Facebook self-disclosure: Examining the role of traits, social cohesion, and motives

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ABSTRACT

Facebook has been shown to be the most popular social network in the United States. Facebook not only has implications in the online world, but face-to-face connections are also affected by this medium. This study explores the uses of Facebook for self-disclosure behavior utilizing the uses and gratifications perspective. Using a convenience sample of Facebook users, this study examines individual and sociological factors as well as Facebook motives to discover the impact on depth, breadth, and amount of user self-disclosure. Path analyses showed that the Big Five personality factors, self-esteem, social cohesion, and motives contribute to self-disclosure dimensions. However, demographic variables did not impact disclosiveness. Limitations are discussed and directions for future research are proposed.

1. Introduction

Since its founding in February, 2004, Facebook has become one of the leading social networking websites (Facebook.com, 2013a). Facebook.com (2013b) reports that at the time of this writing, the site has more than one billion total active users, with over 600 million users accessing the site daily all over the world. In the United States, Facebook is a staple for social networking. In a survey of over 2000 American adults, Hampton, Goulet, Rainie, and Purcell (2011) found that 92% of all social network users are on Facebook, and slightly more than half of those users access Facebook on a daily basis. The results showed that more than just teenagers are using this medium. Hampton et al. (2011) found that the average Facebook users are 38 years old, female (58%), have at least some education beyond high school (69%), and are primarily white (78%). With so many people accessing and using this technology each day, it is important to examine how the medium is used and the possible implications of this use.

One reason Facebook is important to examine is the high amounts of self-disclosure that are often displayed within this medium. Self-disclosure, the revelation of personal information (Derlega, Metts, Petronio, & Margulis, 1993), can have immediate implications due to the fact that users are linked into both virtual and face-to-face friends. The average Facebook user has 229 friends, and nearly half of the user’s social network is a part of their Facebook world (Hampton et al., 2011). This means that many people in networks offline are also present in Facebook, including friends, neighbors, classmates, coworkers, and family. Therefore, the real-world ramifications of Facebook disclosures are important. Although Facebook can bring us together and give us a sense of belonging, there may also be harmful effects of self-disclosure.

The purpose of this study is to determine the predictors of self-disclosive behavior on Facebook. Doing so would not only reveal a clearer picture of the social environment of Facebook, but would also allow scholars to predict the population most at-risk for highly disclosing and potentially damaging Facebook self-disclosure. Additionally, understanding predictors of self-disclosive behavior may reveal those users who are most likely to benefit from increasingly intimate relationships online. Toward that end, a review of uses and gratifications theory will be provided as it applies to disclosiveness on Facebook, followed by a study testing the predictors of disclosive behavior on Facebook.

1.1. Self-disclosure on Facebook

According to research by the Pew Internet and American Life Project (Smith, 2011), American adults say they are drawn to social media sites such as Facebook to maintain contact with friends and family, as well as to re-establish connections with old friends. It is not surprising, then, that Facebook is characterized by high amounts of self-disclosure because it is well-established that self-disclosure is a crucial element in relationship development (e.g., Altman & Taylor, 1973). Facebook’s mission statement is “to

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make the world more open and connected” (Facebook.com, 2013b, para. 1), which rests on its users’ willingness to present their inner thoughts and emotional states on Facebook. The characteristics of Facebook encourage such self-disclosure (Mazer, Murphy, & Simonds, 2007). Facebook’s status update box asks “what’s on your mind,” prompting users to disclose information. The social networking site has a user-friendly platform that allows for easy access to picture posting, status updates, and other web content to be shared with one’s network in both web and mobile formats.

While Facebook functions as an outlet for disclosure, aspects of the internet as a medium encourage increasing amounts of personal self-disclosure. For example, social information processing theory explains that users can adapt their verbal cues to accommodate the largely text-based environment of computer-mediated communication (Walther, 1992). Additionally, the increased amount, depth, and breadth of self-disclosure is one way that Facebook users can express affinity to compensate for the largely textual nature of the online environment (Walther, 1992). Schumaker and Van Der Heide (2011) argued that self-disclosure is one vehicle that Facebook users may employ to express emotions when richer nonverbal communication channels are not present. Along with the lack of nonverbal cues, the asynchronous nature of most Facebook activity can cause a person to self-disclose intimate information (Suler, 2004; Walther, 1996).

