The motivations and personality traits that influence Irish Facebook usage

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Dissertation submitted as a requirement for the degree of MSc in Cyberpsychology, Dun Laoghaire Institute of Art, Design and Technology, 2010.

Declaration and Acknowledgements

This dissertation is entirely my own work, and has not been previously submitted to this or any other third level institution.

Total word count: 13,776

Signature: Graham Gilbert **Date:** 22/4/10

Acknowledgments

I would like to express my sincere thanks and gratitude to my supervisor ***Hannah Barton*** whose guidance has made this thesis possible. I have learned far more from her than is presented in this thesis.

I am also very grateful for the support and the learning imparted from the many lecturers at IADT, and in particular ***Grainne Kirwan***, for her dedication to her job; it really shines through. Both ***Grainne*** and ***Hannah*** have immeasurably enriched my overall college experience.

I wish to thank my future wife, ***Sheila Sullivan***, for listening to my ideas, for challenging them when needed, and for proof reading my thesis drafts.

I thank all my friends and fellow college students who I undoubtedly bored throughout the year. Thank you for putting up with my discussions and progress reports on this thesis.

Finally I would like to acknowledge the contribution of the many participants of this study; without whom this research would not have been possible. Thank you for taking the time to complete the questionnaire and for in turn passing it on to your friends. Special thanks in this last regard to ***Sinéad Cochrane, Claudette Cosgrove,*** and ***Maryrose Lyons***.

To all the above, and the many more that helped me, a sincere thank you.

Graham Gilbert

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Abstract

The present study investigated the motivations and personality traits that influence Irish peoples' Facebook usage. An online survey of n = 155 participants found that 'keeping in contact with existing friends' was the most common cited motive for using Facebook. However, boredom was not rated significantly different from this social connectivity motive. It was found that different demographic groups use Facebook for different purposes: social connectivity (Females) and boredom (Males) both motivated the younger users' more than the older users. Investigating personality traits, Conscientiousness was found to significantly reduce the amount of friends on a Facebook profile; but overall, personality factors were not found to be as influential on Facebook usage as previous literature would suggest.

Introduction

1. Introduction

"The Internet has changed the nature of human social interaction in such a way as to allow us to connect with many individuals" (Guadagno, Okdie, & Eno, 2007, pg.1994). Increasingly, according to these researchers, the phenomenon known as social network sites (SNSs) has become the most popular means of making these social connections. Boyd and Ellison (2007) explain that since their introduction, SNSs have attracted millions of users who have "integrated these sites into their daily practices"; by July 2007, SNSs occupied five of the top fifteen most visited websites, according to Joinson (2008, pg.1027). Wilson, Fornasier, and White (2009) claim that SNSs have come to play such an important role in facilitating communication and relationships for so many people—especially young people—that it would therefore seem imperative that the various factors that influence their usage be investigated.

This study aims to investigate the motivations and personality traits that influence Irish Facebook usage; Facebook being arguably the most popular SNS worldwide. The study will seek to investigate whether or not the set of personality traits that an individual possesses can indicate their likely level of Facebook usage; and can their personality traits indicate the number of friends on their Facebook profile? In addition, the study will investigate the motivations for using Facebook: is it to make ties with other people? or, do they use it for its social and emotional support? or, is it for information gathering purposes?

There is a growing body of evidence indicating that individual differences on the Big-Five factors of personality are associated with different types of Internet usage in general (Amichai-Hamburger & Ben-Artiz, 2003, pg.71). However, despite the startling growth of Facebook usage and the high levels of media attention that Facebook receives, there have been very few formal investigations of the role played by personality traits on Facebook—or other SNSs—usage; for example, Wilson et al. (2009) state that research investigating the intrapersonal characteristics of people who access SNSs is to date, limited.

The present study seeks to address this imbalance, and would therefore increase the pool of knowledge in relation to the ways social behaviours are adapting to SNS usage as a means of social interaction.

2. Literature Review

2.1 Social Network sites

2.1.1 Definition

Defining what an SNS is, Boyd and Ellison (2007) state that SNSs are 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 this list of connections and those made by others within the system.

Furthermore, Boyd and Ellison (2007) contend that the use of the term "social network site" to describe these sites is preferable to the term "social networking site"; they argue that the term "networking" explicitly implies relationship initiation, which they contend is not the primary practice on many SNSs. These researchers also argue that the majority of SNS users are not necessarily "networking" or looking to meet new people, they are seeking to communicate with people who are already in their extended social network.

2.1.2 Function of SNSs

According to Lampe, Ellison, and Steinfield (2008, pg.721), there are hundreds of active SNSs, all with various technological affordances, and all supporting a wide range of interests and practices. Some of the most popularly used SNSs are: those oriented towards work-related contexts, for example LinkedIn.com; those oriented towards connecting people with shared interests such as music or politics, for example MySpace.com; those oriented towards romantic relationship initiation, the original goal of Friendster.com; and those aimed at the college student population, the original incarnation of Facebook.com.

Paraphrasing Ellison, Steinfield, and Lampe (2007), SNSs typically allow their users: to present 'themselves' by means of a personal profile; create and communicate with their own social networks; and establish or maintain connections with others. Since they first began appearing in America in the late 1990s, SNSs have attracted millions of users; for example, Facebook recently passed 400 million worldwide

users—one-third of whom live in Europe—and 50 percent of whom log on daily, according to Facebook.com (2010).

From the results of a research survey involving 2000 participants, Lampe, Ellison and Steinfield (2006) concluded that people used SNSs primarily for 'social-searching': finding out more about people who they have met offline; rather than for 'social-browsing': meeting people via their SNS with the intention of then meeting them offline. In addition, these researchers contend that SNSs may also serve a surveillance type function; they enable users to monitor the actions, beliefs and interests of those who they are friends with or in groups with.

Specifically examining Facebook use, Joinson (2008, pg. 1030) found the most common cited functional uses were: keeping awareness of contacts; sharing photos; organising groups; and participating in applications. Joinson (2008, pg. 1029) also found that 38.8 percent of his participants visited Facebook daily; 27.5 percent reported visiting it more than once a day; 22.5 percent visited it several times per week; 6.7 percent visited it once a week; and 4.2 percent visited it less than once a week.

Therefore, while it is true that there are hundreds of SNSs encompassing a wide range of interests and practices, most actually support the maintenance of pre-existing social networks. This has led Boyd and Ellison (2007) to suggest that the arrival of SNSs has led to a shift in the organization of online communities; SNSs are primarily organized around people, not interests.

2.2 Facebook and how it works

Facebook launched in Harvard University in February, 2004, and is considered to be a computer-mediated SNS. It derived its name from the 'face-books' distributed to Harvard students; these contained headshot photographs and basic biographical data about each student, and were used for the purpose of creating and maintaining social ties. According to Grimmelmann (2009), within a day of its creation, 1,200 students had signed up; and within a month, half the undergraduate population of Harvard had joined.

Facebook rapidly began networking to other colleges, and by September 2005, it was claimed that 85 percent of all students at the 882 colleges it had networked to had Facebook profiles (Arrington, 2005); 60 percent of whom logged in daily. In 2006 it went mainstream—allowing open access to everyone—leading to the present incarnation where a Facebook profile can be created by anyone with an email address and who is willing to claim to be thirteen or older.

Facebook allows its users to send and post messages; browse other users' profiles; and establish visible links via friend requests which can be confirmed or denied. A Facebook profile contains personal information that is supplied voluntarily by the user and usually contains, according to Gosling, Gaddis, and Vazire (2007), information such as the users': hometown; relationship status; political views; interests; favorite music/movies/books/quotes; education establishments attended, and an "About Me" section which contains a short description of the user.

2.3 Personality Traits: A history of the theory

Amichai-Hamburger (2007, pg.186) sets the scene for the investigation into the influence of personality traits on Facebook usage with the claim that: "the key to understanding regularities in the thoughts, feelings and overt behaviours of people is knowledge of their personality". Personality is considered to be "a stable set of psychological characteristics associated with each individual" (Morley, Moore, Heraty, Linehan, & MacCurtin, 2004, pg.47); while trait theorists contend that everyone possesses a certain level of each of what has been attributed to Norman (1963) as the big-five personality traits: Openness to experience; Conscientiousness; Extroversion/Introversion; Agreeableness; and Neuroticism.

Personality traits, according to Pervin, Cervone, and John (2005, pg.223) refer to "consistent patterns in the way individuals behave, feel and think"; they can be used to summarise, predict and explain a person's conduct. Pervin et al. (2005, pg.224) further explain that Trait theorists assume that traits are "the building blocks of personality", and that overt behaviour and underlying traits are linked in a direct manner with one another.

In 1936, Allport and Odbert (as cited by Passer & Smith, 2001, pg. 555) distinguished personality traits from: states such as pleased or angry; and activities,

such as ranting or snooping. From the idiographic tradition of trait theorists, Allport and Odbert focused on the potentially unique individual. A more systematic approach to trait theory used the tool of factor analysis "to identify clusters of specific behaviours that are correlated with one another so highly that they can be viewed as reflecting a basic dimension" (Passer & Smith, 2001, pg.556). For example, Cattell (1965, as cited by Passer & Smith, 2001, pg.558) used this technique to distinguish sixteen such personality dimensions.

Eysenck (1970, as cited by Passer & Smith, 2001, pg.559), also used factor analysis methods, and initially maintained that personality could be understood in terms of two dimensions: Introversion-Extroversion and Stability-Instability; he subsequently added a third dimension called Psychoticism. The Introversion-Extroversion dimension "reflects the tendency to be social, active, and willing to take risks versus a tendency toward social inhibition, passivity, and caution" (Passer & Smith, 2001, pg.557). The Stability-Instability dimension, according to the same authors reflects a continuum "from high emotional stability to an unstable and emotionally reactive behaviour pattern that involves moodiness, anxiety and depression". The Psychoticism dimension is described as a tendency to be "solitary, insensitive, uncaring about others, and opposed to accepted social custom" (Pervin et al. 2005, pg.234).

According to Pervin et al. (2005, pg.253) debates over the number and nature of the basic dimensions of personality continued for many years. Tupes and Christal (1961, as cited by Pervin et al. 2005) re-analysed the correlations reported by Cattell and found that there was good support for five factors: Surgency, Emotional Stability, Agreeableness, Dependability, and Culture. Barrick and Mount (1991, pg. 2) contend that the 5-factor model obtained by Tupes and Christal (1961) was corroborated in four subsequent studies: (Norman (1963); Borgatta (1964); Smith (1967); and Hakel (1974).

Furthermore, Barrick and Mount (1991, pg. 2) explain that Norman's study was especially significant as his labels—Extroversion, Emotional Stability (Neuroticism), Agreeableness, Conscientiousness, Culture (Openness to Experience)—are now commonly used, and have been referred to as "Norman's Big Five" or simply as the "Big Five" (Goldberg, 1981, as cited by Pervin et al., 2005,

pg.254). "Big" according to Pervin et al. (2005, pg.255), was meant to refer to the finding that each factor subsumes a large number of more specific traits. McCrae and Costa (1996, pg.52) contend that everyone possesses a certain level of each of the five factors; while John and Srivastava (1999, pg.7) explain that "these five dimensions represent personality at the broadest level of abstraction, and each dimension summarizes a large number of distinct, more specific personality characteristics". According to Goldberg (1990, pg.820) the Big-five factor model has received considerable empirical support and is now the standard taxonomy to organise and measure personality traits.

2.3.1 Extroversion-Introversion trait

It is widely agreed that the first of Norman's dimensions is broadly similar to Eysenck's Introversion-Extroversion dimension, and has frequently been called Extroversion by such researchers as McCrae and Costa (1985, as cited in Barrick & Mount, 1991). Defining this dimension, Steers and Mowday (1977, as cited by Morley et al., 2004) claim that: "introverts tend to focus their energies inwards and have a greater sensitivity to abstract feelings, whereas extroverts direct more of their attention towards other people, objects and events".

In summation, according to Ross, Orr, Sisic, Arseneault, Simmering and Orr (2009, pg.579) Extroversion denotes a tendency to be both sociable and able to experience positive emotions. In addition to liking people and being sociable, Costa and McCrae (1992, pg. 15) argue that extroverts are also assertive, talkative, active, and cheerful in disposition. At the other end of the continuum, Costa and McCrae (1992, pg.15) contend that Introversion should be considered as the absence of Extroversion, rather than merely it's opposite. They describe Introverts as being reserved, independent, and preferring to be alone; they are not unhappy or pessimistic.

2.3.2 Neuroticism trait

The second of Norman's dimensions—Emotional stability—has more frequently been called Neuroticism; Barrick and Mount (1991, pg.4) state that it is considered by researchers such as Borgatta (1964), and Hakel (1974), to be broadly similar to Eysenck's Stability/Instability dimension. Barrick and Mount (1991, pg.4)

further contend that common traits associated with this factor include "being anxious, depressed, angry, embarrassed, emotional, worried, and insecure".

Ross et al. (2009, pg.579) further explain that Neuroticism reflects a person's tendency to experience psychological distress; with high scorers tending to display heightened sensitivity to perceived threats. In addition, high scorers, according to Costa and McCrae (1992, pg.14) can be prone to having irrational ideas: "to be less able to control their impulses and to cope more poorly than others with stress". In contrast, they consider individuals who score low on Neuroticism to be emotionally stable: "they are usually calm, even-tempered, and relaxed, and they are able to face stressful situations without becoming upset or rattled" (Costa and McCrae, 1992, pg.15).

