundred studies on the social networking website Facebook. An initial selection has been made and has led to the identification of eight main research themes: effects on the users, friendship, construction of impressions, privacy, use, Facebook and politics, self-expression and construal, social capital, and the merging of social spheres. This paper focuses on Facebook use, which is currently the most researched theme. How do individuals use Facebook and why? Six different categories are identified: initiating and maintaining relationships, learning about others, recognition, personality and willingness to communicate, social influence, and experience. The major studies for each category are presented, with an emphasis on the most influential ones in the field. The focus of this literary review is on the commonalities and differences that arise from the results. Hypotheses are presented when possible, and a few theoretical explanations are provided. As a result, one could notice that Facebook is mainly used to keep in touch with other people, but not in a conventional way as users tend to 'spy' on other users' profiles. This phenomenon leads to a growing exhibitionism, which is in turn related to individuals' personality traits. Use of Facebook is also influenced by peers and experience with the website. A few limitations are discussed, and gender is found to be a possible factor influencing Facebook use. Suggestions for further study are provided.

**Keywords:** Literature Review, Facebook Use, users, friendship.

# INTRODUCTION

This paper is a literature review of research about Facebook published in the past five years, and it focuses on the motivations with regards to Facebook use. Why and how do individuals use Facebook? What made Facebook a worldwide phenomenon in such a short time? Several studies have been carried out analysing how and why people use this particular social network. The aim of this paper is to present them and to outline their commonalities as well as the emerging patterns of thought about social networks. When thinking about social networks a couple of decades ago, we could easily imagine one person surrounded by people and more or less connected to them: family, friends, co-workers, and friends of friends. Nowadays, when thinking about a social network, it seems almost impossible not to think about online social networks, which are websites that foster interactions between users online. Individuals communicate and share information instantly independently from their geographical location. In addition, people can now tell the world what they think and do easily form online communities based on affinities, interests, political and religious views, and common causes. Among these websites, Facebook indeed stands as the most popular and influential social networking website with more than 845 million users reached in December 2011 (Facebook.com). The website was created in 2004 by a small group of students, and was restricted to a few universities to allow

college students to be in touch with each other. Facebook was released worldwide only in September 2006 (Facebook.com), and has quickly become the most used social network on the planet.

Due to its global spread, Facebook has become more and more a subject of interest for researchers and since its creation more than a hundred studies have been published. This review provides researchers with an overview on the current state of research on Facebook, on the emerging trends, as well as on the methodologies that have been commonly used until now. After a process of selection of the studies, eight main themes have been identified. This paper focuses on Facebook use, for which six categories have been defined: initiating and maintaining relationships, learning about others, recognition, personality and willingness to communicate, social influence, and experience. The major studies for each category are presented, with an emphasis on the most influential ones in the field. The focus of the review is on the methodologies employed in the studies, as well as on the commonalities and differences that arise from the results. Hypotheses are presented when possible and a few theoretical explanations are provided. In conclusion, this research shows that Facebook is mainly used to keep in touch with other people, but not in a conventional way as users tend to 'spy' on other users' profiles. This phenomenon leads to a growing exhibitionism, which is in turn related to individuals' personality traits. Use of Facebook is also influenced by peers and experience with the website. A few limitations are discussed, and gender is found to be a possible factor influencing Facebook use. Suggestions for further study are provided.

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#### METHODOLOGY

A long selection process has been carried out in order to identify the most relevant research on Facebook: after ensuring that the content was related to Facebook, the studies have been regrouped into eight main research themes: effects on the users, friendship – that is how Facebook changes the conception of friendship online, construction of impressions, information revelation and internet privacy, Facebook use, Facebook and politics, self-expression and construal – i.e. how individuals build an image of themselves on the social network, social capital - how it is changing through Facebook, and the merging of social spheres. Then, the importance of each article has been attributed based on the number of times it had been cited by the other studies, and the year of its publication. Finally, we have removed the studies that had not been cited at all or that did not represent an academic institution. Therefore, the literature employed in this study is composed mainly of published papers or studies presented at academic conventions.

