Seeking Social Connectedness Online and Offline: Does Happiness Require Real Contact?¹

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Abstract

Although online social connectedness is increasing, many assumptions about online social network use still remain. For example, that offline social connectedness is superior to online social connectedness. This cross-sectional study addresses these assumptions by studying online and offline social connectedness in relation to happiness, in a sample of 293 young adults from Sweden, between the ages 18-48. Results show that both online and offline social connectedness was associated to happiness. Moreover, three groups varying on happiness did not differ on various forms of social connectedness; however, very happy individuals reported having more genuine online friends than all other groups. The implications of the study and future directions are discussed.

Keywords: happiness, subjective well-being, online social networks, offline social networks, social connectedness.

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Att söka socialt sammanhang online och offline: krävs verkliga möten för välbefinnande?

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Sammanfattning

Trots att det nu är vanligt att söka sociala sammanhang online förblir många antaganden kring användandet av sociala nätverk online. Till exempel antas fysiska sociala nätverk vara överlägsna dess digitala motsvarighet. Denna tvärsnitts studie ritar sig mot dessa antaganden genom att undersöka socialt sammanhang online och offline i relation till lycka. Ett urval av 293 svenska studenter i åldrarna 18–48 medverkade. Resultaten visade att sociala sammanhang både online och offline kunde kopplas till välbefinnande. När tre grupper med olika nivåer av välbefinnande undersöktes, fanns inga skillnader på uppfyllande av behov genom sociala sammanhang. Däremot hade de lyckligaste fler riktiga vänner än de andra grupperna. Studiens innebörd diskuteras och förslag till framtida forskning ges.

Nyckelord. Lycka, välbefinnande, sociala nätverk, sociala sammanhang, online, offline

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Social connectivity is part of being human and there has never been a time in human history when people have been able to connect to one another with such ease. Social connections are no longer restricted to the people in our immediate surroundings, instead electronic media, such as mobile phones, e-mails, and online social networks, have enabled us to connect with those both near and far. Specifically, the use of online networks have come to be an integrated part of people’s daily routines (Boyd & Ellison, 2008). While feeling socially connected is important for our health there are still uncertainties about the implications of online connectedness.

Indeed, people are wired to socially connect (Crosier, Webster, & Dillon, 2012), they are social beings who strive to connect and form bonds with each other (Baumeister & Leary, 1995), which is termed social connectedness. The broad concept of social connectedness refers to the desire people have to create and maintain relationships, the social bonds they have with others, and the feeling of belongingness that results from these bonds (Baumeister et al., 1995; Grieve, Witteveen, Tolan, & Marrington, 2013). Social connectedness can be expressed through various needs fulfillments and social behaviors, such as seeking out other individuals to avoid feeling lonely, to ask for advice, or simply to socialize. Furthermore, people do not simply strive to create bonds they also resist dissolving relationships. Independent of the type of relationship, dissolving bonds result in distress and negative emotions (Baumeister, et al., 1995). Thus, social connectedness is an essential part of human life and important factor for well-being.

It is not until fairly recently the internet has exploded as a venue for social connectedness. Specifically, online social networks have emerged as a new way to socially connect, and in a short period of time connecting through these sites has become as common
as other social phenomenon such as grabbing a tea/coffee with a friend. The media format allows for easy and convenient interaction among individuals, independent of their physical location. Thus, these online social networks have become a common way for people to share, communicate, and gather information (Boyd et al., 2008). Indeed, several studies indicate that online social networks are now a common part of daily life, particularly among young adults in industrialized countries (Pempek, Yermolayeva, & Calvert, 2009; Ross, Orr, Sicis, Arsenault, Simmering, & Orr, 2009; Skues, Williams, & Wise, 2012).

Like with any current trend assumptions can surface, and online social connectedness is no different. People tend to make assumptions about online social networks use, those who frequently use them, and its effect on happiness. For example, one everyday assumption is that excessive online connectedness can lead to loneliness and social isolation offline (face-to-face). However, a point often overlooked is that some of these assumptions are upheld by dated and unspecific findings. The internet is dynamic and ever-changing, so when studying online social connectedness it is important to stay up-to-date and to study specific platforms rather than general internet use. For example, when simply looking at internet use for communication purposes, early studies found that greater internet use was associated with a decline in offline social connectedness and an increase in loneliness (Kraut, et al., 1998). However, when conducting a follow up study two years later, these findings were no longer supported. Instead, internet use was generally associated to well-being. A suggested explanation for this change was the advances of internet since its early days (Kraut, et al., 2002). Several reviews of online social network studies support this explanation, which show that; the development of social network sites started between the two studies, and that there has been a rapid evolution of online social network sites and their functions. Thus suggesting that early findings have indeed become outdated, and that the area is in need of further research (see Boyd, et al., 2008; Wilson, Gosling, & Graham, 2012). As a result, recent
studies have focused specifically on the use of online social networking sites rather than
general internet use, however, many assumptions about online social connectedness remain.

The present study has two general purposes. First, to explore online and offline (face-
to-face) connectedness among young adults, and second, to examine the link between online
and offline connectedness and happiness. While there are numerous definitions of happiness
this study will consider subjective well-being as a measure of happiness, which in turn is the
individuals overall evaluation of their life satisfaction (Diener, et al., 2009). The study will
introduce some of the existing assumptions addressing online and offline connectedness in
relation to happiness, along with research explaining why these assumptions may exist.
Thereafter, research questions aimed at exploring these assumptions are presented and
studied. The overarching question in this paper is whether being socially connected online or
offline matter for happiness in young adults in Sweden today?