2.3.3 Agreeableness trait

The third of Norman's dimensions—Agreeableness—has also been termed, according to Barrick & Mount (1991, pg.4): Likeability, by Borgatta (1964), and Hakel (1974); Friendliness, by Guilford and Zimmerman (1949); and Compliance versus Hostile Non-Compliance, by Digman and Takemoto-Chock (1981). Morley et al. (2004, pg.36) describe Agreeableness as referring to an individual's tendency "to have satisfactory, easy, and pleasant working relationships with those around them". Eysenck's Psychoticism super-factor was found to correspond to the combination of low Agreeableness and low Conscientiousness, according to researchers such as Clark and Watson (1999, as cited by Pervin et al. 2005, pg. 255); and Costa and McCrae (1995, as cited by Pervin et al. 2005, pg. 255).

In summation, Agreeableness is described by Ross et al. (2009, pg.579) as a personality trait that reflects a tendency to be trusting, sympathetic and co-operative. According to Costa and McCrae (1992, pg. 15), the agreeable person is fundamentally altruistic; they are eager to help others and believe others will be equally helpful in return. They claim that the disagreeable person is egocentric, sceptical of other peoples' intentions, and are competitive rather than co-operative.

2.3.4 Conscientiousness trait

There has been many disagreements regarding the essence of this dimension,

according to Barrick and Mount (1991, pg.4). Some researchers, such as Hogan (1983), and John (1989), (both cited by Barrick & Mount, 1991, pg.4) suggest that Conscientiousness reflects dependability traits such as being careful, thorough, responsible, organised, and planful. Others, such as Borgatta (1964); McCrae and Costa (1985, 1987); and Digman and Inouye (1986), (all also cited by Barrick & Mount, 1991, pg.4), include these dependability traits, but also include volitional variables such as hard working, achievement-oriented, and persevering.

Conscientiousness, according to Costa and McCrae (1992, pg.16) has been linked to an individual's tendency to be competent, ordered, dutiful, achievement orientated, self-disciplined and strong-willed; and contrasts with those who are lackadaisical and sloppy. High scoring is associated with academic and occupational achievement, but may lead to "annoying fastidiousness, compulsive neatness, or workaholic behaviours" (Costa and McCrae, 1992, pg. 16). Pervin et al. (2005, pg. 255) claim that low scorers on this dimension are aimless, less exacting in applying themselves, lazy, careless, lax, negligent, weak-willed, and hedonistic.

2.3.5 Openness to Experience trait

The last of the five dimensions has been called by Norman (1963): Openness to Experience. Researchers such as Digman (1990, as cited by Barrick & Mount, 1991, pg.5) contend that the Openness dimension comprises the essence of what others have called this dimension: Intellect; and Culture. Barrick and Mount (1991, pg. 5) claim that traits commonly associated with Openness to Experience include "being imaginative, cultured, curious, original, broad-minded, intelligent, and artistically sensitive". Furthermore, Morley et al. (2004, pg. 36) state that people who are Open to Experience tend to be more "predisposed to change and more willing to adapt in uncertain or changing circumstances".

In summation, Ross et al. (2009, pg.579) contend that individuals who score high on this personality trait show a willingness to consider alternative approaches, be intellectually curious, and enjoy artistic pursuits. According to Costa and McCrae (1992, pg. 15), they can also be unconventional, willing to question authority, and prepared to entertain new ethical, social and political ideas. Also according to these

researchers, low Openness scorers tend to be conventional in behaviour and conservative in outlook, preferring the familiar to the novel.

2.4 How personality traits can be measured

2.4.1 The NEO PI-R & NEO-FFI

In the early 1980's, Costa and McCrae began developing the NEO Personality Inventory to measure three broad personality dimensions: Neuroticism, Extraversion, and Openness to experience; this scale was first published in 1985. In 1992, they added measures for the Agreeableness and Conscientiousness dimensions, and published their 240-item NEO Personality Inventory, Revised (NEO PI-R; Costa & McCrae, 1992); they also provided a shorter 60-item NEO-FFI scale.

Costa and McCrae (1992, pg.1) describe the NEO PI-R as a concise measure of the five major personality traits, along with some of the more important facets that define each trait. On the NEO PI-R, each trait is represented by six specific scales that measures facets of the trait. The Conscientiousness trait, for example, includes items measuring competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Costa and McCrae contend that together, the five trait scales and 30 facet scales incorporated into the NEO PI-R allows for a comprehensive assessment of adult personality.

In general, John and Srivastava (1999, pg. 23) concede that the NEO questionnaires represent the best-validated Big Five measures in the questionnaire tradition. However, at around the same time that the NEO questionnaires were being published, John, Donahue, and Kentle (1991) devised the Big Five Inventory.

2.4.2 The Big Five Inventory (BFI)

The 44-item BFI was developed to address the need for a shorter instrument than the NEO questionnaires. The BFI has been used frequently in research settings where subject time is at a premium; its short-phrase item format, according to John and Srivastava (1999, pg.23) offers less complexity than the sentence format used by the NEO questionnaires. These authors also claim that one of the advantages of the BFI is its efficiency, taking only about five minutes of administration time, compared with about 15 minutes for the NEO PI-R.

Furthermore, the BFI items are shorter and easier to understand than the NEO-FFI items (Benet-Martinez & John, 1998, as cited by John & Srivastava, 1999, pg.28). The BFI does not use single adjectives as items; instead, it uses short phrases based on the trait adjectives known to be prototypical markers of the Big Five (John, 1989, as cited by John & Sristava, 1999, pg.22). In U.S. and Canadian samples, the alpha reliabilities of the BFI scales typically range from .75 to .90 and average above .80; three-month test-retest reliabilities range from .80 to .90, with a mean of .85. Validity evidence includes substantial convergent and divergent relations with other Big Five instruments as well as with peer ratings.

In summary, John and Srivastava (1999, pg.29) conclude that when participant time is not at a premium; when participants are well educated and test-savvy; and when the research question calls for the assessment of multiple facets for each of the Big Five dimensions, then the full 240-item NEO PI-R would be most useful. Otherwise, the 44-item BFI would seem to offer a measure of the core attributes of the Big Five that is at least as efficient as and easier to understand than the 60-item NEO-FFI.

2.5 Personality traits and the Internet

Wilson, Fornasier, and White (2009) explain that as SNSs are a relatively recent phenomenon, research investigating the personality characteristics of people who access them is limited; in contrast, research investigating the personality of people who access the wider Internet has been growing. Goby (2006, pg.12) claims that one of the main reasons for this growth is the fact that personality may be the key to why some Internet users have more deep and satisfying online relationships than others.

Reviewing the research into personality factors determining general Internet usage on a trait-by-trait basis, the following has been ascertained:

2.5.1 Extroversion-Introversion

Extroversion has been found to be negatively related to higher levels of Internet usage among undergraduate students, according to Landers and Lounsbury (2004, pg.289). This finding suggests that in comparison to Extroverts, Introverts have

either more spare time or were more attracted to the Internet's online appeal. Furthermore, Extroverted people, according to Amiel and Sargent (2004, pg.721), tended to use the Internet for instrumental purposes, such as researching, voicing their own opinions and sharing music with others; while they tended to reject the use of the Internet for social purposes, because they preferred social contact in more traditional contexts. Goby (2006, pg.11) also supported this finding, claiming that extroverts tended to reject the Internet as a medium by which to communicate with others; they preferred instead to communicate with others off-line.

According to Amichai-Hamburger and Ben-Artzi (2003, pg.127), both introverted and highly neurotic females were the most frequent users of the social services available on the Internet; more than other personality-type users. They contend that these findings suggest that introverted and neurotic females may feel more protected and safer when using the Internet to socially interact; essentially because it is an anonymous, virtual environment, which lacks the need to reveal physical appearance.

2.5.2 Openness to Experience

Although agreeing with Landers and Lounsbury (2004) that introversion may predict general Internet usage, McElroy, Hendrickson, Townsend, and DeMarie (2007, cited by Wilson et al. 2009), found that Neuroticism, and Openness to Experience predicted higher levels of time spent online. According to Tuten and Bosnjak (2001, pg.395), Openness to Experience was positively and significantly related to the entertainment functions provided by the Internet; they suggest that this finding implies that young adults using SNSs might score high on Openness to experience simply because SNSs are a new innovation.

2.5.3 Agreeableness; Conscientiousness; and Neuroticism

Agreeableness was found by Landers and Lounsbury (2004, pg.289) to be negatively related to higher levels of Internet usage; suggesting that those who do not get along with others spend their time on the Internet, possibly because there are fewer demands for agreeable behaviour. Lower scores on conscientiousness were also found by these researchers to be associated with high Internet use, and they suggest that this is due to the Internet's limited rules and unstructured policies.

In addition, Amichai-Hamburger, Wainapel, and Fox (2002, pg.127), and Amiel and Sargent (2004, pg.721), found that neurotic people reported being comfortable and feeling a sense of belonging when interacting with others via the Internet. Amichai-Hamburger et al. (2002, pg.127) state that introverted and neurotic people "locate their 'real me' on the Internet, while extroverts and non-neurotic people locate their 'real me' through traditional social interaction".

2.6 Expressing Personality on SNSs

Gosling, Ko, Mannarelli and Morris (2002, pg.380) proposed two mechanisms by which an individual's personality can become expressed in an environment: identity claims and behavioural residue. Identity claims are declarations or behaviours made by individuals to convey how they would like to be seen; while behavioural residues refer to inadvertent clues left by one's behaviour (Gosling, Gaddis, & Vazire, 2007).

According to Evans and Gosling (2007), online Facebook profiles consist predominantly of identity claims; profiles generally lack behavioural residues by virtue of being highly structured and deliberately created by the user. As a result, large numbers of acquaintances, or large numbers of self-photographs posted, are examples of identity claims on a Facebook profile, and can be considered by the model to be expressions of personality.

2.7 Personality traits and SNSs

The five factors of personality, according to Wehrli (2008, pg.5), have been shown to relate to people's behaviour in a wide variety of social contexts; he further claims that they may predispose peoples' motivations to form more or fewer social ties on SNSs. Furthermore, looking at the psychological predictors of why young adults use SNSs, Wilson et al. (2009) found that personality was a significant factor in predicting both SNS usage and SNS addictive tendency.

Specific to Facebook, Ross et al.'s (2009, pg.582) study concluded that personality variables were associated with some aspects of Facebook usage: individuals scoring high on the trait of Extroversion were found to belong to

significantly more Facebook groups; and those scoring high on Openness to Experience were associated with a greater tendency to be sociable through Facebook.

Further reviewing of previous research reveals the following findings on a trait-by-trait basis:

2.7.1 Openness to Experience

Openness to experience may have the strongest influence on social interactions of all the five factors, according to McCrae and Costa (1996, as cited by Wehrli, 2008, pg.5). In relation to SNSs, Wehrli (2008, pg.5) suggests that individuals with high scores on Openness would be more likely to try, to use, and to keep up with new social networking technologies.

Regarding Facebook usage, in addition to their findings that high scorers on Openness have a tendency to seek sociable interactions on Facebook, Ross et al. (2009, pg.582) also found that high scorers tended to have lower levels of computer mediated communications (CMC) skills. They suggest that this finding may be a result of high Openness to Experience scorers being more interested in trying new things than they are in trying to figure out how things work.

In contrast to the previously mentioned research findings, Wilson et al. (2009) report that Openness to Experience did not have any impact on SNS use in their study. They suggest that SNSs may have lost their 'new' experience appeal, and have become 'old news' for those eager to experience even newer activities.

2.7.2 Extroversion

In relation to SNSs, Anderson, John, Keltner, and Kring (2001, pg.128) found extroverts to have larger networks and showed higher contact frequencies. Wehrli (2008, pg.5) claims extroverts approach others more easily and engage in more social interaction; they are more outgoing and assertive.

Wilson et al. (2009) report that participants scoring high on Extroversion in their study spent more time using an SNS; a finding inconsistent with that of Landers and Lounsbury's (2004) general Internet usage study. Wilson et al. speculate that the numerous functional abilities and unlimited contact with friends offered by SNSs may

be specifically attractive to extroverts, who tend to require a high level of stimulation and a large social network.

Specifically investigating Facebook usage, although Extroverts were found in Ross et al.'s (2009) study to belong to significantly more Facebook groups, high levels of Extroversion was not found to be associated with number of Facebook 'contacts' or communicative functions of Facebook. Ross et al. (2009, pg. 582) suggest this finding is consistent with Amiel and Sargent's (2004) findings, and they further suggest that "although those high on the trait of Extroversion may utilise Facebook as a social tool, they do not use Facebook as an alternative to social activities". However, in contradiction to these findings, Wehrli (2008, pg.11) found that in relation to SNSs, Extroversion had the largest influence on friendship, and that for a standard deviation increase in Extroversion: "a student's expected mean number of friends increases by 29 percent".

2.7.3 Conscientiousness

Conscientious people are dependable, careful, and have a high will to achieve. SNSs, according to Wehrli (2008, pg.5) do not promise fast and obvious returns to Conscientious people. As a consequence, therefore, the author claims that high Conscientiousness scorers would thus have lower numbers of contacts and networks; they will "refrain from high investments in SNSs, they will stick to their main goals and try to avoid such sources of distraction". In his study of 1560 student SNS users, Wehrli (2008, pg.11), found that Conscientiousness did significantly reduce the number of friends a user had acquired on their SNS.