#### INITIATING AND MAINTAINING RELATIONSHIPS

Most research to date has focused on the use of Facebook to initiate and maintain relationships. In a study involving 364 university students, Golder et al. (2007) found that one of the users' most frequent activities on Facebook is writing messages. In order to communicate, Facebook users can write to each other through private messages, chat, comments, and wall posts - messages that publicly appear on a user's personal page. Research has shown that Facebook is employed mostly to keep in touch with people and to know them better (Joinson, 2008; Golder et al., 2007; Sheldon, 2008; Wiese and Farrugia, 2009). Stern and Taylor (2007) carried out a survey among 364 university students and found that only a small number of users try to meet new people or try to initiate a relationship via Facebook and that most of them use it to maintain already existing relationships. Facebook was also found to be frequently used to maintain distant relationships, as it allows for immediate communication between users who are geographically far (Golder et al., 2007; Sheldon, 2008; Dong, 2008). Bryant and Marmo (2009) observed the types of relationships that a sample of college students had with their Facebook friends, their behaviours adopted for relational maintenance, and how these strategies changed according to the type of relationship. They found that relationship maintenance on Facebook usually occurs for casual relationships or acquaintances and that close friends and couples tend to use other media to maintain their relationships. According to them, Facebook does not allow enough intimacy for maintaining close relationships and users expect more effort from their partners. Although private messages allow users to share information confidentially, communication over Facebook seems to be seen as 'cheap' and low-effort, therefore not adequate enough to maintain serious relationships with people unless geographically distant. Stern and Taylor have also found similar results: students mostly use Facebook to keep in touch and develop relationships but do not use it for romantic relationship development. As an interpretation of this finding, they state that "students do not want their dating attempts to be public" (Stern and Taylor, 2007, p.17). This interpretation, however, is restrictive, as it does not take into consideration the use of private messages.

In fact, private messages function as e-mails as they are shared exclusively between the sender and the receiver. Users have, therefore, the possibility to maintain romantic relationships with their partners without being public. Stern and Taylor's results seem to show rather the 'cheapness' suggested by Bryant and Marmo's study.

Joinson (2008) presented the phenomenon of relational maintenance under an approach called 'uses and gratifications'. His study was based on two online surveys. The first was carried out to collect demographic information of 137 participants, as well as to measure their use of Facebook. Questions included age, gender, occupation, and location, number of friends on Facebook, time spent on it, what they enjoyed about it, and what they used it for. The results were employed to draw a list of 46 gratifications such as "finding out what old friends are doing now" or "communication with likeminded people" (Joinson, 2008, p.1030). The second survey was an evaluation of these 46 gratifications. The participants - 241 Facebook users - had to rate the degree of importance of each item on a Likert scale from 1 to 7. This methodology limits the participants' choice by allowing them to rate pre-defined elements, not having the possibility to add new items or express their thoughts. However, the use of a preliminary survey allowed the researcher to use the Likert scale without being excessively restrictive. In fact, the items constituting the survey represent the most predictable gratifications that users would identify. In addition, this may contribute to help participants recall or realise uses they may not think of or simply forget. The scoring not only allows the knowledge that people use Facebook for specific reasons, but also how each use is likely to be more or less important for each participant and how this is distributed among a group of users. Joinson identifies two main functions associated with 'keeping in touch': building social capital and surveillance. More than 65% of the participants are female, and the results clearly show a significant difference between females and males. However, Joinson fails to provide an interpretation of these results and does not consider gender as a factor that may have influenced the results. While building social capital confirms once again the use of Facebook to maintain relationships with friends, the concept of 'surveillance' refers to the next motivation for Facebook use: learning about others.