Assumption 1. One common assumption is that online social connectedness is inferior
to offline social connectedness in providing well-being. This assumption may stem from the
idea that online relationships cannot provide the same feeling of social connectedness as
offline relationships. The offline superiority assumption is generally not surprising
considering that there is a well-established link between offline social connectedness and
happiness (for reviews, see Baumeister, et al., 1995; Diener & Ryan, 2009; Gable & Gosnell,
2011; Myers, 1999). Having strong close offline social relationships have positive links to
well-being and life satisfaction (Baumeister, et al., 1995; Diener & Seligman, 2002), positive
affect, and low negative physical and psychological effects, like depression and ill health
(Diener, et al., 2009). Furthermore, socially connected individuals experienced higher life
satisfaction and happiness, while a lack of social connectedness is associated to negative
affect such as, depression, anxiety, or loneliness (Baumeister, et al., 1995). Additionally, in
their study, Diener and Seligman (2002) compared the happiest upper ten percent of
undergraduate students with those who scored in the average or unhappy range. They found that very happy people reported having more good-quality relationships, spent less time alone, and were more social than all other groups. Moreover, they also reported that good quality social relationships and social support had strong positive influence on happiness and life satisfaction. Whereas a lack of relationships and lack of social connectedness was linked to negative affect and dissatisfaction. Indeed offline social connectedness and its links to positive emotions, like happiness, are apparent.

In contrast, less is known about the link between online social connectedness and happiness. Some research suggest that computer mediated communication lack emotional expression and non-verbal cues and therefore have an inferior social function to offline social interactions (Putnam, 2000). For example it has been suggested that the lack of social cues in online communication has resulted in use of emoticons, such as 😊 or 😞, but the variety of social cues derived from an offline connection can never be capsulated in the limited number of emoticons available. Thus, offline communication is a richer communication medium and leads to more trust, social connectedness and positive experiences than online communication does (Putnam, 2000). Furthermore, a study by Schiffrin, Edelman, Falkenstern, & Stewart (2010) found that, even though online communication was common, people perceived online communication inferior to offline communication. Suggesting that online social connectedness might not have the same association to happiness as offline social connectedness.

From a theoretical standpoint, the media richness theory explains the effectiveness of using different media (see Dennis, Fuller, & Valacich, 2008). Richness of media is the amount of social cues, reciprocity, and understanding that can be achieved through the media; and media use that matches the purpose of the communication with the appropriate level of richness needed is defined as effective media. For example, a text-message is low in richness
and thus only efficient for simple messages like quick reminders, but not for explaining complex pieces of information. Consequently, offline communication is considered a rich media capable of transferring a multitude of social cues (facial expression, tone of voice, body language, etc.), while online communication is a less rich media. So, rich media can be considered effective for socializing; while online communication is effective when communicating more simplistic and straightforward information (see Dennis, Fuller, & Valacich, 2008). Consequently, the restrictions of online communication supports the idea of offline superiority and implies that those who frequently use online networks to socialize will not experience the same feeling of connectedness, and in turn would be less happy. Although comparative studies exist such as the use of online and offline social connectedness for positive impressions of others (Okdie, et al., 2010), few empirical studies exist on whether offline or online connectedness is linked to specific positive emotions like happiness.

Assumption 2. Another assumption is that individuals using online social networks may be socially anxious and unwilling to seek offline connectedness. Since social connectedness is linked to positive emotions offline, being socially connected online could function as compensation for those who cannot or do not want to interact offline. So, if one does not seek online social connectedness when lacking offline social connectedness, it is implied that one will be less happy. Indeed, having the ability to initiate social connections was negatively related to online social network use (Jenkins-Guarnieri, Wright, & Hudiburgh, 2012). Suggesting that those who are unskilled in seeking offline connectedness are instead seeking social connectedness online. Research also shows that lonely individuals perceive online networks as useful for social connectedness (Jin, 2013), and use such sites to compensate for lack of offline relationships (Skues, et al., 2012). Moreover, although time spent using online social networks is associated to larger online networks, the users of online social network do not have larger offline networks compared to non-users (Pollet, Roberts, &
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Dunbar, 2011). These studies give support to the idea that those who lack offline social connectedness could be seeking it online.

However, in contradiction to the belief that online social connectedness can compensate for deficiencies in offline social connectedness, other research suggests that online social connectedness is simply a reproduction of offline social connectedness. In other words, social behaviors and needs fulfillments online are just another way to express the social needs and behaviors one has offline. Certainly, studies show that people use social network sites to communicate with people to whom they already have a preexisting offline relationship (Ellison, Steinfield, & Lampe, 2007; Pempek, et al., 2009; Skues, et al., 2012), and rarely to contact strangers (Pempek, et al., 2009). Generally, online social networks seem to function as a means to maintain and strengthen weak social ties (Ellison, Steinfield, & Lampe, 2010; Skues, et al., 2012; Subrahmanymal, Reich, Waechter, & Espinoza, 2008). Suggesting that online social connectedness is indeed a reflection of offline social connectedness and those who lack offline will also lack in online connectedness. It has also been reported that almost half of offline friends were also online friends, which is why a moderate overlap between closest offline and closest online friends occurs (Reich, Subrahmanymal, & Espinoza, 2012; Subrahmanymal, et al., 2008). Such studies support the idea that online social networks are used to complement, rather than replace, offline relationships.