Wilson et al. (2009) also found that low conscientiousness people spent a higher level of time using SNSs. They speculate that un-conscientious people may occupy their time on SNSs while procrastinating about completing other tasks. In contrast to this finding, Ross et al. (2009) found no support for their hypothesis that: "Conscientiousness would be negatively related to Facebook usage in order to balance academic pursuits and requirements". These authors make the point that because this finding was contrary to previous general Internet usage research, this trait warrants attention in future research.

2.7.4 Agreeableness

Agreeable persons tend to be courteous, trusting, inclined to cooperate, but known to avoid conflict. McCarty and Green (2005, as cited by Wehrli, 2008, pg.5) report agreeableness to have a favourable influence on social interactions; while Wehrli (2008, pg.5) contends that agreeable individuals will not reject an offer of friendship.

Agreeableness did not predict SNS usage in Wilson et al.'s (2009) study, or Ross et al.'s (2009) study; further findings inconsistent with that of Landers and Lounsbury (2004). Wilson et al. (2009) suggest that although disagreeable people may use the Internet more, they are not necessarily engaging with other people socially on it, but rather using it for more functional purposes.

2.7.5 Neuroticism

This refers to the extent that individuals experience and display negative affects like anxiety and guilt; it is also tied to the ability, or lack of it, to cope with stress (Wehrli, 2008, pg.6). The author explains that people with high scores on Neuroticism tend to believe that they are not attractive to others and are fearful of rejection; possibly leading to high activity levels on SNSs derived from an intensified desire for an unstained self-presentation.

In contrast, Wilson et al. (2009) found that Neuroticism was not associated with increased levels of SNS usage. They contend that because of the insecure and anxious nature of neurotic people, posting photos and information on an SNS may not be an attractive proposition, and like disagreeable people, may prefer to use the Internet for other functions.

2.8 Motivations for using SNSs

Pelling and White (2009) claim that young adults are more likely than any other age group to have a SNS and engage in higher levels of use; 1.46 hours per day, and logging in 4.19 times per day, according to Raacke and Bonds-Raacke (2008, pg.171). Facebook.com's (2010) own press release claims that the average user spends 55 minutes per day using Facebook; they also have an average of 130 friends added to their profile.

However, despite the increasing popularity of SNSs, there is still little known about the motivations that predict people's level of use. Looking at general Internet usage, Stafford, Kline, and Dimmick (1999, as cited by Goby, 2006, pg.5) found that interpersonal communication was the most frequently cited reason for logging on.

Lampe, Ellison, and Steinfield (2006) reported that the main motivation for using Facebook of their sample was: "to keep in touch with an old friend or someone I knew from high school". In a longitudinal study looking at how use of Facebook has changed over a three year period of time, Lampe, Ellison, and Steinfield (2008, pg.728) found that usage motives remained fairly constant, and that their users were typically using the site to maintain lightweight contact with relationships they had developed off-line. Only a few of their users reported that they used Facebook to make connections with people they did not know already. In agreement, Ross et al. (2009, pg.582) found that a motivation to communicate was influential in terms of Facebook use.

In addition, the need to belong was found to correlate positively with the willingness to join a social network site by Gangadharbatla (2008, as cited by Christofides, Muise, & Desmarais, 2009, pg.342). Christofides et al. (2009, pg.342), explain that for young adults, the need to be a part of their social group and their need for popularity are key elements in their lives. Therefore, having a presence on sites such as Facebook enables them to connect to a social network, and being visible within this social network is perceived to be an important aspect of popularity; the need for popularity was found to be a significant predictor of disclosure on Facebook and a motivation for using the site (Christofides et al. 2009, pg.342).

Identity is constructed by disclosing personal information, and this construction is linked with popularity. Christofides et al. (2009, pg.343) report that in order to have a presence on the Facebook site, users perceived that they had disclosed a variety of personal and identifying information, such as their birthday, e-mail address, profile picture, pictures with friends, and even pictures at parties and drinking with friends. These same users also reported that information control and privacy were important to them. Returning to personality characteristics, and why they are important to investigate motivation in relation to SNS usage, Christophes et al. (2009,

pg.343) suggest that the balance between privacy and disclosure issues was influenced by different aspects of personality.

Finally, although SNS addictive tendency, as outlined by Wilson et al. (2009), is outside the scope of the present study, it is important to recognise that it could also be a motivation factor for SNS usage; the user is motivated to use Facebook because they are addicted to using it.

3. Limitations of previous work

3.1 Lack of previous research

From the review of the literature of previous research investigating motivations and personality traits that have been found to influence Facebook usage, one of the major limitations that can be ascertained is the general lack of research in this area; for example, Wilson et al's. (2009) study was at the time of review only going to the publisher. Furthermore, no known study has been conducted on an Irish Facebook user population. This lack of research is in contrast to the large amount of research investigating influences on general Internet usage.

3.2 Cultural variables

The Wehrli (2008), Wilson et al. (2009), and Ross et al. (2009) studies—the three main core sources for the current study—each seek to generalise their findings to the entire population of Facebook users from a student population in their respective countries. Wehrli (2008) collected his data from 1560 students at ETH Zurich, Switzerland; Wilson et al. (2009) collected their data from 201 students at a major Australian university; while Ross et al. (2009) collected their data from a sample of 97 students at a university in South-western Ontario, Canada.

As outlined in the literature review, the user demographics of Facebook has expanded rapidly to encompass the entire adult age-range, and cultural background. Generalising the findings from a student sample in a particular country to the entire Facebook population raises the issue of external validity; and this has to be a limitation of previous work in this field. This limitation echoes the original argument made by Gergen (1973, as cited in Hunt, 2007, pg. 501) and paraphrased into the assertion that it is unjustifiable to make generalisations about human nature on the basis of mini-experiments with college undergraduates. It is worth noting, as the literature review implies, that SNSs—and Facebook in particular—are no longer the sole preserve of students; none of the core sources for the current study takes this factor into account.

3.3 Age related issues

Evident in the analysis of previous research in this area—specifically the three core sources—is that none takes into account the issue that personality research consistently indicates that: "personality traits tend only to become very stable the further into adulthood a person is" (Pervin, Cervone & John, 2005, pg.267); implying that personality traits in young adults are subject to change and therefore not reliable indicators on which to base generalised assumptions.

Regarding the age of their respective sample populations, Wilson et al. (2009) collected data from a population aged 17-24; Ross et al.'s (2009) average age of participant was 21.69 years; while Wehrli (2008) makes no reference to any age criteria, other than the reflection that response rates to his survey decreased as age increased. Basing their respective findings on a population sample of young students—entirely younger than 24 in both Wilson et al's. (2009) and Ross et al.'s (2009) respective studies—when personality trait research suggests that it is only as we advance into adulthood do personality traits become stable, again raises the issue of the external validity of the respective findings.

4. Current study

4.1 Purpose and objective

A core objective of this study is to ascertain the individual personality characteristics that have a significant relationship to high levels of usage of the Facebook SNS. It is also an objective to investigate the individual personality characteristics that influence a specific online social networking behaviour: the number of friend's contacts maintained. A further objective is to ascertain the most commonly cited motives for using the Facebook social network site.

To achieve the above stated objectives, this study obtained the measures of personality traits from a sample population of Irish Facebook users via the BFI personality scale (John & Srivastava, 1999). Finally, the study obtained an indication of the motivations for using Facebook via a demographic and Facebook usage questionnaire.

As previously stated, there is a lack of research in the area of personality traits and their influence on Facebook usage in general; or in an Irish context in particular. In addition, there is also a lack of research into the motivations behind Facebook usage. A primary purpose of this study is to expand these limited knowledge bases.

4.2 Establishing the Hypotheses to be investigated

Having reviewed the previously published research, and using the various findings as templates to ascertain possible hypotheses for the current study, it was therefore decided: to investigate the respective relationships between two personality traits—Agreeableness and Openness—and high levels of usage; and to investigate the individual personality characteristics that possibly influences the number of friend's contacts maintained using the scores from the Extroversion and Conscientiousness traits respectively. Furthermore, Extroversion and Conscientiousness scores were investigated in relation to this last context in an attempt to replicate Wehrli's (2008, pg.11) findings, but with an Irish Facebook user population.

4.3 Research questions

The following are the research questions that this study seeks to answer:

1. What motivates people to use Facebook?
2. What individual personality attributes affect whether someone is a high frequency user of Facebook?
3. On individual Facebook profiles, why do some people accumulate a large number of acquaintances while others only maintain a close circle of friends?

4.4 Hypotheses

H1: Keeping in contact with existing friends will be the most commonly cited motive for using Facebook.

H2: Facebook users with low numbers of friends' will differ in Conscientiousness scores than users with high numbers of friends'.

H3: Facebook users with large numbers of friends' will differ in Extroversion scores than users with low numbers of friends.

H4: High frequency users of Facebook will differ in Agreeableness scores than lower frequency users.

H5: High frequency users of Facebook will differ in Openness scores than lower frequency users.

Methodology

1. Design

To investigate Hypothesis H1, a mean value score of the most popular answer on the Facebook SNS Usage questionnaire to the question "I use my Facebook profile to?" was used to ascertain the participants motivations for using Facebook.

The current study utilised a quantitative between-subjects (un-related samples) design to investigate each of the other four hypotheses. The dependent variable for the Hypotheses H2; H3; H4; and H5 was the respective personality trait to be measured.

The independent variable for the investigation of the Hypotheses H2 and H3 respectively was the number of friends' contacts. For the analysis, this was categorised into three groupings: 0-30; 31-80; and Greater than 80. A convenience sample of 200 'friends of friends' with Irish surnames had been undertaken prior to initiation of data collection to determine the average number of friends' contacts Irish Facebook users have (see Appendix A, Table 8). The mean number of friends (n = 200) was 79.295; therefore for the current research, high numbers of friends' contacts was considered to be those who listed their number of friends on Facebook profiles as being 'greater than 80' in number.

The independent variable for the investigation of the Hypotheses H4 and H5 respectively was the reported level of usage of Facebook. For the analysis, this was categorised into four groupings: Less than once a week; 1-2 times a week; 3 or more times a week; and at least once a day. These categorisations were based on the findings of the Joinson (2008, pg.1029) study, where 66.3 percent of the participants (n = 241) reported using Facebook daily, 22.5 percent reported using it several times per week, 6.7 percent reported visiting it once a week on average, and 4.2 percent reported visiting the site less than once per week. High frequency Facebook users in the current study were considered to be those who used Facebook 'at least once a day'.

2. Participants

A convenience sample of 155 Irish Facebook social network site users, of mixed gender (Males = 78, Females = 77), formed the sample population. A minimum sample size of 125 participants was calculated to be necessary using the DSSresearch.com toolkit for calculating the sample size of a one-sample two-tailed test, using average values.

A further criterion for inclusion to the sample population was that each participant had to be 24 years of age or over. Pervin, Cervone and John (2005, pg.267) contend that it is generally accepted that personality dimensions become very stable the further into adulthood a person is.

A study of SNS usage based on age, by Rapleaf (2008), found that 46 percent of Facebook users were in the age group of 18-24, 24 percent were in the age group of 25-34, and 6 percent were in the age group of 35- 44. In the current study, the age criteria was classified into four different age groups, with participants in the 'younger than 24' group being excluded; this study is intended to be based on typical Irish Facebook users, and 24 years of age was considered to be the minimum age for displaying stable personality traits while still being within the optimum age range for most frequent users of Facebook.

3. Ethical issues

Prior to commencing the online survey, each participant was requested to read the informed consent form (see Appendix B). This principally outlined that all personal information would remain anonymous; that there were no disguised procedures involved; and that each participant was free to withdraw from participation at any time and without consequences ensuing. By agreeing to take part in the survey they were also indicating that they had understood the informed consent form and that they were over 18 years of age. Having read all this, and in order to commence the survey, they were then requested to click that they agreed to take part in the online survey.

To respect the privacy and confidentiality of the participants, in the demographic questionnaire section, participants were advised that they need only supply their initials and not their name, if they chose.

When they had finished the survey and clicked to submit their answers, each participant was directed to a 'Thank-you' page which also included a debrief section (see Appendix G), summarising the aims of the survey and outlining the traits that the personality test would score. They were informed that although the findings of the study may be published online and in the form of journal articles and conference proceedings in print, their individual data would not be identifiable in any of the published accounts. Finally, participants were informed that if they would like feedback on how they had scored they could contact the investigator via email and that they would receive feedback expediently.

4. Materials

Each participant was required to have access to the Internet, and they were directed to the Surveygizmo.com online survey via 'request for suitable participants' link pages distributed to friends and friends-of-friends on Facebook, and through word-of-mouth emails and blog links from friends of the researcher.

The online survey consisted of a participant consent form (see Appendix B); a Demographic Questionnaire (see Appendix C); a Facebook Social Network Site Usage Questionnaire (see Appendix D); the Big Five Inventory (BFI) personality scale (John & Srivastava, 1999) (see Appendix E); and a participant debrief section (see Appendix G).