### LEARNING ABOUT OTHERS

The term 'surveillance' was first used by Lampe and his colleagues (2006) in one of the most influential studies on Facebook. According to them, "Facebook may foster relationship building by allowing users to track other members of their community" (Lampe et al., 2006, p.167). In other words, Facebook users keep in touch with their peers by retrieving information about them on the website, keeping track of their activity, reading what they write, or looking at what they post on their wall. The researchers carried out two surveys among first-year students at Michigan State University, and found that surveillance is mostly employed to keep in touch with high school friends. Similarly, Zeynep Tufekci (2008) treated the concept of 'social grooming' intended as the "interest in exchanging and browsing social information about friends and acquaintances" (Tufekci, 2008, p.550). She carried out a

study investigating how social networks' use and adoption are related to social grooming. Basing her research on a preliminary qualitative study with focus groups consisting of 51 college students, she developed a paper-and-pencil survey to carry out a quantitative study among 713 college students, and attempting to answer the research questions. The findings show that Facebook users are more interested in social grooming as opposed to non-users and that social grooming appears to be one of the most attractive features of the website. According to the study carried out by Lampe et al. (2006) Facebook users employ surveillance to find out information about people with whom they have any sort of connection, even weak ones such as being in the same class. However, it is rarely the case that users employ the website to find new friends with the intention of continuing the relationship offline. Keeping in touch in Facebook can be seen as a sort of 'stalking,' as users can gather information about other people by simply observing without directly being involved in an interaction.

In a recent study of 208 Facebook users, Ruble (2011) observed the different strategies employed to gather information about others. She found that most people employ passive strategies: rather than interacting with the other person, they seek for information in his or her profile page and read what s/he writes on other people's pages. According to Ruble, not only does Facebook provide several options that may influence the choice of a passive strategy over an active one, but it also allows users to "learn information that would seem sensitive to ask someone that they do not know very well in person" (Ruble, 2011, p.13). Similarly, Bumgarner concluded that "Facebook contributes to socializing [not] by offering a medium through which people can meet and communicate with others. Instead, it's by acting as a [dispenser of] information about peers" (Bumgarner 2007, p.19). Information is therefore 'served on a plate' and communication between individuals appears as secondary. These results show the tendency of users' information gathering about casual acquaintances and do not include close friendships and relationships. What is regarded as private information can be shared via private messages and users can set privacy filters that do not allow specific people to access certain data. Ruble and Bumgarner's studies show how Facebook contributes to spreading information that users consider as public. According to Bumgarner, this makes Facebook "a tool for the facilitating of gossip" (Bumgarner, 2007, p.17). Access to information is so easy that it becomes a reason for diversion for Facebook users, alimenting a voyeuristic behaviour. Bumgarner states that this may be related to a need for exhibitionism and is strictly related to the third motivation for Facebook use: recognition.

### RECOGNITION

In a study carried out among 438 Facebook users from Hong Kong, Zhang and Tang (2009) observe the relationship between gratifications and different Facebook uses. By employing an online survey, they identified six gratifications that can be regrouped under two categories. The first, mood management, includes entertainment and surveillance and is strictly dependent on the user. The second category is called social compensation, and includes recognition gaining, emotional support, social network extension and social network maintenance depending on a response from other users. According to the researchers, these two categories are related to a certain degree of collective self-esteem, which "reflects the according value an individual [places] on a social group" (Zhang and Tang, 2009, p.5). In other words, gratifications obtained from Facebook allow the users of the website to gain and maintain recognition from others - a social group or community - and satisfy their need to belong. Buffardi and Campbell (2008) looked at recognition by exploring the phenomenon of narcissism among 129 undergraduate users. Their methodology consisted of saving the main profile page and the section displaying the twenty most recent pictures of the user and having them evaluated by a group of 128 rater participants. The evaluations were based on personality traits rated on a 7-point Likert scale, and constituted impression ratings. Subsequently, the ratings were compared with the results of an NPI questionnaire, which measures the degree of narcissistic personality. The findings suggested that self-presentation, craving for attention, and shallowness of relationships are associated with narcissism.