From a theoretical standpoint, individuals are considered active in the pursuit of social connectedness. According to the uses and gratification theory, people are motivated by a desire to fulfill certain needs and have the ability to choose the medium that best fulfill those needs (Katz & Blumler, 1973). By using this approach several social needs for online interactions have been identified, such as, socializing, seeking information, entertainment, and self-expression (Kirsh, 2010; Smock, Ellison, Lampe, & Wohn, 2011; Whiting &
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Williams, 2013). All of which can be considered behavioral expressions of social connectedness, and can be applied to both online and offline domains.

Moreover, when comparing needs fulfillments across both online and offline mediums findings are inconsistent. A study comparing needs fulfilments between face-to-face interaction and various social media (mobile phone, telephone, internet, etc.) found that face-to-face communication was the most common way to satisfy social needs (Petrič, Petrovčič, & Vehovar, 2011). However, the study did not examine the use of online social networks specifically. A more recent study that looked at online social networks found that social needs can be met online, and that social connectedness derived from an online social network can moderate positive associations to happiness (Grieve, et al., 2013). Indeed the research is mixed and further studies are needed in the area to gain clarity.

Assumption 3. Lastly, rather than focusing on how people are connected, this final assumption focuses on the characteristics of online connections between people. The assumption suggests that happiness derived from online social connectedness is directly linked to quantity of friends. Implying that those who have large online networks would be happier than those who have fewer online friends.

Overall, people’s online social networks vary in both quantity and type. When simply looking at online relationships research has found that quantity of online friendships vary widely from person to person, ranging from only a few, to thousands (Manago, Taylor, & Greenfield, 2012; Skues, et al., 2012). Moreover, online relationships also vary in type, ranging from close friends and family, to acquaintances and strangers. A study of online friendships asked participants to report the type of relationship they had with randomly selected online friends (Manago et al., 2012). The result showed that only a fifth of online friends were considered close friends (best friends, very good friends, family member etc.) and very few were considered online only friends or strangers. Thus, the majority of online
relationships consisted of weak bonds such as, acquaintances, maintained past relationships, or classmates (Manago et al., 2012). Indeed, people’s online social networks are diverse, there are individual differences both in quantity and the characteristics of online relationships.

Furthermore, when studying the association between quantity of online friends and happiness findings are mixed. For example, one study found that individuals total online social network size predicts life satisfaction (Manago, et al., 2012). On the other hand, a longitudinal study showed that while the amount of online friends and online social network use increases over time, well-being remained unchanged (Steinfield, Ellison, & Lampe, 2008). However, it is important to remember that the strength and quality of social relationships are important factors for happiness (Baumiester et al., 1995). This implies that studying overall quantity of online friendships might not be useful for understanding happiness. Research shows that well-being derived from offline social connectedness depends on more than just having social contact, people strive to have positive and close relationships, and not simply social contact with strangers (Baumiester et al., 1995). Moreover, Ellison and Lampe (2010) found that online social network use was associated to increase in social capital; a concept used to explain the social benefits people get from having social bonds and social networks, e.g. social support (Putnam, 2002). However, it was the actual friendships, not total friendships, which lead to increase in social capital. Suggesting that friends whom are not considered actual online friends do not provide social benefits (Ellison, Steinfield, & Lampe, 2010). Thus implying that happy individuals might have both more friends and more actual friends in their online network. Perhaps it is not the quantity of online friends, but the type of relationship one has, that matters for happiness.

**Research Questions and Hypotheses (H)**
While social networks are now found both offline and online, the link between online social connectedness and happiness is yet to be thoroughly examined. This research aims to provide a better understanding of online and offline connectedness, as well as the associations to happiness. Specifically, by applying a uses and gratification approach, this study will examine social connectedness as a set of needs fulfilled by either online or offline social interaction. Moreover, online connectedness is also studied through the following online social connectedness demographics, amount of social network use, friendships, and actual friendships.

The study will explore the assumption presented above in three sections. First, the assumption of offline superiority is studied by describing the needs most commonly fulfilled in each domain then testing whether young adults use one domain over the other to fulfill specific needs. If offline social connectedness is superior and provides more social connectedness, as the assumption suggests, it is expected (H1) that an offline domain will be used more often than online domain to fulfill all needs.

Secondly, the relationship between social connectedness and happiness is studied. Based on the literature, social connectedness is related to happiness, so by initially examining whether meeting ones specific needs online or offline is related to happiness. It is expected that (H2) both online and offline connectedness will have a positive association to happiness. Next, focusing on the contradiction that online connectedness is either a compensation or a complement to offline connectedness. The assumption is then tested by asking whether fulfilment of needs differ depending on happiness. If online social connectedness is used as a compensation, (H3) unhappy individuals will report less needs fulfillment through both online and offline connectedness.

Thirdly, research shows that happiness is linked to having good-quality offline friendships and suggests that quantity of online friendships differ depending on happiness.
Therefore, it is expected that (H4) happy individuals will report having more online friends and actual online friends. Additionally, in light of the literature presented it is expected that (H5) unhappy individuals will report more online social network use.

**Method**

**Participants**

The young adults who participated in the study were from various universities in mid-
Sweden, and were studying social sciences ($M_{age}=23.08$; Min=18; Max=48). Of the 293 participants, 176 were women (61.1%) and 112 were male (38.2%). The sample was generally representative of Swedish student in regards to age and gender distributions (SCB, 2014). The participants were anonymous and were not compensated for participating in the project.