4.1 Demographic Questionnaire

In order to obtain some of the demographic details of each of the participants', a 4-item demographic questionnaire (see Appendix C) was administered. To ensure both anonymity and confidentiality, while also taking a record of those participating, the first question asked each participant to enter either their name or their initials; whichever they preferred. This was followed by a gender categorisation question, and then a question enquiring whether the participant was Irish or not. The final question in this part of the survey was an age group categorisation question; the participant was required to tick which age group category they belonged to: younger than 24; 24-34; 35-44; and older than 44.

4.2 Facebook SNS Usage questionnaire

This was a 17-item questionnaire (see appendix D); 14 of these items comprised of a Likert type five-point scale, with responses ranging from 'Not at all' to 'A great deal'; rating levels of agreement on the 14 different statements: 'I use my Facebook profile to...' in order to ascertain motivations for using Facebook. The other 3 items in this questionnaire primarily contained criteria to ascertain levels of Facebook SNS usage and numbers of friends' contacts.

4.3 BFI Index

As this survey was to be conducted online—in geographically remote locations—it was considered essential that the entire online survey could be completed relatively quickly in order to ensure adequate response rates. The Big Five Index (BFI), (John & Srivastava, 1999) is a 44-item measurement scale with high validity and reliability scores against comparative but much longer to administer personality tests, such as the NEO PI-R.

The BFI is a self-report inventory, comprising of a five point Likert scale with responses ranging from 'Disagree strongly' to 'Agree strongly'; and provides overall measures of Extroversion; Openness; Agreeableness; Neuroticism and Conscientiousness (see Appendix D).

4.4 BFI Scoring

The participants were required to write a number from 1 to 5, next to each of the 44 statements, to indicate the extent to which they agreed or disagreed with that statement; with 1 designating 'Disagree strongly' and 5 designating 'Agree strongly'. Numbers in between 1 and 5 would represent different levels of these two extremities.

Scoring for each personality dimension was achieved by awarding one point for each answer that corresponded with the system as directed on the scoring key (see Appendix F). There are 9 items on the scale designed to rate Agreeableness; 8 items to rate Extroversion/Introversion; 8 items to rate Neuroticism; 9 items to rate Conscientiousness; and there are 10 items to rate Openness to Experience.

Total maximum scores for each personality dimension were: 45 for Agreeableness; 40 for Extroversion/Introversion; 40 for Neuroticism; 45 for Conscientiousness; and 50 for Openness to Experience.

5. Procedure

5.1 Pilot Test

To paraphrase Harris (2002, pg. 191), in order to uncover any serious flaws or ambiguities in the questions and survey design that might have been overlooked, and to generally fine-tune the procedure, a pilot test of the entire procedure as outlined below was first carried out using 10 participants. From the feedback of this pilot test it was ascertained that two of the original Demographic questionnaire questions were ambiguous—suitable changes were subsequently made—and that the entire survey took approximately five minutes to complete.

5.2 Online Survey

As stated previously, the online survey consisted of: a Demographic Questionnaire; a Facebook SNS Usage Questionnaire; and the BFI. Oral feedback from the pilot test suggested the survey took approximately five minutes to complete, and upon completion, participants were thanked for their contribution and asked to read the debrief section (see Appendix G) outlining the primary goals of the research. The information obtained in this survey was collected and analysed. Statistical analysis was performed using SPSS version 16.

Results

1. Descriptive statistics

1.1 Length of time per visit

The mean value for the length of time the participants in this study (n = 155) reported spending on each visit to Facebook was 27.58 minutes; *SD* = 31.63; the mean value for the length of time per visit of the male participants (n = 78) was 24.10 minutes, *SD* = 24.73; and the mean value for the female participants (n = 77) was 31.10 minutes, *SD* = 37.19 (see Appendix H, Table 9).

Separating the sample population into two groupings based on age, those participants aged '24 – 34' years had a mean value of 32.66 minutes per visit (*SD* = 4.30), while those aged 'Older than 34' years had a mean value of 22.30 minutes per Facebook visit (*SD* = 2.51) (see Appendix H, Table 10).

1.2 Usage levels

The majority of the participants (47.1%) reported using Facebook at least one or more times a day (see Figure 1 below; and also Appendix H, Table 11).

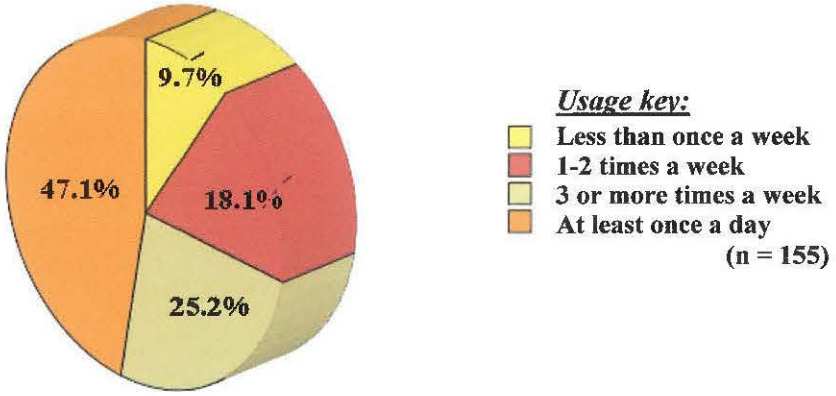

Figure 1. Pie chart representing reported usage of Facebook.

57 percent of the participants aged 24 -34 (see Appendix H, Table 12) reported using Facebook at least once a day; 36.8 percent of the participants categorised as 'Older than 34' reported using Facebook at least once a day (see Appendix H, Table 12).

1.3 Personality traits

The respective mean values of the sample population for each of the five personality traits are set out in Table 1 below (see also Appendix H, Table 13). Also displayed are the maximum possible scores obtainable on each personality trait.

Table 1. The Mean values for each of the personality traits

Personality Trait	Mean	Std. Dev.	Max. Possible score
Conscientiousness	**33.62**	6.01	45
Agreeableness	**35.04**	5.28	45
Openness	**37.18**	5.78	50
Extroversion	**28.27**	5.33	40
Neuroticism	**21.23**	5.76	40

2. Results for the investigation of motivations for using Facebook (H1)

H1: *Keeping in contact with existing friends will be the most commonly cited motive for using Facebook.*

Consistent with expectations, the answer "to keep in contact with existing friends" (Q1) had the highest mean value of 3.68, *SD* = .97 (see Figure 2) across all 14 answer statements, to the question "I use my Facebook profile...?" Keeping in contact with existing friends was therefore ranked the most common reported motive, by the sample population, for using Facebook.

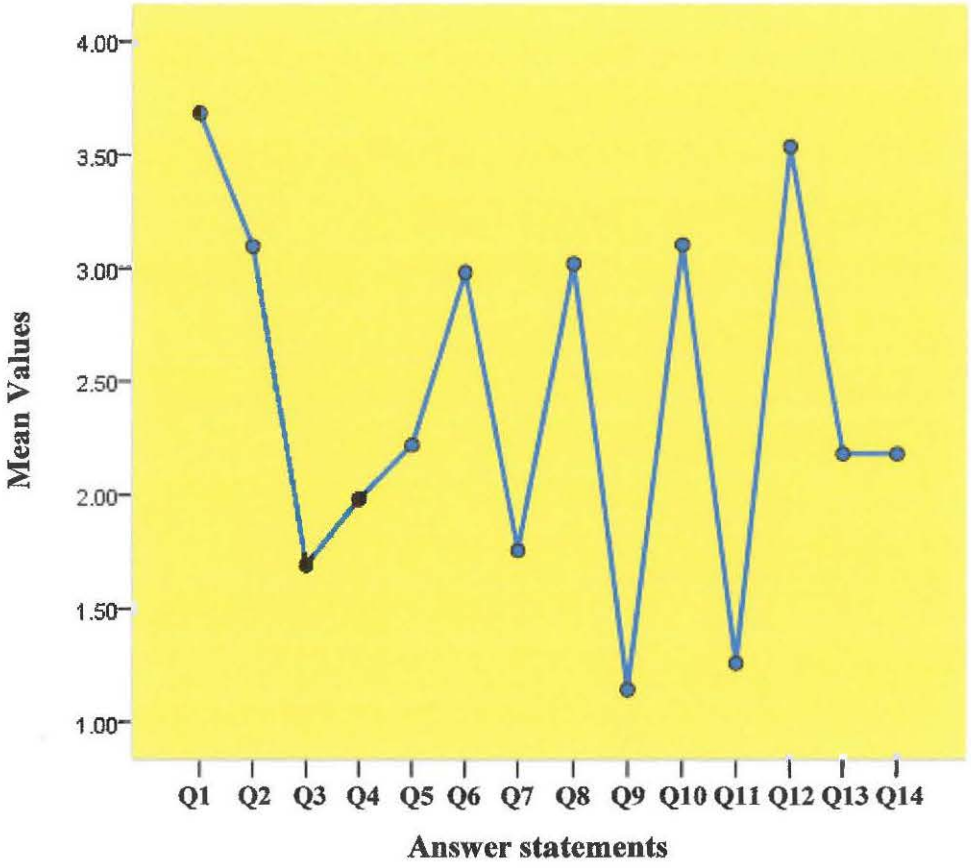

Figure 2. Mean values for each of the answer statements

"To pass the time when I am bored" (Q12), with a mean value of 3.54, *SD* = 1.05, ranked second on a descending scale where the highest mean value was ranked first (see Table 2). The statement with the lowest mean value of 1.14, *SD* = .46, and thus ranked 14th, was: "to possibly make romantic contacts" (Q9, see Table 2).

Table 2. The Mean values for the answer statements in descending order of rank

Rank	Name	Answer statement	Mean	Std. Deviation
1	Q1	To keep in contact with existing friends	**3.68**	.97
2	Q12	To pass the time when I am bored	**3.54**	1.05
3	Q2	To keep in contact with family and relations	**3.10**	1.12
4	Q10	To share photographs	**3.10**	1.15
5	Q8	To share information with others	**3.02**	1.18
6	Q6	To keep in contact with acquaintances I have previously met	**2.98**	1.03
7	Q5	To state what I am doing	**2.22**	1.16
8	Q13	To play games	**2.18**	1.32
9	Q14	To take quizzes	**2.18**	1.03
10	Q4	To express how I am feeling	**1.98**	1.04
11	Q7	To make contact with new people	**1.75**	.96
12	Q3	To keep in contact with persons I am already romantically involved with	**1.69**	1.08
13	Q11	For employment purposes	**1.26**	.70
14	Q9	To possibly make romantic contacts	**1.14**	.46

Analysing the scores for the entire sample population, a paired *t*-test (see Appendix I, Table 14) showed no significant difference between the mean values of the top two ranked answer statements ($t = 1.693$, df = 154, $p = .094$, two-tailed). This result is in contrast to the paired *t*-test between the mean values of the top ranked motive (Q1) and the third ranked motive (Q2) which did show a significant difference, ($t = 6.588$, df = 154, $p < .0005$, two-tailed; see Appendix I, Table 14). There was also a similar significant difference ($t = 4.021$, df = 154, $p < .0005$, two-tailed; see Appendix I, Table 14) between the mean values of the second ranked motive (Q12) and the third ranked motive (Q2).

2.1 Gender differences in motivations for usage

Specifically analysing the scores by gender, Males in the sample population had a slightly higher mean value ($M = 3.56$, $SD = .93$; see Table 3 below) for the motive of using Facebook 'to pass the time when bored' (Q12) than for the motive of 'keeping in contact with existing friends' (Q1) ($M = 3.55$, $SD = .91$; see Table 3 below). These two mean values were the highest mean values respectively for the Male sample population across all 14 answer statements (see Appendix I, Table 15).

Furthermore, a paired *t*-test showed no significant difference between the mean values of the top two ranked answer statements (Q1 & Q12) for the Male sample population (t =.116, df = 77, p = .908, two-tailed).

Table 3. The Mean values shown by gender for the two most commonly cited usage motives

Motive		Mean	Std. Dev.
Q1: Keeping in contact with existing friends	Males	**3.55**	.91
	Females	**3.82**	1.01
Q12: Boredom	Males	**3.56**	.93
	Females	**3.51**	1.15

Females in the sample population had a higher mean value (M = 3.82, SD = 1.01; see Table 3 above) for the motive of 'keeping in contact with existing friends' (Q1) than for the motive of using Facebook 'to pass the time when bored' (Q12) (M = 3.51, SD = 1.15; see Table 3 above). These two mean values were also the highest mean values respectively for the Female sample population across all 14 answer statements (see Appendix I, Table 15). However, a paired *t*-test showed a significant difference between the mean values of the top two ranked answer statements (Q1 & Q12) for the Female sample population (t = 2.289, df = 76, p = .025, two-tailed).

2.2 Age differences in motivations for usage

For the purposes of analysing the differences in motivations for usage of Facebook based on the age of the participants, two distinct age groupings were compared. Those participants aged '24 – 34' years were grouped together (n = 79), and those participants aged 'older than 34' were grouped together (n = 76).

Participants in the age grouping of '24 – 34' had a higher mean value for the motive of 'keeping in contact with existing friends' (Q1) (M = 4.01, SD = .09) than participants in the 'older than 34' age grouping (M = 3.34, SD = .97) (see Table 4 below; and also Appendix I, Tables 16 & 17). Both age groupings ranked this motive (Q1) as their most common motivation for using Facebook.