According to Buffardi and Campbell, the tools that Facebook offers to communicate may push its users to promote themselves more, hence encouraging narcissism. However, the methodology used does not allow for much generalization. The impression ratings are based on a subjective evaluation of the raters and different individuals may have divergent perceptions of different personality traits. In addition, the NPI questionnaire proposes bipolar choices such as "My body is nothing special" versus "I like to look at my body" on a scale, which greatly limits the participants freedom of answer (Buffardi and Campbell, 2008, 1306). In addition, participants may not want to admit certain narcissistic traits because they may be considered negative. The ambiguity of the items is also problematic: for instance, "My body is nothing special" does not provide information about the participant's perception of their body. "Nothing special" may or may not have a negative connotation depending on the context, and the participant's answer will be determined by their perception of 'body' and what makes a body 'special'. The choice of more neutral items, such as rating "how satisfied are you with your body?" on a scale would guarantee a more accurate answer. An additional problem with this study is the choice of participants. More than 60% of both participants and participant raters are females. It is not clear whether gender plays a role in the ways people use Facebook although it seems to be the case according to Joinson's (2008) results that we discussed earlier. Gangadharbatla (2008) explored whether willingness to join social networking websites (in this case Facebook) is in relation with the need to belong, collective self-esteem and Internet self-efficacy. A paperand-pencil questionnaire showed that this is the case, and the researcher concludes that these factors may as well influence individuals' attitudes toward social networking sites. Attitudes are very closely related to another factor that influences Facebook use: the user's personality.

# PERSONALITY AND WILLINGNESS TO COMMU-**NICATE**

The first study that attempted to relate personality with Facebook use is by Ross et al. (2009). The researchers have employed the Five-Factor Model (FFM) of personality, a model that proposes five traits as the predictors of an individual's personality: neuroticism, that is a "person's tendency to experience psychological distress", extraversion, openness to experience, agreeableness, which reflects "a tendency to be trusting, sympathetic and cooperative", and conscientiousness, which is "the degree to which an individual is organized, diligent and scrupulous" (Ross et al., 2009, p.579). The study involved 97 students – of which 15 men and 82 women – with an average age of 21.69 years. Participants completed an online survey measuring attitudes and uses of Facebook, a questionnaire measuring motivation, knowledge, and efficacy in computer-mediated communication (CMC), and the NEO-PI-R test that assesses personality. The results suggest that an individual's higher extraversion corresponds to a greater use of Facebook groups but not necessarily to a higher number of friends. Higher neuroticism seems to be associated with an increased use of the wall, and openness to experience corresponds to CMC knowledge and online sociability. Contrary to expectations, agreeableness and conscientiousness were not significantly relevant in relation to Facebook use. The researchers conclude that personality has very little influence on Facebook use and that the relationship between the two is, therefore, weak. A year later, Amichai-Hamburger and Vinitzky (2010) published a study based on the one of Ross et al. (2009). They tried to answer the same research questions and in contrast with the findings of Ross et al., they found that personality has a strong influence on Facebook use. According to their findings, extroversion is related to the number of friends, and not on the use of Facebook groups. Agreeableness and conscientiousness do have an impact on Facebook use and number of friends respectively. According to Amichai-Hamburger and Vinitzky, the difference relies on the adoption of a slightly different methodology. In fact, instead of giving a questionnaire to the participants, they gathered the information directly from the website. It is not clear how the researchers collected the data from the Internet page; however, the results show how the choice of a different approach – a more objective one as opposed to a subjective one - can lead to significantly different results. The questionnaire proposed by Ross et al. (2009) presents the limitations typical of surveys: participants can lie or misunderstand questions or can feel the pressure of being evaluated (monitoring effect). Objective data retrieval, as performed by Amichai-Hamburger and Vinitzky (2010), escapes the monitoring effect on participants and the data is expected to be more authentic.