**Measures**

**Offline and online connectedness.** Numerous online social media platforms exist, such as Facebook™, Twitter™, Linkedin™, and Tumblr™. For the purpose of this study, only one of these platforms, Facebook™, is used to measure online connectedness. At present, Facebook is the most prominent social networking platform used, reporting over one billion active users (Facebook, 2012). Compared to Linkedin™, an employment- and business oriented platform, or Tumblr™, a microblogging platform, Facebook’s™ main function is bidirectional communication with friends and acquaintances. Thus, Facebook™ can provide a foundation for investigating the link between online social connectedness and happiness.

Social connectedness is operationally defined by social needs fulfillment offline (face-to-face) or online (Facebook™). For the purpose of the present study, a uses and gratifications approach was used to measure social needs fulfillment. Whether it was online
or offline, social connectedness was measured by asking questions about why one seeks out being connected based on certain needs.

The various forms of online and offline social connectedness were posed using operational definitions and measurement by Dholakia and colleagues (2004). The operational definitions of individually needs are: *purposive value* is defined as goal directed behaviors for seeking and sharing information with others; *self-discovery* needs refer to using social interaction to reach deeper understanding of oneself and others; *maintaining interpersonal interconnectivity* refers to pursuing the positive effects derived from staying in touch with others, such as, friendships, social support, and intimacy; *social enhancement* refers to seeking acceptance and approval from others in order to enhance one’s social status; *entertainment value* refers to seeking to relax or to enjoy oneself through play and contact with others (Cheung, Chiu, & Lee, 2010; Dholakia et al, 2004).

Online and offline social connectedness was measured by asking the same questions twice with slight word replacement of “Facebook” for online and “Friends or Family” for offline. The questions posed were: How often do you use Facebook/contact friends and family to satisfy the following needs? To measure *purposive value needs*, nine items were posed which were: “How often do you use Facebook/contact friends and family to: get information; learn how to do things; provide others with information; contribute to a pool of information; generate ideas; negotiate or bargain; get someone to do something for me; solve problems; and make decisions”. To measure *self-discovery needs*, participants were asked two questions which were: “How often do you use Facebook/contact friends and family to: learn about myself and others; and gain insight into myself”. To measure *maintaining interpersonal interconnectivity*, participants were asked two questions which were: “How often do you use Facebook/contact friends or family to: have something to do with others; and to stay in touch”. *Social enhancement* was measured by asking participants two question
which were “How often do you use Facebook/contact friends and family to: impress; and, feel important”. Lastly, *entertainment value* was measured by asking participants four questions which were “How often do you use Facebook/friends and family to: be entertained; play; relax; and pass time away when bored”. (Dholakia, et al., 2004). Furthermore, an additional single item, *avoiding loneliness*, was measured by asking participants “How often do you use Facebook/contact friends and family to: feel less lonely”. Participants were asked to respond to these statements using a 5-point Likert scale ranging from 1, “never or almost never” to 5, “always or almost always”. For Swedish translations used in the questionnaire, see Appendix 1.

**Happiness.** Happiness is defined as subjective well-being, which is the individuals overall evaluation of their life satisfaction (Diener, et al., 2009). Happiness was assessed by using The Life Satisfaction scale developed by Diener, Emmons, Larson, & Griffin, (1985). The scale aims to measure an individual’s perception of their overall life satisfaction. The five item inventory is based on a response scale from 1, “strongly disagree” to 7, “strongly agree”. The questions posed were: “In most ways, my life is close to my ideal; the conditions of my life are excellent; I am satisfied with my life; So far I have gotten the important things I want in life; and If I could live my life over, I would change almost nothing.” The total score is used where higher scores indicate higher levels of subjective well-being.

The scale has acceptable psychometric properties including good convergent and discriminant validity of the instrument where reliability coefficients range from .79 to .89 (Pavot & Diener, 1993).

The average happiness score ($M = 24.63, SD = 5.91$) in the sample, was in line with Diener’s (2006) ‘average category’ of happiness. However, the distribution of happiness scores was negatively skewed, 58% scored above average (scores ≤ 25) and only 5% were dissatisfied (scores ≥ 14). So, for the purposes of this study, the scores were transformed into
three new categories; low happiness (scores of 5-19), average happiness (scores 20-24), and high happiness (scores 25-35). The categories are in line with the categories proposed by Diener (2006). The new categories will be used when comparing happy and unhappy individuals on social connectedness and online social connectedness demographics.

**Online social connectedness demographics.** Participants were asked to report how often they used Facebook on a 4-point Likert scale with the following response alternatives: 1 “once a month”, 2 “once a week”, 3 “several times a week”, to 4 “daily”. Moreover, the nature of online friendships were also measured by asking participants to estimate how many Facebook friends they had and how many of their Facebook friends were considered *actual friends*. The question was open-ended and a definition of actual friend was not provided so the concept will be highly subjective therefore, individual differences between participants are likely.

**Procedure**

The present paper obtained data from a project focused on studying online and offline networks in young adults in Sweden. At the end of a scheduled, non-obligatory lecture, students were asked to participate in the study by answering questions in a short inventory. The participation was voluntary and the questionnaires were anonymous. Demographic information, age and gender, was collected.

**Statistical analysis**

SPSS™ statistical software was used to for variance and correlational-based analyses. Analyses of variance was used to compare needs fulfillment behaviors and online demographics across three happiness groups. Moreover, multiple regression analyses was used to examine whether fulfilling needs was related to happiness. Since the study is cross-sectional in design, no causal relationships will be tested or suggested.