Not only does the internet as a medium lend itself to self-disclosure, but interpersonal aspects of disclosure are relevant to Facebook. There are several dimensions of self-disclosure, such as amount, depth, breadth, intent, valence, and honesty/accuracy (Altman & Taylor, 1973; Wheeless, 1978). General disclosingness is represented by amount, depth, and breadth of self-disclosure in the present study. Amount of self-disclosure is conceptualized as the number of disclosures made on Facebook. Depth is characterized by more personal or intimate disclosures. People disclose with more breadth when they discuss a wide variety of topics.

1.2. Uses and gratifications theory

Uses and gratifications theory (U&G) has proven to be a useful and popular theory to frame the study of computer-mediated communication, including Facebook use. U&G proposes that media uses and effects are best understood within the context of the individual’s psychological and sociological characteristics, as well as his/her motives for using a medium (Katz, Blumler, & Gurevitch, 1974). People approach media with goals in mind that they wish to fulfill, making this a functional perspective (Rubin, 2002). This limited effects model requires researchers to consider each of these variables when examining the whole picture of media effects. Extant Facebook research using U&G has largely explored the motives for Facebook use and significant predictors of Facebook use.

1.2.1. Motives for Facebook use

Modern U&G studies often focus on understanding the motives, or reasons people use media, which in turn helps predict the gratifications they will gain from media use (Rubin, 2002; Ruggiero, 2000). Researchers have been very interested in discovering the motives for Facebook use, most often under the U&G framework (e.g., Hunt, Atkin, & Krishnan, 2012; Joinson, 2008; Raacke & Bonds-Raacke, 2008; Sheldon, 2008a, 2008b; Smock, Ellison, Lampe, & Wohl, 2011; Tosun, 2012; Yang & Brown, 2013). This body of research focuses on developing motive typologies as well as the effects of these motives on Facebook use.

Many researchers have developed motives typologies for social network use. Often combined with interpersonal motives, social networking research has shown several major motives for use. These include relationship maintenance, to pass the time, virtual community (i.e., develop new relationships), entertainment, coolness, and companionship (Sheldon, 2008a, 2008b; Special & Li-Barber, 2012). Other researchers have found additional motives including control (i.e., telling someone to do something; Baek, Holton, Harp, & Yaschur, 2011), promoting work/professional advancement (Baek et al., 2011; Papacharissi & Mendelson, 2011), photo-related activities (Raacke & Bonds-Raacke, 2008; Tosun, 2012), and learning/academic purposes (Hew, 2011; Raacke & Bonds-Raacke, 2008).

Motives for using Facebook are linked to one’s real-world communication experiences, as the research reviewed above has shown. Research has also shown that motives are linked to self-disclosure. In a study on Facebook and self-disclosure, Special and Li-Barber (2012) found that those who were motivated to use the medium for entertainment tended to disclose more information on the site. Additionally, those that were highly disclosive were more likely to use Facebook to pass the time (Special & Li-Barber, 2012). Tosun (2012) found that those people who felt they could disclose their “true self” online were more likely to use Facebook to establish new relationships and manage romantic relationships. Additionally, research conducted by Smock et al. (2011) showed that people who use Facebook for expressive information sharing motivations were more likely to post status updates.

Existing research has shown that individual variables should be taken into consideration when examining the use of new media (e.g., Hills & Argyle, 2003; Miura & Yamashita, 2007). Predictor variables such as personality traits, sociological variables, and demographics have an impact on the dynamics of self-disclosure on Facebook. These variables often play a role in the motives people have for using Facebook as well as their self-disclosive behaviors online.

1.3. Predictors of Facebook use

1.3.1. Individual variables

Two main individual factors are examined in this research: personality traits and self-esteem. Personality factors have often been used as variables in U&G research (Ruggiero, 2000). The “Big Five” personality traits are neuroticism, agreeableness, openness, conscientiousness, and extraversion (John, Donahue, & Kentle, 1991). In a study on Facebook use and personality traits, Ross et al. (2009) found that personality traits were linked to several functions and motivations. For example, participants who were highly extroverted were more likely to join Facebook groups. With regards to openness, those that were highly open were more likely to indicate a need to be sociable on Facebook. People low in neuroticism were more likely to use photos on Facebook, whereas people highly neurotic enjoyed the Wall function (Ross et al., 2009). Additionally, in a study of Australian Facebook users, Ryan and Xenos (2011) found that Facebook users are more likely to be extraverted and narcissistic. People who scored high on exhibitionism were more likely to prefer photos and status updates. As found in Ross et al. (2009), people who were more neurotic preferred using the Wall function on Facebook.