Participants in the age grouping of '24 – 34' had a higher mean value for the motive of 'passing the time when bored' (Q12) ($M = 3.81$, $SD = .93$) than participants in the 'older than 34' age grouping ($M = 3.25$, $SD = 1.08$) (see Table 5 below; and also Appendix, Tables 16 & 17). Both age groupings ranked this motive as their second most common motivation for using Facebook.

Table 4. Mean values in the age grouping '24-34' for the five most commonly cited motivations

Age 24 – 34

Rank	Qn.	Mean	Std. Dev.
1	Q1	**4.01**	.09
2	Q12	**3.81**	.93
3	Q10	**3.37**	.99
4	Q8	**3.20**	1.15
5	Q6	**3.16**	.95

Table 5. Mean values in the age grouping 'older than 34' for the five most commonly cited motivations

Older than 34

Rank	Qn.	Mean	Std. Dev.
1	Q1	**3.34**	.97
2	Q12	**3.25**	1.08
3	Q2	**3.03**	1.15
4	Q10	**2.83**	1.24
5	Q8	**2.83**	1.19

2.2.1 Analysing the '24 -34 years' of age group

A paired *t*-test (see Appendix I, Table 18) showed no significant difference between the mean values of the top two ranked answer statements for this age grouping (Q1 & Q12) ($t = 1.688$, df = 78, $p = .096$, two-tailed). However, the mean values of the top ranked motive (Q1) and the third ranked motive (Q10) did show a significant difference, ($t = 4.704$, df = 78, $p < .0005$, two-tailed; see Appendix I, Table 18). There was also a similar significant difference ($t = 3.324$, df = 78, $p < .0005$, two-tailed; see Appendix I, Table 18) between the mean values of the second ranked motive (Q12) and the third ranked motive (Q10).

2.2.2 Analysing the 'Older than 34 years' of age group

A paired *t*-test (see Appendix I, Table 19) showed no significant difference between the mean values of the top two ranked answer statements for this age grouping (Q1 & Q12) ($t = .708$, df = 75, $p = .481$, two-tailed). However, the mean values of the top ranked motive (Q1) and the third ranked motive (Q2) did show a

significant difference, (t = 2.535, df = 75, p < .05, two-tailed; see Appendix I, Table 19).

2.2.3 Comparing both age groupings

There was a significant statistical difference found between the two age groupings for their respective most commonly cited motive for using Facebook Q1 (U = 1840.00, $N1$ =79, $N2$ =76, p < .0005, two-tailed). A Mann-Whitney U test was carried out as Levene's test for equality of variance suggested that equality of variance (F = 4.311, p < .05) could not be assumed.

There was also a significant difference found between both groupings for their second respective most commonly cited motive for using Facebook (Q12) (t = 3.448, df = 153, p < .05, two-tailed; see Appendix I, Table 20); Levene's test for equality of variance suggested that equality of variance (F = 1.304, p = .255) could be assumed.

3. Results for the investigation of the effects of personality traits on Facebook usage

3.1 Investigating H2

H2: Facebook users with low numbers of friends' will differ in Conscientiousness scores than users with high numbers of friends.

Levene's test for equality of variance suggested that equality of variance ($F = 8.714$, $p < .05$) could not be assumed for the investigation of H2; therefore a Mann-Whitney test was used to explore the difference between the conscientiousness scores for those participants who reported having '0 - 30 friends' and those participants who reported having 'greater than 80 friends' on their respective Facebook profiles.

Consistent with expectations, Facebook users with low numbers of friends' differed significantly in Conscientiousness scores than users with high numbers of friends' ($U = 761.500$, N1 = 27, N2 = 82, p = .015, two-tailed). Participants who reported having '0 - 30 friends' generally scored higher on the personality trait of Conscientiousness ($M = 36.03$, $SD = 4.23$) than those participants reporting the highest number of friends—greater than 80—$M = 32.53$, $SD = 6.26$ (see Figure 3 below).

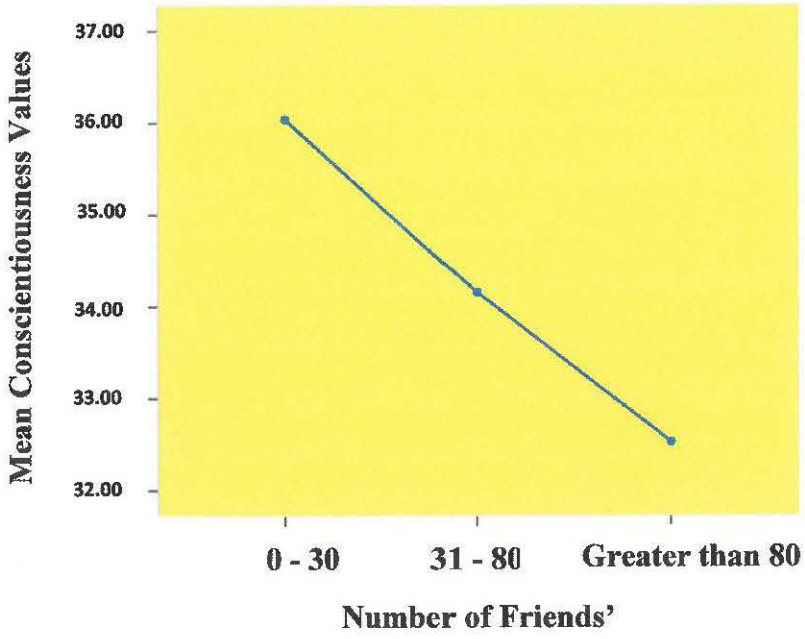

Figure 3. Mean values of the Conscientiousness scores for each of the Number of friends' groups

3.1.1 Investigating possible influencing variables on Conscientiousness scoring

To better understand the influences on Conscientiousness scores, a stepwise regression was performed with the 'number of friends' and the 'length of time' per Facebook visit as predictors. Using the enter method, a significant model emerged: $F(2,152) = 7.484$, $p < .05$ (see Appendix J, Tables 21 – 27). However the model only explained 7.8 % of the variance (Adjusted $R^2 = .078$). Table 6 below gives information for the predictor variables entered into the model. Both number of friends, and length of time, were significant predictors of Conscientiousness scores.

Table 6. The un-standardised and standardised regression coefficients for the variables entered into the model

Variable	Un-standardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
No. of Friends	-2.130	.629	-.270	-3.387	.001
Length of time	.040	.015	.210	2.629	.009

3.1.2 Investigating the influences of 'usage' on Conscientiousness scoring

To investigate the influence that usage may have on Conscientiousness scoring, usage levels were grouped into three distinct groupings for the analysis; converging those who reported using Facebook 'less than once a week' and those who reported using Facebook '1 -2 times a week' into one usage group entitled 'Less than three times a week'.

Participants in the usage grouping of 'Less than 3 times a week' had a higher mean value for Conscientiousness scores ($M = 34.72$, $SD = 5.74$; see Table 7 below) than participants in the '3 or more times a week' grouping ($M = 34.00$, $SD = 5.77$) and participants in the 'At least once a day' grouping ($M = 32.77$, $SD = 6.25$).

Table 7. Mean values of Conscientiousness scores for the three usage level groupings

	Usage	N	Mean	Std. Deviation	Std. Error Mean
Con	Less than three times a week	43	34.7209	5.73762	.87498
	3 or more times a week	39	34.000	5.77198	.92426
	At least once a day	73	32.7671	6.24616	.73106

Investigating the significance of these mean scores, it was found that there was no significant difference between the 'Less than three times a week' group and the 'At least once a day group' (t = 1.675, df = 153, p = .096, two-tailed) (see Appendix J, Table 28). Levene's test for equality of variance suggested that equality of variance (F = 2.201, p = .14, see Appendix J, Table 28) for this investigation.

3.2 Investigating H3

H3: High frequency users of Facebook will differ in Agreeableness scores than lower frequency users.

Levene's test for equality of variance suggested that equality of variance (F = 3.025, p = .086; see Appendix J, Table 30) could be assumed for the investigation of H3. Contrary to expectations, an Independent samples t-test revealed no significant difference in Agreeableness scores between high frequency Facebook users—those who reported using it at least once a day—and low frequency Facebook users—those who reported using it less than once a week—(t = .118, df = 86, p = .906, two-tailed) (see Appendix J, Tables 29 & 30).

3.3 Investigating H4

H4: High frequency users of Facebook will differ in Openness scores than lower frequency users.

Levene's test for equality of variance suggested that equality of variance (F = .455, p = .502; see Appendix J, Table 32) could be assumed for the investigation of H4. Again, contrary to expectations, an Independent samples t-test revealed no significant difference in the personality trait scores of Openness between the high frequency users and the low frequency users of Facebook (t = .135, df = 86, p = .893, two-tailed) (see Appendix J, Tables 31 & 32).

3.4 Investigating H5

H5: Facebook users with large numbers of friends' will differ in Extroversion scores than users with low numbers of friends.

Levene's test for equality of variance suggested that equality of variance (F = .031, p = .86; see Appendix J, Table 34) could be assumed for the investigation of H5. Again, contrary to expectations, an Independent samples t-test revealed no significant difference in the personality trait scores of Extroversion between those participants with low numbers of friends' and those with large numbers of friends' on their respective Facebook profiles (t = .134, df = 107, p = .893, two-tailed) (see Appendix J, Tables 33 & 34).

Discussion

1. Overview of findings

The purpose of the present study was to examine the motivations and personality traits that influence Irish peoples' Facebook usage. The results indicated that 'keeping in contact with existing friends' was the most common reported motive for using Facebook. However, the second most commonly cited motive—to pass the time when I am bored—was not rated significantly different.

Furthermore, it was found that men in the sample population reported the 'boredom' motive ($M = 3.56$) slightly ahead of the 'keeping in contact with existing friends' ($M = 3.55$) motive. There was also a significant relationship found between the age of the Facebook user and the motivations for their usage. Younger adults—those aged 24 – 34 years—more commonly reported both the 'keeping in contact with existing friends' and 'boredom' as their primary motivations than adults aged 'Older than 34' years.

In addition, consistent with expectations, Facebook users with low numbers of friends were found to score higher on the personality trait of Conscientiousness than those participants reporting the highest number of friends; Conscientiousness was found to significantly reduce the amount of friends contacts maintained on a Facebook profile. However, contrary to expectations, Extroversion scores for the same groupings were not found to be significantly different. Also contrary to expectations, high frequency users of Facebook were not found to score differently for the personality traits of Agreeableness or Openness, respectively, than low frequency users.

2. Interpretation of key results

2.1 The descriptive statistics

2.1.1 Length of time per visit

The average time spent per visit to Facebook was 27.58 minutes; the female participants (n = 77) reported spending longer (M = 31.10 minutes) than the male participants (n = 78; M = 24.10 minutes). Younger adults, those aged 24 – 34 years, also reported spending longer per visit (M = 32.66 minutes) than those aged older than 34 (M = 22.30).

Facebook.com (2010) reports the average figures for the amount of time spent per day using Facebook—"more than 55 minutes"—but does not indicate gender differences in this usage; or what the average usage time per visit is? The current studies' results indicate that there is a gender difference in usage figures; females generally reported spending more time per visit to Facebook than their male counterparts. Furthermore, the 27.58 minutes figure is an average time per visit, and is inclusive of all users, not just those who use it daily. In addition, the younger adults in the current study, those aged 24 – 34, generally spent 10 minutes longer per visit to Facebook than the older aged adults.

2.1.2 Usage Levels

The current studies' daily usage figure was found to be consistent with Facebook.com's (2010) contention that roughly 50 percent of its users log on daily; in the present study, 47.1 percent of the Irish sample population reported using Facebook at least once a day. However, this figure is not quite as high as Joinson's (2008, pg.1029) 66.3 percent usage per day figure.

In addition, it was found that only 36.8 percent of the participants 'Older than 34' reported logging onto Facebook at least once a day; 28.9 percent of this group reported using it 3 or more times a week. 57 percent of the younger aged adults, those aged 24 – 34 years, reported using Facebook at least once a day. This finding implies that older adults do not use Facebook on a daily basis as frequently as younger adults.

2.2 Investigating motivations for using Facebook

H1: Keeping in contact with existing friends will be the most commonly cited motive for using Facebook.

2.2.1 Irish Facebook users in general

Consistent with expectations, the answer "to keep in contact with existing friends" had the highest mean value of 3.68, ($SD = .97$) across all 14 of the answer statements. However, the results of a paired t-test showed no significant difference between the mean values of the top two ranked answer statements ($t = 1.693$, df = 154, $p = .094$, two-tailed). A paired t-test between the mean value of the top ranked motive and the third ranked motive did show a significant difference ($t = 6.588$, df = 154, $p < .0005$, two-tailed).

These results suggest that the sample population reported: "to pass the time when I am bored"—the second highest ranked motive—to be a similarly common motive for using Facebook as 'keeping in contact with existing friends'. The third ranked motive, 'to keep in contact with family and relations', was considered by the sample population to be a significantly different motivation for using Facebook than the top two ranked motives.

The Lampe et al. (2006) report concluded that 'keeping in touch with an old friend' was the main motivation for using Facebook, and that this 'social searching' function also contained elements of a 'social capital' function; users turned to Facebook seeking emotional support from their friends' contacts, as well as it being an information resource about those friends. In addition, Joinson's (2008) study found that the most common cited motives for using Facebook were: keeping awareness of contacts; sharing photos; organising groups and participating in applications. The current findings are consistent with each of these two cited studies'. However, none of the above mentioned previous research drew conclusions that people were motivated to use Facebook because they were bored.