**Results**
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After presenting the descriptive data, the findings will be reported in three sections, starting with an examination of offline and online connectedness. The second section will focus on online and offline social connectedness in relation to happiness. Finally, the three groups varying on happiness are compared on amount of online social network use and online friendships.

**Descriptive data**

An overview of the data showed that online social networks were frequently used. Most of the participants used these networks everyday (75.6%), some used them several times a week (17.8%), and very few participants reported using online social networks once a month (1.8%). The most common reason for both online and offline connectedness was maintaining interpersonal interconnectivity. Almost half of the participants used an online social network (51%), or and offline context (47.7%), ‘often’ or ‘always’, for maintaining interpersonal interconnectivity. Social enhancement was the least commonly fulfilled need in both domains. Close to a third of participants never used an online social network (32.4%) or offline context (29.8%) for social enhancement. See table 2, for means and standard deviations for all needs.

Furthermore, although there was large variation, the average number of online friends was 297 ($SD= 175.25$, min$= 20$, max$= 1000$). Not surprisingly the average number of actual online friends was lower at 47 ($SD= 63.54$, min$= 0$, max$=400$). As seen in table 4, very happy individuals reported using online social networks more than both average and unhappy individuals did. In addition, very happy people also reported the greatest amount of friends and actual friends compared to all other groups.

The six social needs of purposive value, self-discovery, maintaining interpersonal interconnectivity, self-enhancement, entertainment value, and avoiding loneliness were measured in the two domains (online and offline). As seen in Table 1, intercorrelations
between needs, offline and online respectively, show low to moderate positive correlations between all variables within each domain. That is, online connectedness needs were all related to one another, and the same was found for offline connectedness needs. Moreover, individual needs showed low positive correlations across the two domains.
### Table 1

*Intercorrelation coefficients for six measures of online connectedness and six measures of offline connectedness*

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<td>.17**</td>
<td>.42**</td>
<td>.43**</td>
<td>.42**</td>
<td>.52**</td>
<td>.46**</td>
<td>.49**</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * p < .05; ** p < .01*
Do Young Adults Use One Domain Over Another to Gratify Their Needs?

To investigate whether young adults use one domain over the other to gratify their needs, the differences between offline and online needs fulfillment behaviors was examined through a paired sample $t$-test. The hypothesis (H1) was partly supported, offline connectedness was used more often than online connectedness for some, but not all need fulfillments. Specifically, As seen in Table 2, the results showed a significant difference in gratification of purposive value $t(264) = 20.87, p < .01$, self discovery, $t(272) = 8.10, p < .01$, and lonely avoidance, $t(275) = 11.65, p < .01$. Specifically, offline connectedness was more commonly used when young adults wanted to reach a deeper understanding of themselves and others, to seek and share information, and avoiding loneliness. However, no differences were found between online and offline social connectedness based on maintaining interpersonal interconnectivity, social enhancement, or entertainment value.

Table 2

* Differences in gratification of needs offline compared to online domains

<table>
<thead>
<tr>
<th>Needs</th>
<th>Offline</th>
<th></th>
<th></th>
<th></th>
<th>Online</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>df</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purposive value</td>
<td>265</td>
<td>3.51</td>
<td>0.69</td>
<td></td>
<td>265</td>
<td>2.39</td>
<td>0.66</td>
<td></td>
<td></td>
<td>264</td>
<td>20.87**</td>
</tr>
<tr>
<td>Self-discovery</td>
<td>273</td>
<td>2.96</td>
<td>1.10</td>
<td></td>
<td>273</td>
<td>2.29</td>
<td>0.94</td>
<td></td>
<td></td>
<td>272</td>
<td>8.10**</td>
</tr>
<tr>
<td>Maintaining interpersonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interconnectivity</td>
<td>275</td>
<td>3.57</td>
<td>0.94</td>
<td></td>
<td>275</td>
<td>3.66</td>
<td>0.96</td>
<td></td>
<td></td>
<td>274</td>
<td>-1.13</td>
</tr>
<tr>
<td>Social enhancement</td>
<td>277</td>
<td>2.07</td>
<td>1.01</td>
<td></td>
<td>277</td>
<td>1.97</td>
<td>0.92</td>
<td></td>
<td></td>
<td>276</td>
<td>1.63</td>
</tr>
<tr>
<td>Entertainment value</td>
<td>271</td>
<td>2.94</td>
<td>0.99</td>
<td></td>
<td>271</td>
<td>2.93</td>
<td>0.80</td>
<td></td>
<td></td>
<td>270</td>
<td>0.144</td>
</tr>
<tr>
<td>Avoiding loneliness</td>
<td>276</td>
<td>3.22</td>
<td>1.23</td>
<td></td>
<td>276</td>
<td>2.29</td>
<td>1.25</td>
<td></td>
<td></td>
<td>275</td>
<td>11.65**</td>
</tr>
</tbody>
</table>

* $p < .05$; ** $p < .01$
Is Fulfillment of Needs, Online or Offline, Linked to Happiness?