The study by Zhang and Tang (2009) discussed earlier in this paper also relates to personality. The gratifications regrouped in the category of social compensation are determined by emotional openness and self-esteem. Zywica and Danowski (2008) explore self-esteem and sociability in relation to social compensation and social enhancement (or "rich get richer" hypothesis), the latter hypothesizing that "those with more developed offline social networks enhance them with more extensive online social networks" (Zywica and Danowski, 2008, p.3). They find that introverted users tend to have lower self-esteem and that, in comparison, more extroverted users with high self-esteem are more popular both offline and on Facebook. As a consequence, users with low self-esteem reveal more information about themselves

on the website, often exaggerated, in order to enhance their self-image and to look popular on Facebook. However, this study consisted of an online survey carried out among 614 college students, of which 70% were female. Once again, it is possible that the dominance of female participants may have biased the results. According to Zhang and Tang (2009), individuals who are more reluctant to communicate and hence more introverted tend to act in the same way online, instead of trying to compensate the lack of communication through the social network. Sheldon (2008b) obtained the same results from a questionnaire among 172 university students. The ratio of males to females is approximately equal:43% of males and 57% of females. She looked at how unwillingness-to-communicate influences Facebook use and found, similarly to Zywica and Danowski individuals who fear communication spend more time on Facebook in order to feel less lonely and tend to have less friends. Moreover, users who have a higher number of friends on the social network tend to be more willing to communicate in real life contexts.

# SOCIAL INFLUENCE

Another element determining people's use of Facebook is social influence. Teo et al. (2009) carried out a study among 381 Singaporean respondents whose average age was 25. The researchers hypothesized that the user's likeability to join and use Facebook is directly related to the following: the number of friends using the social network, the belief that Facebook has the most active users in Singapore and globally, and finally the belief that Facebook is the most used networking site among an individual's peers. In addition, Teo et al. predicted that the use of the website increases with the size of a person's social network and with the usefulness of the functions and applications on the website. The findings confirmed these hypotheses and the researchers concluded that peer effect has indeed a role in an individual's choice to use Facebook. These results are confirmed by another study, performed by Cheung and Lee (2010). They grounded their research on a theoretical model developed by Kelman (1974; quoted by Cheung and Lee, 2010, p.25), which presents three modes of social influence. The first is compliance (or subjective norm) and is the process by which an individual starts using a specific technology under the influence of family members or friends. The second mode of social influence is internalization (or group norm) representing an individual's decision based on similarity of values - e.g. with certain communities or groups of interest. The third is identification (or social identity) and sees the individual's recognition emotional and evaluative - of his place in a certain group of community. Cheung and Lee (2010) carried out a questionnaire among 389 students of which 54% were males and 46% were females, and found that an individual's motivation to join a social network such as Facebook is motivated by subjective norm and social identity. In particular, social norm has a significant impact on the individual's adoption of the website where family members and friends represent opinion leaders suggesting and explaining the function of the technology. Social identity relates to the concept of recognition discussed earlier in this paper. By joining communities that share similar values and

interests, the individual is recognized as part of that community and performs social action.

#### **EXPERIENCE**

The last aspect influencing Facebook use is the user's experience with the social network. In a recent study, Vasalou et al. (2010) are the first to hypothesize that Facebook use may vary according to time spent on Facebook and therefore with the user's increasing experience. In addition, the researchers explored differences in Facebook use among participants from five different countries in order to assess whether culture is a determinant for Facebook use. They carried out an online survey among 423 users of which 72 from the United States, 67 from the United Kingdom, 95 Italians, 108 Greeks, and 81 French. The survey served to gather demographic information, membership duration, Facebook uses and motivations as well as time spent on the social network. In order to measure differences of Facebook use over time, the researchers grounded their study on Fogg and Eckles' behaviour chain. (Fogg and Eckles, 2007; quoted by Vasalou et al. 2010, p.720) According to this model, users who approach user-generated content websites such as Facebook undergo three experience phases: discovery, superficial involvement - which is usually characterized by the registration of the user to the website – and true commitment when the user has fully adopted the service. The results of the study show that users at different experience stages use Facebook slightly differently, in particular in their way of creating content and involving other users. Moreover, less experienced users valued interactive tools such as games and applications as more important as opposed to more experienced users, who judged the picture features more important. This finding may suggest that experienced users tend to be more comfortable with disclosing and retrieving personal information and are more likely to abandon interactive tools that do not provide the same degree of gratification. The study also reveals that cultural differences have an impact on the importance of Facebook features such as status updates, photographs, and groups. Due to the number of participants, it is reductive to consider a hundred users as representatives of a country or even a whole culture; therefore, these results have to be interpreted with caution. However, culture may indeed play a role in the perception of what is the preferred way of communicating with other users and what is acceptable in a computer-mediated communication.

