Research Report

Individual differences predicting social connectedness derived from Facebook: Some unexpected findings

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A B S T R A C T

Social connectedness derived from Facebook is associated with positive outcomes such as better psychological health wellbeing. Yet to date, little is known about the construct of Facebook social connectedness. The aim of this study was to draw on existing studies of Facebook use to investigate what might predict social connectedness stemming from Facebook use. Participants ($N = 326$, age range 18–78 years) provided demographic information and completed measures of Facebook use, attitudes towards Facebook, personality, and Facebook social connectedness. It was hypothesised that younger age, positive attitudes, extraversion and openness to experience would predict Facebook social connectedness. Interestingly, with only age and attitude in the model, being older and having more favourable attitudes to Facebook predicted social connectedness derived from Facebook, with age acting as a suppressor variable. With the addition of personality in the final model, favourable attitudes to Facebook, extraversion, and openness to experience predicted Facebook social connectedness. In contrast to predictions, emotional stability also contributed significantly to the model. Findings are discussed in terms of implications for the social connectedness of older adults, and the role of emotional stability in the generation of social capital and in the "social enhancement" hypothesis.

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1. Introduction

In recent times, there has been a rapid increase in the use of online social networking sites, such as Facebook (Nadkarni & Hofmann, 2012). Facebook now ranks consistently as the first or second most visited website in the world (Alexa, 2015). Much research has considered motivations for Facebook use (e.g., Aladwani, 2014), and has explored the negative outcomes associated with Facebook use (e.g., Sagioglou & Greitemeyer, 2014). However, in addition, a positive psychology approach to Facebook has emerged, with the use of Facebook as a source of social connectedness (Grieve, Indian, Witteveen, Tolan, & Marrington, 2013) and social support (Indian & Grieve, 2014; Nabi, Prestin, & So, 2013) now considered. The aim of this research was to provide the first examination of the role of individual differences in predicting social connectedness derived online.

Social connectedness refers to the feelings of belongingness and affiliation that emerge from interpersonal relationships within social networks (e.g. Lee, Draper, & Lee, 2001). While a broad range of extant research has shown that face-to-face social networks and connectedness are associated with positive psychological outcomes, such as improved well-being (e.g., Cockshaw & Shochet, 2010; Lee et al., 2001), Grieve et al. (2013) extended the examination of social connectedness to consider social connectedness derived specifically from Facebook. Grieve et al.'s study revealed that Facebook social connectedness also comprised feelings of belongingness and affiliation, but from the online— rather than traditional— social network. Further, Grieve et al. found that Facebook social connectedness was related to, but distinct from, social connectedness obtained from face-to-face social networks. In addition, higher levels of Facebook social connectedness were associated with less depression, anxiety, and stress, and greater levels of subjective well-being. Grieve et al. concluded that Facebook could act as an alternative medium for social connectedness, and, given its association with positive psychological outcomes, that further consideration of the construct of Facebook social connectedness was necessary. However, to date, there is no extant research that has investigated the user characteristics that might predict social connectedness derived from Facebook.

Nonetheless, there is existing research regarding Facebook use that may provide insight into likely variables of interest. For example, social networking sites are predominantly considered to be a

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medium for the young (Livingstone, 2008; Spies Shapiro & Margolin, 2014), and adolescents report using Facebook to maintain a sense of union with others (Davis, 2012). It would seem then, that age might be a useful predictor of social connectedness derived from Facebook. Further, because favourable attitudes to online interactions predict intentions to engage in online behaviours (Grieve & Elliott, 2013; Moss, O'Connor, & White, 2010), it also seems prudent to investigate whether positive attitudes towards Facebook might predict Facebook social connectedness.

In addition, there is evidence that personality predicts Facebook use, with Ross et al. (2009) finding that greater levels of extraversion (characterised by high sociability) and openness to experience (characterised by intellectual curiosity and openness) were associated with greater use of Facebook. Presumably, higher levels of Facebook use provide increased opportunity to experience social connectedness in that forum. However, it also seems likely that sociable individuals might be predisposed to experiencing social connection, and that those open to less traditional ways of thinking might be more amenable to an alternative form of social connectivity. It follows that extraversion and openness to experience might predict social connectedness resulting from Facebook use.