Generally, fulfilling needs was associated with happiness where 11.2% of the variance in happiness could be explained by all needs, both online and offline, $F(12,235)= 2.46$, $p<.05$. It was expected that both online and offline social connectedness would be positively associated to happiness (H2). In order to study this closer, online and offline needs were studied separately. The hypothesis was partly supported, fulfillment of some needs are associated to happiness while others were not. Results for the multiple linear regression analyses of online connectedness showed that 6.8% of the variance in happiness was significantly explained by online needs, $F(6,251)= 3.07$, $p<.05$. At an individual needs level online, avoiding loneliness, $\beta= -.17$, $p<.05$, and seeking entertainment $\beta= -.18$, $p<.05$, was associated with low happiness levels. That is seeking online social connectedness for loneliness avoidance and for entertainment is linked to low levels of happiness. Interestingly, only 5.2% of the variance in happiness could be explained by all offline needs together, $F(6,264)= 2.39$, $p<.05$. At the individual needs level offline, only purposive value was found to be associated to happiness, $\beta= 0.15$, $p<.05$. Suggesting that greater use of offline connectedness to seek and share information is positively associated with happiness.

Do very happy individuals gratify their needs differently from unhappy individuals?

In order to address the hypothesis (H3) which suggested that unhappy individuals would lack needs fulfillments both online and offline, further testing was needed. To explore if happy and unhappy individuals used online and offline social connectedness differently analyses of variance was used. The hypothesis was not supported, results showed no significant differences across the three groups on various forms of social connectedness (Table 3). People reported expressing online and offline social connectivity in the same fashion independent of happiness level.
Table 3

Means (standard deviation), and one-way analyses of variance (ANOVA) for online and offline needs across three happiness groups

<table>
<thead>
<tr>
<th>Needs</th>
<th>Low a (n=60)</th>
<th>Average b (n=58)</th>
<th>High c (n=166)</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purposive value</td>
<td>2.37 (0.61)</td>
<td>2.41 (0.63)</td>
<td>2.38 (0.68)</td>
<td>2</td>
<td>0.05</td>
</tr>
<tr>
<td>Self-discovery</td>
<td>2.32 (0.83)</td>
<td>2.17 (0.92)</td>
<td>2.33 (0.94)</td>
<td>2</td>
<td>0.62</td>
</tr>
<tr>
<td>Maintaining interpersonal</td>
<td>3.77 (0.95)</td>
<td>3.50 (1.04)</td>
<td>3.68 (0.92)</td>
<td>2</td>
<td>1.20</td>
</tr>
<tr>
<td>interconnectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social enhancement</td>
<td>2.09 (0.95)</td>
<td>1.96 (0.87)</td>
<td>1.93 (0.94)</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Entertainment value</td>
<td>3.06 (0.83)</td>
<td>2.98 (0.74)</td>
<td>2.86 (0.74)</td>
<td>2</td>
<td>1.44</td>
</tr>
<tr>
<td>Avoiding loneliness</td>
<td>2.52 (1.39)</td>
<td>2.33 (1.20)</td>
<td>2.20 (1.19)</td>
<td>2</td>
<td>1.44</td>
</tr>
<tr>
<td>Offline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purposive value</td>
<td>3.39 (0.70)</td>
<td>3.49 (0.89)</td>
<td>3.50 (0.68)</td>
<td>2</td>
<td>0.46</td>
</tr>
<tr>
<td>Self-discovery</td>
<td>2.75 (1.06)</td>
<td>3.02 (1.09)</td>
<td>2.94 (1.10)</td>
<td>2</td>
<td>1.01</td>
</tr>
<tr>
<td>Maintaining interpersonal</td>
<td>3.58 (0.92)</td>
<td>3.61 (0.97)</td>
<td>3.48 (0.99)</td>
<td>2</td>
<td>0.45</td>
</tr>
<tr>
<td>interconnectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social enhancement</td>
<td>1.97 (0.90)</td>
<td>1.99 (1.05)</td>
<td>2.05 (0.96)</td>
<td>2</td>
<td>0.19</td>
</tr>
<tr>
<td>Entertainment value</td>
<td>3.00 (1.44)</td>
<td>2.91 (0.78)</td>
<td>2.84 (0.86)</td>
<td>2</td>
<td>0.60</td>
</tr>
<tr>
<td>Avoiding loneliness</td>
<td>3.25 (1.39)</td>
<td>3.34 (1.22)</td>
<td>3.06 (1.17)</td>
<td>2</td>
<td>1.35</td>
</tr>
</tbody>
</table>

* p <.05; ** p <.01
Do Happy and Unhappy Individuals Differ in Amount of Social Network Use, Amount of Online Friends, or the Characteristics of Online Friendships?

To test whether the differences in online social network use and online friendships across happiness groups were significant a one-way ANOVA analyses was used. The amount of online social network use was expected to differ across the groups (H5). However, as shown in table 4 the results did not show significant difference in amount of social network use therefor the hypothesis was not supported.

Furthermore, happy individuals were also expected to have more online friends and actual online friends than other groups (H4). The results showed no significant difference in quantity of online friends. However, the results showed a significant overall difference in the amount of actual online friends across the three groups, F(2,250) = 3.30, p<.05. A Bonferroni Post Hoc test revealed that unhappy individuals (M = 29.88, SD = 45.50) reported having significantly less actual online friends than did very happy individuals (M = 54.84, SD = 70.38). No other group differences were found. Means and standard deviations for all groups are shown in table 4.

In summary, individuals who were unhappy used online social networks as frequently as the very happy individuals did. Likewise, the groups did not significantly differ on quantity of online friends. Interestingly, very happy did have more actual online friends than unhappy individuals.

Table 4

Means (standard deviation), one-way analyses of variance (ANOVA) for online social network use and online friendships across happiness groups.