### **CONCLUSION**

The biggest problem that researchers face when exploring Facebook is its ever-changing nature. The phenomenon of social networks has developed extremely quickly in the last years, and so have the uses, habits, and conceptions of Facebook. Starting as a social network between students belonging to the same university, Facebook has rapidly become a global social network that is more and more becoming part of our lives. People interact via messages and pictures, but also present their products and services, companies, organise meetings, internships, trips, and apply for jobs. Also, the use of student samples for research on Facebook use is becoming less relevant as more and more people of any age and from any professional field employ the social network. As the study on experience by

Fogg and Eckles (2007) suggests, increased use also has an impact on how individuals employ Facebook. Early research studied groups of participants when Facebook was restricted to a few campuses and its use was determined by a restricted audience. Since then, Facebook has become global and has undergone several changes in its structure and appearance modifying in an ongoing way how users employ the social

Research revealed six main categories related to Facebook use. Users employ the social networking website mostly to keep in touch with friends and maintain relationships with geographically distant peers. Despite the presence of several communication tools such as public messages, comments, posts, and private messages, 'keeping in touch' was found to be performed by 'spying' on peers and gathering information about them from their profiles. This activity promotes an exhibitionist behaviour, which leads to manifestations of narcissism and the need to belong. As in real life, the degree of socialization on Facebook differs according to the user's personality and willingness to communicate. Facebook use is also determined by social influence, which is partly related to the need to belong and the user's experience with the website. Culture may as well play a role in how users employ Facebook. It is important to note that the aspects influencing Facebook use presented in this paper come from what has been currently studied and that other features may still need to be discovered.

The methodologies employed in most of the studies consist of surveys. Researchers preferred a quantitative approach and based their studies on self-report. This method clearly presents a certain degree of bias, as participants can lie or not fully understand what is asked. The comparison between the results obtained by Amichai-Hamburger and Vinitzky (2010) and Ross et al. (2009) showed how subjective and objective studies could lead to opposite results. Scales such as that of Likert restrict the participants' choice and make the results more likely to follow the researchers' predictions. In addition, most surveys were conducted online hence limiting the monitoring effect on the participants. The use of preliminary studies was used to minimize this problem. Preliminary studies significantly helped the researchers to set their variables and predict their results, which would have been very difficult otherwise considering the limited amount of literature on Facebook use. Finally, the choice of participants was revealed to be problematic on several instances. Female participants were predominant in several studies and results showed that there is a difference in Facebook use between males and females; however, none of the researchers addressed the issue of gender. Future research should explore the use of Facebook for professional purposes, e.g. how companies employ the website for public relations, advertising, and communication and how they use it to spread information, announcements, and news. Also, research should focus on gender and try to explore the reasons behind differences in Facebook use. A new motivation for Facebook use could be represented by gratifications sought via the use of a recent Facebook tool allowing its users to reveal their geographical location on the website by simply posting a message or taking a picture. More broadly, it would be interesting to explore the impact of all social media (e.g. Twitter, Linkedin, Facebook) on

society; especially how this type of CMC is shaping society and the way people communicate in real life.

#### CONFLICT OF INTEREST

The author confirms that this article content has no conflicts of interest.

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