Although participants rated 'boredom' motivations as being similar to 'keeping in contact with existing friends', the motivations 'to play games' or 'to take quizzes', both of which could be considered boredom alleviating motivations, were

both only ranked 8th and 9th respectively. It could therefore be inferred that because people are bored, they decide to interact with their friends on Facebook, resulting in both motivations becoming similarly important reasons for using Facebook.

In summary, the present study found that an Irish sample population considered boredom to be as similar a motivation for using Facebook as keeping in contact with existing friends. The study investigated further this 'boredom' motive, and discovered possible gender differences and age related differences.

2.2.2 Gender differences in motivations for Facebook usage

Males in the sample population had a slightly higher mean value ($M = 3.56$, $SD = .93$) for the motive of using Facebook 'to pass the time when bored' than for the motive of 'keeping in contact with existing friends' ($M = 3.55$, $SD = .91$). A paired t-test showed no significant difference between the mean values of these two top ranked motives ($t = .116$, df = 77, $p = .908$, two-tailed).

In contrast, the Females had a higher mean value ($M = 3.82$, $SD = 1.01$) for the motive of 'keeping in contact with existing friends' than for the motive of using Facebook 'to pass the time when bored' ($M = 3.51$, $SD = 1.15$). A paired t-test showed a significant difference between the mean values of these top two ranked answer statements ($t = 2.289$, df = 76, $p = .025$, two-tailed).

These results imply that Males rated both 'keeping in contact with existing friends' and using Facebook 'to pass the time when bored' to be both similar, and also their top ranked motivations respectively for using Facebook. Females, on the other hand, rated 'keeping in contact with existing friends' significantly higher than the 'boredom' factor as their most common motive for using Facebook. As outlined previously, Female participants in this study were also found to spend slightly longer per Facebook visit than the Male participants.

It is therefore possible to infer that although both genders use Facebook for the 'social searching' and 'social capital' functions as outlined by Lampe et al. (2006), perhaps females place greater emphasis on these functional affordances of Facebook, thus accounting for the longer amount of time spent per visit and the primacy attached to using it to contact existing friends.

2.2.3 Age differences in motivations for usage

Participants in the age grouping of '24 – 34' (n = 79) had a higher mean value for the motive of 'passing the time' when bored ($M = 3.81$, $SD = .93$) than participants in the 'older than 34' age grouping (n = 76) ($M = 3.25$, $SD = 1.08$). There was a significant statistical difference found between the two age groupings for the 'keeping in contact with existing friends' motive ($U = 1840.00$, $N1 = 79$, $N2 = 76$, $p < .0005$, two-tailed) and also for the 'boredom' motive ($t = 3.448$, df = 153, $p < .05$, two-tailed).

These results suggest that motivations for using Facebook could also vary due to age related differences. The younger aged adults seem more frequently inclined to rate 'keeping in contact with existing friends' and 'boredom' factors as motives for using Facebook than the older adults. This possibly implies that the younger adults have a need for more social connectivity type activities than older adults, and also have a higher level of boredom in general.

Interestingly, using Facebook to share 'photographs' and 'information' with others, both of which could be considered sociable type motivations, were respectively ranked third and fourth by the younger adults, (see Appendix I, Table 15) and were more frequently rated as reasons for using facebook ($M = 3.37$ & 3.20 respectively) by the younger adults than by the older adults. The older adults ranked both motives fourth and fifth respectively, but with much lower mean scores ($M =$ 2.83 respectively).

2.3 Investigating the effects of personality traits on Facebook usage

2.3.1 Conscientiousness

H2: Facebook users with low numbers of friends' will differ in Conscientiousness scores than users with high numbers of friends'.

Consistent with expectations, Facebook users with low numbers of friends differed significantly in Conscientiousness scores than users with high numbers of friends ($U = 761.500$, N1 = 27, N2 = 82, p = .015, two-tailed). Using a stepwise regression, a significant model emerged: $F(2,152) = 7.484$, $p < .05$, with 'length of time per visit' and 'number of friends' as predictor variables.

These findings replicate Wehrli's (2008, pg.11) findings, and support the contention that Conscientiousness significantly reduces the amount of friends contacts maintained on a Facebook profile. Wehrli (2008, pg.11) surmised as an explanation that SNSs do not promise fast and obvious returns to Conscientious people. The step-wise regression suggests that 'length of time per visit' is also a significant predictor of Conscientiousness scoring. However the low (7.8 percent) figure of the variance implies other factors also contribute.

A possible contributing factor could be usage levels. An investigation into the influence of usage levels on Conscientiousness indicated that higher scoring tended to belong to the lower level of usage grouping: participants in the usage grouping of 'Less than 3 times a week' had a higher mean value for Conscientiousness scores (M = 34.72) than participants in the '3 or more times a week' grouping (M = 34.00) and participants in the 'At least once a day' grouping (M = 32.77).

Although these results were not found to be statistically significant, they do tentatively support agreement with Wilson et al's. (2009) finding that low conscientiousness scorers spend a higher level of time using SNSs; and also previous findings that unconscientious people are frequent users of the general internet (Landers and Lounsbury, 2004). These results also suggest that as a consequence of low time investment in Facebook, Conscientious people acquire fewer friends' contacts.

2.3.2 Extroversion

H3: Facebook users with large numbers of friends' will differ in Extroversion scores than users with low numbers of friends.

Extroversion was not found to have any impact on the number of friends on Facebook. This finding was consistent with Ross et al's. (2009) study but inconsistent with Wehrli's (2008, pg.11) findings. The result also implies support for Ross et al's. (2009, pg.582) contention that although Extroverts may use Facebook as a social tool, "they do not use Facebook as an alternative to social activities".

As outlined previously, Goby (2006) found that Extroverts tended to reject the Internet as a means to communicate with others, preferring off-line methods. The

current findings raises the possibility, also proposed by Ross et al. (2009, pg.582), that the form of CMC that Facebook offers does not suit the needs of Extroverts; Extroverts may be seeking more instant social contact such as that afforded by instant messaging or face-to-face communications.

2.3.3 Agreeableness

H4: High frequency users of Facebook will differ in Agreeableness scores than lower frequency users.

Contrary to Hypothesis 4, Agreeableness scores were not found to impact on Facebook usage. This finding is consistent with the findings of both the Wilson et al. (2009) and the Ross et al. (2009) studies respectively. However, both of these studies had prior to the analysis of their respective results also predicted that Agreeableness scores should impact on Facebook usage. In addition, Landers and Lounsbury (2004, pg.289) had found that disagreeable people tended to use the Internet more, and suggested by way of explanation, that this was because there were fewer demands online for agreeable behaviour.

The current studies' findings suggest support for Wilson et al's. (2009) conclusion that although the disagreeable people cited in the Landers and Lounsbury (2004) may be using the Internet more than their agreeable counterparts, they are not using it for social networking reasons.

2.3.4 Openness

H5: High frequency users of Facebook will differ in Openness scores than lower frequency users.

Contrary to Hypothesis 5, Openness to experience was not found to be associated with increased levels of Facebook usage. This finding is inconsistent with that of the Ross et al. (2008) study, which found that Open people tend to seek social interaction on Facebook; and the McElroy et al. (2007, as cited by Wilson et al. 2009) general Internet usage study which found that Openness predicted higher amounts of time spent online. The findings are, however, consistent with the Wilson et al. (2009) study that Openness did not have any impact on SNS use.

As outlined in the literature review, Facebook has been main-stream since 2006; newer social networking technologies, such as Twitter.com—founded in 2006—have also become increasingly popular in the intervening years and may have attracted the more Open to experience members of the population. It is conceivable that Facebook may no longer be considered a new innovation, and as a consequence of this, and contrary to expectations, the Openness trait may not have the impact on Facebook usage that previous, general Internet usage research and the Ross et al. (2008) study suggests it would.

3. Evaluation of the present study

Investigating SNSs such as Facebook poses a number of challenges. The first being that the reasons for using them are not well understood; and second, previous research that has been conducted, has tended to focus on student populations which may limit their generalisability. However, the results of the present paper were found to be consistent with many of the conclusions of previous research. The significance of the results indicates the design strengths of the present study; however, limitations can be observed.

The BFI scale used, although a valid measure of personality traits that is both quick to complete and easy to understand, does not further sub-divide each trait into the six individual facets that the NEO PI-R does; nor does it categorise high scorers and low scorers in each trait dimension like the NEO PI-R does. A possible explanation for the non-significance of some of the personality related results could be that the five trait dimensions were too broad a measure of personality. Scoring the individual facets per trait dimension on the NEO PI-R scale may have led to more significant findings. The Ross et al. (2008) study utilised the NEO PI-R for the personality scoring and thus had access to the facet scoring, however they only reported results on the five trait dimensions and not the individual facets. The current study, as reported earlier, broadly found results consistent with the Ross et al. (2008) study when investigating the effects of personality on Facebook usage.

A further limitation is that although the results of the investigation into the motivations for using Facebook implied possible gender and age related differences, the key reported findings are based on the overall sample population. This arose from an awareness of the fallacy of generalising from too small of a sample population, and concerns external reliability issues alluded to as the Gergen (1973, as cited in Hunt, 2007, pg. 501) argument in the 'limitations of previous work' section; the argument being that it is unjustifiable to make generalisations about human nature on the basis of mini-experiments with college undergraduates. Although the sample size of 155 was modestly higher than the sample size of 125 participants calculated to be necessary using the DSSresearch.com toolkit, it would have been too small if sub-divided further into gender or age related categories; and all findings then based on these.

If the sample size can be regarded as a limitation of the present study, it can also be argued that it is larger than the 137 sample size in the Joinson (2008) study or the 97 sample size of the Ross et al. (2009) study; both key previously published research studies in this field. Furthermore, one of the key strengths of the present study is that while both these above cited studies, and also the Wehrli (2008) study only utilised a student population, the current study drew its sample from all possible Irish users of Facebook. In addition, the study attempted to overcome the confounding variable of non-stability of personality dimensions in younger adults by excluding those under the age of 24.

A major component of the study design was the decision to use the BFI scale rather than the NEO PI-R in order to minimise the time it takes to complete the survey and thus boost completion rates; feedback from the pilot tests suggested it only took five minutes to complete the online survey. It was therefore extremely disappointing to find that the online survey, distributed via the Surveygizmo.com website, was abandoned by 355 potential participants. The disparity in the completed and abandoned figures seems too high to be for ethical or time constraint reasons. Anecdotal evidence from some potential participants recounted technical problems encountered with the Surveygizmo.com software preventing completion and causing frustration; this could account for the relatively high abandonment of the survey by those who initially had commenced it.

4. Future research in the area

The current studies' findings are based on Facebook users frozen in a 'snap shot' moment of time. Further work should consider the possibility of researching users' motivations for using Facebook as they develop over time; basically a longitudinal study with the same people. A possibility also exists that in addition to the personality influences, the number of friends and usage levels could also be influenced by length of time the particular user had been a member of Facebook. A longitudinal study of users' could help alleviate this confounding variable. Furthermore, the possibility of the addictive nature of using Facebook being a motivation was beyond the scope of the present study but could also be investigated in future research.

The 'boredom' factor was an unexpected finding in the present study; no previous research in this field had pronounced this as a motivation for using Facebook. Further research should focus on boredom as a motivation, and expand on the current studies' finding; previous research tends to have focused on the social connectivity motivations of using Facebook. A replication study could consider including a questionnaire such as The Boredom Proneness Scale (Farmer & Sundberg, 1986) which consists of 28 items using a 7-point Likert scale ranging from 1 ("strongly agree") to 7 ("strongly disagree") and assesses general levels of boredom in conjunction with investigating Facebook usage.

Furthermore, in order to achieve more significant results, replication of this study might consider using the NEO PI-R scale of measuring personality in order to determine the individual facets of personality that accompany each major personality dimension,. However, the time it takes to complete this survey online and the resultant possibility of low completion is a factor that would have to be considered if following this course of action.

Finally, sourcing an additional online survey distributor such as surveymonkey.com may alleviate the suspicion of technical frustrations associated with the present studies Surveygizmo.com online survey distributor.

5. Implications of the findings of the present study

The results from the present study suggest that 'boredom' alongside 'keeping in touch' is a major motivating factor for using Facebook, and that gender and age variables influence the level of these motivations. Paraphrasing Joinson (2008, pg.1035), it would seem likely that 'keeping in touch' is a polite way of saying 'checking up on regularly'. Furthermore, the findings imply that the time spent per visit is dependent on the uses being employed; it varies with age and gender.

Echoing Joinson's (2008, pg.1035) comments, these insights are clearly important for designers of SNSs and their content. If people are using Facebook because they are bored, it would seem imperative to design suitable content applications that address these needs; alongside the applications that help build and maintain social connections. There is equally a need to recognise that not all users of Facebook have the same motivations for using it; different demographic groups were found to use it for different purposes: social connectivity (Females) and boredom (Males) motivating the younger users' more than older users.

It was stated earlier that investigating SNSs poses a number of challenges, and that the reasons for using them are not well understood. The finding that Conscientiousness was found to significantly reduce the amount of friends contacts maintained on a Facebook profile increases the general knowledge pool in this area of research and supports previous research such as Wehrli (2008).