<table>
<thead>
<tr>
<th>Online measures</th>
<th>Low (n=60)</th>
<th>Average (n=58)</th>
<th>High (n=166)</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td></td>
<td>----------------</td>
<td>--------------</td>
<td>----</td>
<td>---</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>----------------</td>
<td>--------------</td>
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</tr>
</tbody>
</table>

Social network use  3.67 (0.66)  3.64 (0.76)  3.70 (0.62)  2  0.16
Total friends  252.09 (153.26)  301.68 (183.22)  312.52 (180.45)  2  2.46
Actual friends  29.88 (45.50)  42.51 (54.01)  54.84 (70.38)*  2  3.30*

Note: Raised letter indicates significant group difference

* p <.05; ** p <.01

Discussion

The present study had two general purposes. First, to explore online and offline social connectedness among young adults; Second, to examine the link between, online and offline, social connectedness and well-being. In doing so, the study aims to gain understanding of whether social connectedness, be it online or offline, matters for happiness in young adults. The findings show that young adults in Sweden were generally happy and that online social connectedness was common; a majority (75.6%) of young adults used online social networks daily. The needs they fulfilled through online and offline social connectedness differed slightly, nonetheless, both online and offline social connectivity had links to happiness. Moreover, when comparing three groups varying on happiness they did not differ on various forms of social connectedness, however, very happy individuals reported having more genuine online friends than all other groups.

A comparison of online and offline social connectedness was used to identify whether young adults used one domain over the other to fulfill their needs. The most common reason for both online and offline social connectedness was maintaining relationships. This finding was not surprising considering social connectedness is a fundamental motivation for humans and refers to a desire to maintain and create bonds (Baumeister, et al., 1995). Moreover, when comparing social connectedness across the two domains, the results indicate that young adults fulfill most of their needs offline rather than online, yet, some needs were fulfilled equally in both domains. Specifically, people used an offline context more when avoiding
loneliness, seeking and sharing information, and to learn about oneself and others. While, both domains were used equally for maintaining relationships, improving social status, and entertainment. Although improving social status was equal across the two domains, it was also the least gratified need in both domains.

In light of media richness theory, both mediums have their strengths and weaknesses, and the efficiency of the media depends on which need it is intended to fulfill (Sproull & Kiesler, 1985; Dennis, et al., 2008). Online social networks are less rich in social cues but provide people with a convenient way to connect independent of physical location, thus could be efficient for fulfilling of some needs. This could explain why not all needs are typically fulfilled offline, as was hypothesized. For example, maintaining relationships and seeking entertainment are needs fulfilled equally in both domains suggesting that online networks are indeed efficient for fulfilling them. However, online social networks might be less suitable for other needs because of the inherent lack of social cues. The rich offline medium leads to more trust and social connectedness (Putnam, 2000), thus could explain why more complex needs, such as avoiding loneliness and self-discovery are more commonly fulfilled offline. Consequently, while some social cues can be mediated online with emoticons, this social setting is inferior to offline interaction where social cues (tone of voice, body language, facial expressions, touch, etc.) are present. Indicating that online social connectedness can meet some social needs but can hardly replace offline social connectedness entirely.

By further exploring of the role of social connectedness in regards to happiness the results revealed that both offline and online social connectedness was related to happiness suggesting that being socially connected, whether it was online or offline, matters for happiness. However, not all social needs were associated to happiness; specifically, greater use of online social connectedness for avoiding loneliness and for entertainment was associated with lower levels of happiness. Whereas greater use of offline social
connectedness for seeking and sharing information was associated to higher happiness levels. Due to the cross-sectional design of this study we cannot say that the needs precede happiness or if happiness influences the needs fulfillment. Thus, these patterns have to be further tested, and a longitudinal study is needed to make this connection.

Furthermore, results indicated that fulfillment of social needs did not differ depending on happiness levels. Additionally, unhappy individuals did not spend more time online than others did. These results suggest that unhappy individuals were generally not lacking in offline social connectedness and using online social connectedness as a compensation. As a result, the assumption that online social connectedness is a compensation for deficiencies in offline social connectedness did not seem to be supported. Instead, the reproduction assumption seems more accurate since the pattern of needs fulfillment was stable across varying happiness. That is, young adults reported using an offline domain for fulfilling most of their needs. Moreover, correlations for needs fulfilled offline were positively correlated to corresponding online need (Table 1). Further supporting the idea of online social connectedness as a reproduction of offline social connectedness.

While individuals varying on happiness did not differ on amount of social network use or quantity of friends, very happy individuals had more actual friends than did those who were unhappy. These results are not surprising considering that having good quality friends has a strong association to happiness and well-being (Diener, et al., 2002; Myers, 1999). However, by putting these results in relation to previous research it could be suggested that having many actual online friends could influence the benefits of needs fulfillments online. Research show the majority of online friendships are considered weak bonds, such as acquaintances (Manago, et al., 2012), and that online communication is limited to only a small group of close friends (Wilson, et al., 2012). Indicating that fulfilling ones social needs is restricted to only a small proportion of the total friendship amount. Thus, individuals who
have many close friends in their online social networks could benefit more from online social connectedness than those who have few actual friends and many acquaintances. Implying that it is not how we connect to one another, but also whom we connect to that matter for our happiness. Further research directed at relating needs fulfillments and relationship types should give more insight.

Interestingly, online social connectedness had a stronger association to happiness than offline social connectedness. However, this is probably due to online social connectedness being used as a complement to offline connectedness and not an isolated domain. Further studies to investigate this difference could prove interesting.