The aim of this research was therefore to provide a preliminary investigation into the role of chronological age, attitudes towards Facebook, and personality in predicting perceptions of Facebook derived social connectedness. It was hypothesised that younger people and people with more favourable attitudes to Facebook would experience greater levels of social connectedness on Facebook. It was also predicted that extraversion and openness to experience would be positively related to levels of Facebook social connectedness. For completeness, we also assessed the contribution of the other personality dimensions of the Big Five: agreeableness, conscientiousness, and emotional stability.

We tested these predictions using a hierarchical regression model, with age and attitudes entered together, followed by the personality variables. This approach was used so that the contribution of personality to Facebook social connectedness could be examined over and above the two variables we expected to have the strongest effects: age and attitudes.

2. Materials and methods

2.1. Participants

Facebook users (N = 326) were recruited via research invitations on Facebook from a "Facebook Research" profile page generated by the research team. On average, participants were 28.00 years old (SD = 10.96 years, range 18–78 years). The sample was predominantly female (81%). The only selection criteria were that participants had to be adults and users of Facebook.

2.2. Measures

2.2.1. Demographic information

A brief demographic section requested that participants report their chronological age, gender, number of Facebook friends, and Facebook use.

2.2.2. Facebook attitudes

Attitude towards Facebook was measured using six items taken from Ellison, Steinfield, and Lampe's (2007) Facebook Intensity Scale. A sample question is "*I am proud to tell people I'm on Facebook*". Answers are given on a five-point Likert scale with the anchors 1 = *strongly disagree*, and 5 = *strongly agree*. Thus, higher scores indicate more positive attitudes towards Facebook.

Internal reliability (assessed using Cronbach's alpha) was excellent at α = .90 in the current sample.

2.2.3. Facebook social connectedness

Social connectedness derived from the use of Facebook was using the 13-item Facebook Social Connectedness scale presented by Grieve et al. (2013). Participants respond to items such as "*I feel close to people on Facebook*" and "*I find myself actively involved in Facebook friends' lives*" using a six-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Negatively worded items are reverse-scored such that higher scores reflect greater perceptions of Facebook social connectedness. Reliability in the current sample was excellent (α = .91).

2.2.4. Personality

We used the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003) to assess the Big Five domains of personality: extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. Participants endorse their level of agreement (on a seven-point scale where 1 = *strongly disagree* and 7 = *strongly agree*) to pairs of traits presented in each of the 10 items. Five items are reverse-scored, and higher scores indicate higher levels of each personality domain.

2.3. Design and procedure

Data were collected cross-sectionally, using a correlational design. The predictor variables were age, attitudes to Facebook, and extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. The outcome variable was Facebook social connectedness.

After ethical clearance was obtained from the University's ethics committee, participants were invited to take part in an online survey investigating Facebook use via postings on Facebook. After giving informed consent, participants completed the questions, before being thanked for their time.

3. Results

The number of Facebook friends reported by the sample is presented in Table 1. Table 2 shows the average length of time spent on Facebook per day.

Descriptive statistics for the measures as are reported in Table 3. Means and standard deviations for all measures were in line with previous research (Ellison et al., 2007; Grieve et al., 2013; Saslow, Muise, Impett, & Dubin, 2013).

As the sample was predominantly female, we entered gender into the first step of a hierarchical multiple regression to act as a control variable, also allowing us to establish whether there were any systematic effects of gender on Facebook social connectedness. No significant effect was evident, R = .09, $F(1, 324)$ = 2.69, p = .11,

Table 1
Number of Facebook friends.

Number of friends	Percentage of sample
10 or fewer	0.9
11–50	6.7
51–100	9.2
101–150	14.1
151–200	9.8
201–250	14.1
251–300	9.5
301–400	12.3
400 or more	23.3