6. Conclusions

The results from the present study suggest that 'boredom', alongside 'keeping in touch' is a major motivating factor for using Facebook. Therefore, recognition needs to be made that not all users of Facebook have the same motivations for using it, and that if people are using Facebook because they are bored, it would seem imperative to design suitable content applications that address their needs, and not just cater to social connectivity needs.

Although it was found that Conscientiousness significantly reduced the amount of friends contacts maintained on a Facebook profile, the non-significance of the other investigations leads to a conclusion that when investigating the effects of personality on Facebook usage, the Big-five personality traits might be too broad a measure to understand specific Facebook behaviours.

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Appendix A

Table 8. Calculating the average number of friends' contacts

A convenience sample of 200 'friends of friends' with Irish surnames to determine the average number of friends' contacts Irish Facebook users have.

	Male				Female			
1	144	68	144	116	141	57	55	27
2	72	135	68	92	188	55	22	39
3	166	32	38	157	31	142	32	106
4	77	38	110	94	141	135	164	66
5	29	42	24	78	61	148	161	89
6	115	142	155	66	95	105	64	48
7	18	76	68	90	88	17	41	105
8	39	179	127	128	129	89	147	34
9	70	43	75	75	48	47	59	80
10	54	41	107	29	66	141	122	74
11	56	58	87	85	100	133	47	68
12	132	119	82	142	41	98	99	62
13	55	118	6	25	127	38	96	83
14	49	117	41	123	106	82	108	6
15	46	57	76	13	118	62	21	44
16	37	15	96	86	121	71	12	98
17	128	28	115	65	68	127	97	84
18	47	58	23	49	84	108	65	124
19	30	83	49	12	140	60	124	28
20	72	90	47	72	177	65	78	89
21	106	12	92	58	53	38	14	17
22	38	19	25	65	107	39	70	34
23	121	79	83	116	61	100	114	51
24	98	82	149	126	43	130	28	18
25	91	61	116	50	167	89	85	86
Average Per Column	**75.6**	**71.68**	**80.12**	**80.48**	**100.04**	**87.04**	**77**	**62.4**
Gender Average	**76.97**				**81.62**			
Average Number of Friends	**79.295**							

Appendix B

Participant Informed consent form

Thank you for agreeing to participate in this study.

This survey will take you approximately five minutes to complete. The majority of the questions require the ticking of the appropriate boxes.

This survey involves answering questions about your Facebook usage, and completing a short personality test. It is being carried out by Graham Gilbert of Dun Laoghaire Institute of Art, Design and Technology, Ireland, as part of his final year thesis.

There are no right or wrong answers. The best answer to choose is the one that you most identify with.

Answer honestly, your anonymity is guaranteed.

This survey is voluntary, and you are free to skip a question or leave the survey at any point you wish. Data gathered in the study will be anonymous, confidential, and for research purposes only.

You are free to withdraw from the survey at any time.

If you are 18 or over, understand the statements above, and freely consent to participate in this study, then click on the **"I agree to take part in the study"** button to begin the survey.

I have read and understand the information provided by the researcher. I hereby acknowledge the above information, and give my voluntary consent to participate in this study.
I understand that I may revoke my consent from the study at any time.

I agree to take part in the survey *

○ **Yes**

Appendix C

Demographic Questionnaire

Please tick the appropriate boxes:

1) Please enter your **Name** or if you prefer just **your initials:**

_____

2) Male _____ **Female** _____

3) Are you Irish? Yes _____ No _____

4) What Age Group are you?

Younger Than 24	24 – 34	35 – 44	Older Than 44

Appendix D

Facebook Social Network Website Usage Questionnaire

Here are a number of statements that may or may not apply to you. For example, do you agree that you are someone who *uses Facebook alot?*

Please rate your level of agreement with each statement on a five point scale (**1** being "**not at all**" and **5** being "**a great deal**").

Not at all	Once or Twice	Sometimes	Quite often	A great deal
1	2	3	4	5

I use my Facebook profile...

1. To keep in contact with existing friends _____
2. To keep in contact with family and relations _____
3. To keep in contact with persons I am already romantically involved with _____
4. To express how I am feeling _____
5. To state what I am doing _____
6. To keep in contact with acquaintances I have previously met _____
7. To make contact with new people _____
8. To share information with others (jokes, YouTube clips, etc.) _____
9. To possibly make romantic contacts _____
10. To share photographs _____
11. For employment purposes _____
12. To pass the time when I am bored _____
13. To play games _____
14. To take quizzes _____

Appendix D / Contd.

Please list any other reasons that you have used your **Facebook** profile for:

_____

15) How often would you login to your **Facebook** profile?

Less than once a week	1 - 2 times a week	3 or more times a week	At least once a day

If your answer was **'Less than once a week'**, please specify how often you login to your **Facebook** profile (e.g. Once a month)

_____

16) When you login to your **Facebook** profile, how long in **minutes** do you normally spend there? _____ minutes

17) Please estimate how many **Friends Contacts** you have on your **Facebook** profile?

0 – 30	31 – 80	Greater Than 80

If your answer was: **'Greater than 80'**, please specify how many **Friends Contacts** you have on your **Facebook** profile

_____

Appendix E

The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others?*
Please write a number next to each statement to indicate the extent to which you **agree or disagree with that statement**.

Disagree strongly	Disagree a little	Neither Agree nor disagree	Agree a little	Agree strongly
1	2	3	4	5

I am someone Who...

1. _____ Is talkative
2. _____ Tends to find fault with others
3. _____ Does a thorough job
4. _____ Is depressed, blue
5. _____ Is original, comes up with new ideas
6. _____ Is reserved
7. _____ Is helpful and unselfish with others
8. _____ Can be somewhat careless
9. _____ Is relaxed, handles stress well
10. _____ Is curious about many different
11. _____ Is full of energy
12. _____ Starts quarrels with others
13. _____ Is a reliable worker
14. _____ Can be tense
15. _____ Is ingenious, a deep thinker
16. _____ Generates a lot of enthusiasm
17. _____ Has a forgiving nature
18. _____ Tends to be disorganized

I am someone Who...

19. _____ Worries a lot
20. _____ Has an active imagination
21. _____ Tends to be quiet
22. _____ Is generally trusting
23. _____ Tends to be lazy
24. _____ Is emotionally stable, not easily upset
25. _____ Is inventive
26. _____ Has an assertive personality
27. _____ Can be cold and aloof
28. _____ Perseveres until the task is finished
29. _____ Can be moody
30. _____ Values artistic, aesthetic experiences
31. _____ Is sometimes shy, inhibited
32. _____ Is considerate and kind to almost everyone
33. _____ Does things efficiently
34. _____ Remains calm in tense situations
35. _____ Prefers work that is routine
36. _____ Is outgoing, sociable
37. _____ Is sometimes rude to others
38. _____ Makes plans and follows through with them
39. _____ Gets nervous easily
40. _____ Likes to reflect, play with ideas
41. _____ Has few artistic interests
42. _____ Likes to cooperate with others
43. _____ Is easily distracted
44. _____ Is sophisticated in art, music, or literature

Please check: Did you write a number in front of each statement?

Appendix F

BFI scale scoring Key

"R" denotes reverse-scored items:

Extroversion:	1, 6R, 11, 16, 21R, 26, 31R, 36
Agreeableness:	2R, 7, 12R, 17, 22, 27R, 32, 37R, 42
Conscientiousness:	3, 8R, 13, 18R, 23R, 28, 33, 38, 43R
Neuroticism:	4, 9R, 14, 19, 24R, 29, 34R, 39
Openness:	5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Appendix G

Participants Debrief section

Thank you for taking the time to complete my survey.

The aim of this survey is to ascertain whether there is a relationship between personality characteristics and Facebook usage. All my participants have to be Irish, over 24, and have a Facebook profile.

The personality test scores are based on Five personality characteristics that we each possess in varying amounts:

1. Extroversion / Introversion
2. Conscientiousness
3. Openness to Experience
4. Agreeableness
5. Neuroticism

The findings of the study may be published online and in the form of journal articles and conference proceedings in print, but your individual data will not be identifiable in any of the published accounts.

I hope to have the results analysed by the end of January, 2010.

If you would like feedback on how you scored please send me an email to gillyggilbert@hotmail.com (copy and paste this address in your "to" box of your email) and I will endeavour to get back to you as soon as possible.

Thanks Again!

Graham Gilbert

Appendix H – Descriptive Statistics Analysis

Appendix H

Table 9. Descriptive statistics for length of time each gender spent per Facebook visit

	Gender			Statistic	Std. Error
Length	**Male**	**Mean**		**24.1026**	2.80000
		95% Confidence Interval for Mean	Lower Bound	18.5270	
			Upper Bound	29.6781	
		5% Trimmed Mean		20.3775	
		Median		15.0000	
		Variance		611.522	
		Std. Deviation		24.7289 7	
		Minimum		5.00	
		Maximum		120.00	
		Range		115.00	
		Interquartile Range		20.00	
		Skewness		2.411	.272
		Kurtosis		6.144	.538
	Female	**Mean**		**31.1039**	4.23851
		95% Confidence Interval for Mean	Lower Bound	22.6622	
			Upper Bound	39.5456	
		5% Trimmed Mean		25.8838	
		Median		20.0000	
		Variance		1383.30 5	
		Std. Deviation		37.1928 1	
		Minimum		5.00	
		Maximum		240.00	
		Range		235.00	
		Interquartile Range		25.00	
		Skewness		3.124	.274
		Kurtosis		13.114	.541

Appendix H

Table 10. Descriptive statistics for length of time each age grouping spent per Facebook visit

	Age			Statistic	Std. Error
Length	**24-34**	**Mean**		**32.6582**	**4.30012**
		95% Confidence Interval for Mean	Lower Bound	24.0973	
			Upper Bound	41.2191	
		5% Trimmed Mean		27.6547	
		Median		20.0000	
		Variance		1460.792	
		Std. Deviation		38.22031	
		Minimum		5.00	
		Maximum		240.00	
		Range		235.00	
		Interquartile Range		20.00	
		Skewness		2.891	.271
		Kurtosis		11.006	.535
	older than 34	**Mean**		**22.3026**	**2.51389**
		95% Confidence Interval for Mean	Lower Bound	17.2947	
			Upper Bound	27.3106	
		5% Trimmed Mean		19.2690	
		Median		15.0000	
		Variance		480.294	
		Std. Deviation		21.91561	
		Minimum		5.00	
		Maximum		120.00	
		Range		115.00	
		Interquartile Range		23.75	
		Skewness		2.363	.276
		Kurtosis		6.763	.545

Appendix H

Table 11. Usage levels of Facebook

	Frequency	Percent
Less than once a week	15	9.7
1-2 times a week	28	18.1
3 or more times a week	39	25.2
At least once a day	73	47.1
Total	155	100.0

Table 12. Usage levels of Facebook separated into age groupings

	24 - 34		Older than 34	
	Frequency	Percent	Frequency	Percent
Less than once a week	**6**	**7.6**	**9**	**11.8**
1-2 times a week	11	13.9	17	22.4
3 or more	17	21.5	22	28.9
At least once a day	45	57.0	28	36.8
Total	79	100.0	76	100.0

Appendix H

Table 13. Descriptive statistics for each personality trait

Trait			Statistic	Std. Error
Extro	**Mean**		**28.2710**	**.42781**
	95% Confidence Interval for Mean	Lower Bound	27.4258	
		Upper Bound	29.1161	
	5% Trimmed Mean		28.2491	
	Median		28.0000	
	Variance		28.368	
	Std. Deviation		5.32613	
	Minimum		15.00	
	Maximum		40.00	
	Range		25.00	
	Interquartile Range		8.00	
	Skewness		.113	.195
	Kurtosis		-.088	.387
Con	**Mean**		**33.6194**	**.48300**
	95% Confidence Interval for Mean	Lower Bound	32.6652	
		Upper Bound	34.5735	
	5% Trimmed Mean		33.7384	
	Median		34.0000	
	Variance		36.159	
	Std. Deviation		6.01327	
	Minimum		19.00	
	Maximum		45.00	
	Range		26.00	
	Interquartile Range		8.00	
	Skewness		-.288	.195
	Kurtosis		-.481	.387

Appendix H

Table 13. Contd./

Trait			Statistic	Std. Err.
Open	**Mean**		**37.1806**	**.46417**
	95% Confidence Interval for Mean	Lower Bound	36.2637	
		Upper Bound	38.0976	
	5% Trimmed Mean		37.1577	
	Median		37.0000	
	Variance		33.396	
	Std. Deviation		5.77890	
	Minimum		24.00	
	Maximum		50.00	
	Range		26.00	
	Interquartile Range		9.00	
	Skewness		.070	.195
	Kurtosis		-.710	.387
Neur	**Mean**		**21.2323**	**.46276**
	95% Confidence Interval for Mean	Lower Bound	20.3181	
		Upper Bound	22.1464	
	5% Trimmed Mean		21.2025	
	Median		21.0000	
	Variance		33.192	
	Std. Deviation		5.76129	
	Minimum		8.00	
	Maximum		35.00	
	Range		27.00	
	Interquartile Range		8.00	
	Skewness		.069	.195
	Kurtosis		-.459	.387
Agree	**Mean**		**35.0387**	**.42403**
	95% Confidence Interval for Mean	Lower Bound	34.2011	
		Upper Bound	35.8764	
	5% Trimmed Mean		35.1326	
	Median		35.0000	
	Variance		27.869	
	Std. Deviation		5.27907	
	Minimum		22.00	
	Maximum		45.00	
	Range		23.00	
	Interquartile Range		8.00	
	Skewness		-.266	.195
	Kurtosis		-.476	.387