There are however some limitations in the present study. Firstly, the study uses a cross-sectional design so causality cannot be inferred and we cannot say that needs fulfillment precedes happiness therefore a longitudinal study in recommended. Happiness is relatively stable across time (Diener, et al., 2009) so examining if needs fulfillments vary over time could be interesting. Secondly, the participants are young adults in Sweden. It is possible that other cohorts, for example older participants, could report differently than younger participants on online social connectedness. Older cohorts have not “grown up with” online social networks but are one of the fastest growing user groups (see Wilson, et al., 2012), so a replication study is encouraged. Thirdly, not having a definition of an ‘actual’ friend limits the reliability. As seen in the results, there is a large range of responses. Individual differences could be due to unhappy people having less actual friends or simply that they are setting the bar higher than happy individuals. Future research could also consider comparing quantity of actual friends both online and offline. Furthermore, the uses and gratification approach does not differentiate between needs sought and needs gratified. It could be that participants seek to fulfill a need offline but the need is not actually satisfied. An updated version of the uses and gratifications approach could make this distinction.
Lastly, while this study used established measures and that have shown good construct validity the Swedish translations need to be further tested. The measure developed by Dholakia et al. (2004) was translated into Swedish (see appendix 1) but a factor analysis is needed to see if the items load correctly. In summary, future research focusing on studying the assumptions about online and offline connectivity in relation to happiness is needed and should give more insight in the area.

The study had some strengths, first, that the sample size was adequate and, generally the sample presented similar age and gender distributions of Swedish university student. Secondly, the examination of individual needs fulfillments rather than a general measure for social connectedness, gave a more in-depth view of both online and offline social connectedness and the difference between them.

Social connectedness is an essential part of human life and the possibilities to connect have increased with the introduction of online social networks. Being socially connected, whether it be online or offline, is generally linked to happiness yet the different domains offer slightly different usages. Nevertheless, people seem capable to choose the media that best fulfill their needs and reach social connectedness. Online social networks play an important role for young adult to maintain social relationships, and having another context in which social needs can be fulfilled is positive for happiness. It is suggested the benefits of online social connectedness could be increased by having more good online friends, which in turn might be beneficial for both needs fulfillment and happiness. Suggesting that is not only important how we are socially connected but also who we are connected to, that matters for happiness.
SOCIAL CONNECTEDNESS AND HAPPINESS

References


### Constructs, items and Swedish translations for items. All questions posed started with: How often do you use Facebook/Contact friend or family to satisfy the following needs?

<table>
<thead>
<tr>
<th>Construct</th>
<th>List of items</th>
<th>Swedish translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purposive value (PV)</td>
<td>PV1: To get information</td>
<td>Att få information</td>
</tr>
<tr>
<td></td>
<td>PV2: To learn how to do things</td>
<td>Att lära mig hur man gör något</td>
</tr>
<tr>
<td></td>
<td>PV3: To provide others with information</td>
<td>Att ge andra information</td>
</tr>
<tr>
<td></td>
<td>PV4: To contribute to a pool of information</td>
<td>Att bidra med information</td>
</tr>
<tr>
<td></td>
<td>PV5: To generate ideas</td>
<td>Att skapa idéeer</td>
</tr>
<tr>
<td></td>
<td>PV6: To negotiate or bargain</td>
<td>Att förhandla eller köpslå</td>
</tr>
<tr>
<td></td>
<td>PV7: To get someone to do something for me</td>
<td>Att få någon att göra någonting för mig</td>
</tr>
<tr>
<td></td>
<td>PV8: To solve problems</td>
<td>Att lösa ett problem</td>
</tr>
<tr>
<td></td>
<td>PV9: To make decisions</td>
<td>Att ta beslut</td>
</tr>
<tr>
<td>Self-discovery (SD)</td>
<td>SD1: To learn about myself and others</td>
<td>Att lära mig mer om mig själv och andra</td>
</tr>
<tr>
<td></td>
<td>SD2: To gain insight into myself</td>
<td>Att få mer insikt om mig själv</td>
</tr>
<tr>
<td>Maintaining interpersonal interconnectivity (MII)</td>
<td>MII1: To have something to do with others</td>
<td>Att ha någonting att göra med andra</td>
</tr>
<tr>
<td></td>
<td>MII2: To stay in touch</td>
<td>Att behålla kontakten med andra</td>
</tr>
<tr>
<td>Social enhancement (SE)</td>
<td>SE1: To impress</td>
<td>Att imponera på andra</td>
</tr>
<tr>
<td></td>
<td>SE2: To feel important</td>
<td>Att känna mig viktig</td>
</tr>
<tr>
<td>Entertainment value (EV)</td>
<td>EV1: To be entertained</td>
<td>För underhållning</td>
</tr>
<tr>
<td></td>
<td>EV2: To play</td>
<td>Att spela</td>
</tr>
<tr>
<td></td>
<td>EV3: To relax</td>
<td>För avkoppling</td>
</tr>
<tr>
<td></td>
<td>EV4: To pass time away when bored</td>
<td>För att fördra tid när jag har träkt</td>
</tr>
<tr>
<td>Avoiding loneliness (AL)</td>
<td>AL1: Avoid loneliness</td>
<td>Att känna mig mindre ensam</td>
</tr>
</tbody>
</table>

*Note: Response Scale: 1= never or almost never, 2= rarely, 3= sometimes, 4= often, 5= always or almost always. Svarsalternativ: 1= Aldrig eller nästan aldrig, 2= sällan, 3= ibland, 4= ofta, 5= alltid eller väldigt ofta.*