Appendix I – Motivations for Facebook usage statistical analysis

Appendix I

Table 14. Paired differences t-test's for the Facebook usage questionnaire answers

		Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Q1 - Q12	.14839	1.09778	.08818	-.02580	.32258	1.683	154	.094
Pair 2	Q1 - Q2	.58710	1.10950	.08912	.41105	.76315	6.588	154	.000
Pair 3	Q12 - Q2	.43871	1.35840	.10911	.22317	.65425	4.021	154	.000
Pair 4	Q2 - Q10	-.00645	1.38403	.11117	-.22606	.21316	-.058	154	.954
Pair 5	Q10 - Q8	.08387	1.35299	.10867	-.13081	.29856	.772	154	.441
Pair 6	Q8 - Q6	.03871	1.30873	.10512	-.16895	.24637	.368	154	.713
Pair 7	Q6 - Q5	.76129	1.27455	.10237	.55905	.96353	7.436	154	.000
Pair 8	Q5 - Q13	.03871	1.61118	.12941	-.21694	.29436	.299	154	.765
Pair 9	Q13 - Q14	.00000	1.18431	.09513	-.18792	.18792	.000	154	1.000
Pair 10	Q14 - Q4	.20000	1.29635	.10413	-.00570	.40570	1.921	154	.057
Pair 11	Q4 - Q7	.22581	1.14839	.09224	.04358	.40803	2.448	154	.015
Pair 12	Q7 - Q3	.06452	1.34685	.10818	-.14919	.27823	.596	154	.552
Pair 13	Q3 - Q11	.43226	1.26911	.10194	.23088	.63363	4.240	154	.000
Pair 14	Q11 - Q9	.11613	.84481	.06786	-.01792	.25018	1.711	154	.089

Appendix I

Table 15. The Mean values shown by gender for the ranked Facebook usage questionnaire answers

Overall Rank	Answer statement	Gender	Mean	Std. Error
1	**Q1:** To keep in contact with existing friends	Males	**3.55**	.10
		Females	**3.82**	.12
2	**Q12:** To pass the time when I am bored	Males	**3.56**	.11
		Females	**3.51**	.13
3	**Q2:** To keep in contact with family and relations	Males	**3.00**	.12
		Females	**3.19**	.14
4	**Q10:** To share photographs	Males	**2.88**	.12
		Females	**3.32**	.14
5	**Q8:** To share information with others	Males	**3.14**	.11
		Females	**2.89**	.15
6	**Q6:** To keep in contact with acquaintances I have previously met	Males	**2.91**	.12
		Females	**3.05**	.12
7	**Q5:** To state what I am doing.	Males	**2.06**	.12
		Females	**2.38**	.14
8	**Q13:** To play games	Males	**2.19**	.14
		Females	**2.17**	.16
9	**Q14:** To take quizzes	Males	**2.10**	.12
		Females	**2.26**	.12
10	**Q4:** To express how I am feeling	Males	**1.82**	.11
		Females	**2.14**	.12
11	**Q7:** To make contact with new people	Males	**1.79**	.10
		Females	**1.71**	.12
12	**Q3:** To keep in contact with persons I am already romantically involved with	Males	**1.74**	.12
		Females	**1.63**	.13
13	**Q11:** For employment purposes	Males	**1.25**	.07
		Females	**1.26**	.09
14	**Q9:** To possibly make romantic contacts	Males	**1.18**	.06
		Females	**1.10**	.04

Appendix I

Table 16. The Mean values of the 'Age 24 – 34' group for the ranked Facebook usage questionnaire answers

Rank	Qn	Age 24 - 34	Statistics	Std. Error
1	Q1	Mean	4.0127	.09446
		Variance	.705	
		Std. Deviation	.83962	
2	Q12	Mean	3.8101	.10517
		Variance	.874	
		Std. Deviation	.93474	
3	Q10	Mean	3.3671	.11132
		Variance	.979	
		Std. Deviation	.98940	
4	Q8	Mean	3.2025	.12914
		Variance	1.317	
		Std. Deviation	1.14779	
5	Q6	Mean	3.1646	.10724
		Variance	.908	
		Std. Deviation	.95314	
6	Q2	Mean	3.1646	.12276
		Variance	1.191	
		Std. Deviation	1.09111	
7	Q5	Mean	2.4051	.13180
		Variance	1.253	
		Std. Deviation	1.11921	
8	Q13	Mean	2.3038	.14453
		Variance	1.650	
		Std. Deviation	1.28457	
9	Q14	Mean	2.2278	.10802
		Variance	.922	
		Std. Deviation	.96009	
10	Q4	Mean	2.1392	.11498
		Variance	1.044	
		Std. Deviation	1.04193	
11	Q3	Mean	1.8481	.12493
		Variance	1.233	
		Std. Deviation	1.11042	

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Table 16. Contd.

Rank	Qn	Age 24 - 34	Statistics	Std. Error
12	Q7	Mean	1.7342	.10460
		Variance	.864	
		Std. Deviation	.92969	
13	Q11	Mean	1.2785	.08044
		Variance	.511	
		Std. Deviation	.71498	
14	Q9	Mean	1.2025	.06339
		Variance	.317	
		Std. Deviation	.56341	

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Table 17. The Mean values of the 'Older than 34' age group for the ranked Facebook usage questionnaire answers

Rank	Qn	Older than 34	Statistics	Std. Error
1	Q1	Mean	3.3421	.11169
		Variance	.948	
		Std. Deviation	.97369	
2	Q12	Mean	3.2500	.12443
		Variance	1.177	
		Std. Deviation	1.08474	
3	Q2	Mean	3.0263	.13242
		Variance	1.333	
		Std. Deviation	1.15440	
4	Q10	Mean	2.8289	.14190
		Variance	1.530	
		Std. Deviation	1.23707	
5	Q8	Mean	2.8289	.13687
		Variance	1.424	
		Std. Deviation	1.19318	
6	Q6	Mean	2.7895	.12470
		Variance	1.182	
		Std. Deviation	1.08709	
7	Q14	Mean	2.1316	.12613
		Variance	1.209	
		Std. Deviation	1.09960	
8	Q13	Mean	2.0526	.15548
		Variance	1.837	
		Std. Deviation	1.35543	
9	Q5	Mean	2.0263	.12838
		Variance	1.253	
		Std. Deviation	1.11921	
10	Q4	Mean	1.8158	.11952
		Variance	1.086	
		Std. Deviation	1.04193	
11	Q7	Mean	1.7763	.11486
		Variance	1.003	
		Std. Deviation	1.00131	

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Table 17. Contd.

Rank	Qn	Older than 34	Statistics	Std. Error
12	Q3	Mean	1.5263	.11769
		Variance	1.053	
		Std. Deviation	1.02598	
13	Q11	Mean	1.2368	.07918
		Variance	.476	
		Std. Deviation	.69028	
14	Q9	Mean	1.0789	.03634
		Variance	.100	
		Std. Deviation	.31678	

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Table 18. Paired samples tests for the 24 – 34 years of age group

			Pair 1	Pair 2	Pair 3
			Q1 - Q12	Q12 - Q10	Q1 - Q10
Paired Differences	Mean		.20253	.44304	.64557
	Std. Deviation		1.06674	1.18481	1.21990
	Std. Error Mean		.12002	.13330	.13725
	95% Confidence Interval of the Difference	Lower	-.03641	.17766	.37233
		Upper	.44147	.70842	.91881
	t		1.688	3.324	4.704
	df		78	78	78
	Sig. (2-tailed)		.096	.001	.000

Table 19. Paired samples tests for the older than 34 years of age group

			Pair 1	Pair 2
			SNS1 - SNS12	SNS1 - SNS2
Paired Differences	Mean		.09211	.31579
	Std. Deviation		1.13346	1.08579
	Std. Error Mean		.13002	.12455
	95% Confidence Interval of the Difference	Lower	-.16690	.06768
		Upper	.35111	.56390
	t		.708	2.535
	df		75	75
	Sig. (2-tailed)		.481	.013

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Table 20. *t*-test comparing both age groupings

			Equal variances assumed
Levene's Test for Equality of Variances	F		1.304
	Sig.		.255
t-test for Equality of Means	t		3.448
	df		153
	Sig. (2-tailed)		.001
	Mean Difference		.56013
	Std. Error Difference		.16245
	95% Confidence Interval of the Difference	Lower	.23919
		Upper	.88106

Appendix J – Effects of personality traits on Facebook usage statistical analysis

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Table 21. Descriptive statistics for the stepwise regression

Descriptive Statistics			
	Mean	Std. Deviation	N
Con	33.6194	6.01327	155
Contacts	2.3548	.76228	155
Length	27.5806	31.63486	155

Table 22. Correlational statistics for the stepwise regression

Correlations				
		Con	Contacts	Length
Pearson Correlation	Con	1.000	-.220	.145
	Contacts	-.220	1.000	.240
	Length	.145	.240	1.000
Sig. (1-tailed)	Con	.	.003	.036
	Contacts	.003	.	.001
	Length	.036	.001	.
N	Con	155	155	155
	Contacts	155	155	155
	Length	155	155	155

Table 23. Predictor variables for the stepwise regression

Variables Entered/Removed[b]			
Model	Variables Entered	Variables Removed	Method
1	Length, Contacts[a]	.	Enter
a. All requested variables entered.			
b. Dependent Variable: Con			

Table 24. Adjusted R Square value for the stepwise regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.299[a]	.090	.078	5.77504
a. Predictors: (Constant), Length, Contacts				

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Table 25. ANOVA statistics for the stepwise regression

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	499.170	2	249.585	7.484	.001[a]
	Residual	5069.372	152	33.351		
	Total	5568.542	154			

a. Predictors: (Constant), Length, Contacts

b. Dependent Variable: Con

Table 26. Coefficients statistics for the stepwise regression

Coefficients[a]								
Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	37.537	1.512		24.829	.000		
	Contacts	-2.130	.629	-.270	-3.387	.001	.942	1.061
	Length	.040	.015	.210	2.629	.009	.942	1.061

a. Dependent Variable: Con

Table 27. Collinearity diagnostics for the stepwise regression

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	Contacts	Length
1	1	2.536	1.000	.01	.01	.06
	2	.416	2.470	.04	.03	.93
	3	.048	7.290	.95	.96	.01

a. Dependent Variable: Con

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Table 28. Independent samples *t*-test for the Conscientiousness scores on the usage groupings

			Con	
			Equal variances assumed	**Equal variances not assumed**
Levene's Test for Equality of Variances	F		2.201	
	Sig.		.140	
t-test for Equality of Means	t		1.675	1.666
	df		153	146.968
	Sig. (2-tailed)		.096	.098
	Mean Difference		1.61093	1.61093
	Std. Error Difference		.96201	.96686
	95% Confidence Interval of the Difference	Lower	-.28961	-.29982
		Upper	3.51146	3.52167

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Table 29. Independent samples group statistics for usage and Agreeableness

	Usage	N	Mean	Std. Deviation	Std. Error Mean
Agree	Less than once	15	34.6667	3.97612	1.02663
	At least once a day	73	34.8493	5.70981	.66828

Table 30. Independent samples *t*-test statistics for usage and Agreeableness

			Agree	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		3.025	
	Sig.		.086	
t-test for Equality of Means	t		-.118	-.149
	df		86	27.421
	Sig. (2-tailed)		.906	.883
	Mean Difference		-.18265	-.18265
	Std. Error Difference		1.54931	1.22498
	95% Confidence Interval of the Difference	Lower	-3.26258	-2.69429
		Upper	2.89729	2.32899

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Table 31. Independent samples group statistics for usage and Openness

	Usage	N	Mean	Std. Deviation	Std. Error Mean
Open	Less than once	15	37.6667	5.39400	1.39272
	At least once a day	73	37.4384	6.08958	.71273

Table 32. Independent samples *t*-test statistics for usage and Openness

			Open	
			Equal variances assumed	**Equal variances not assumed**
Levene's Test for Equality of Variances	F		.455	
	Sig.		.502	
t-test for Equality of Means	t		.135	.146
	df		86	22.000
	Sig. (2-tailed)		.893	.885
	Mean Difference		.22831	.22831
	Std. Error Difference		1.69578	1.56450
	95% Confidence Interval of the Difference	Lower	-3.14280	-3.01627
		Upper	3.59942	3.47289

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Table 33. Independent samples group statistics for number of contacts and Extroversion

	Contacts	N	Mean	Std. Deviation	Std. Error Mean
Extro	0-30	27	28.7037	5.39811	1.03887
	Greater than 80	82	28.5488	5.13317	.56686

Table 34. Independent samples *t*-test statistics for number of contacts and Extroversion

			Extro	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.031	
	Sig.		.860	
t-test for Equality of Means	t		.134	.131
	df		107	42.576
	Sig. (2-tailed)		.893	.896
	Mean Difference		.15492	.15492
	Std. Error Difference		1.15352	1.18346
	95% Confidence Interval of the Difference	Lower	-2.13180	-2.23244
		Upper	2.44165	2.54229