In addition to personality characteristics, self-esteem, or the belief that one has self-worth (Crocker & Park, 2004), is another individual variable that should be considered when examining online self-disclosure. The social compensation hypothesis posits that people use media to fulfill social needs that are unmet in everyday life (Davis & Kraus, 1989). Specifically, the internet may be a forum for those who are inhibited in everyday life to branch out and form social relationships (McKenna, Green, & Gleason, 2002). According to this perspective, people with low self-esteem who may otherwise be withdrawn in social situations have the opportunity to flourish on Facebook.

There is some Facebook research that supports the social compensation hypothesis. Facebook users with lower self-esteem tend
to have more Facebook friends (Lee, Moore, Park, & Park, 2012), spend more time on Facebook, and have a stronger emotional connection to Facebook (Kalpidou, Costin, & Morris, 2011). Undergraduate students in Forest and Wood's (2012) studies who were lower in self-esteem saw self-disclosure on Facebook as appealing, but their disclosures were generally more negative than positive.

### 1.3.2. Social cohesion

Although the research above partially support the social compensatory features of Facebook, the social enhancement hypothesis argues that people behave online in similar ways as they do face-to-face (Valkenburg, Schouten, & Peter, 2005). In other words, those who are sociable and have strong connections offline are likely to benefit from this sociability and maintain highly social Facebook pages, rife with self-disclosure and connection. Therefore, it may be useful to measure sociological indices when exploring how users self-disclose on Facebook.

One sociological variable that may be of particular interest with respect to the social enhancement hypothesis is social cohesion. Social cohesion is the connection one feels to a larger group, established through social bonds (Yamamoto, 2011). Members of socially cohesive groups feel a sense of engagement through their groups (Rosell & et al., 1995).

Papacharissi and Mendelson’s (2011) research supports the assumption that those with stronger real-life ties utilize Facebook to strengthen these ties. Results showed that participants who used Facebook for expressive information sharing, habitual/pass the time, relaxation/entertainment, coolness, companionship, social interaction, and professional advancement were most likely to score high on social capital measures (staying connected, meeting new people, etc.). In other words, those who were socially active in their real life were more likely to benefit from Facebook’s ability to connect with others (Papacharissi & Mendelson, 2011). According to Hampton et al. (2011), Facebook users have more confidants and closer ties to offline network than others, again in support of the social enhancement hypothesis. Examining both self-esteem and social cohesion in the present study will provide an opportunity to test the social compensation and social enhancement hypotheses.

### 1.3.3. Demographic factors

In addition to individual and sociological characteristics, demographics can impact self-disclosure on Facebook. Sex is the most commonly examined individual difference with regard to self-disclosure (Dindia, 2002). Generally speaking, research has shown that women tend to disclose more personal information in face-to-face contexts than men (e.g., Buhre & Fuqua, 1987; Davidson & Duberman, 1982; Jourard, 1971; Morton, 1978). This trend has been supported in online communication, as well (e.g., Peter, Valkenburg, & Schouten, 2005; Punyanunt-Carter, 2006).

When looking at Facebook specifically, there have been some studies that show sex differences in Facebook use and motives. Sheldon (2008b) found that female students used Facebook to pass the time, for entertainment, and for maintaining existing relationships. Males in this study, however, tended to use Facebook more to develop new relationships and to develop romantic relationships. Hunt et al. (2012) also found that women used Facebook more for entertainment and interpersonal communication motives. With regards to self-disclosure on Facebook, Special and Li-Barber (2012) found that males disclosed more basic information and contact information than females.

Other studies have shown that men and women do not differ in why they use Facebook. When examining motives for making a relationship “Facebook official,” Fox and Warber (2013) found that there were no differences in motivations between men and women (interpersonal or social) in making a relationship status disclosure. Raacke and Bonds-Raacke (2008) found that there were no gender differences in reported motivations for Facebook use between men and women. Additionally, Baek et al. (2011) found no gender differences in posting links and motivations on Facebook.

Finally, age appears to be a potentially important predictor to include in this study. Because Facebook users’ ages range widely and the average Facebook user is 38 years old (Hampton et al., 2011), age may play an important part in the self-disclosive behaviors of Facebook users. Existing research suggests that younger people tend to disclose more than older people in face-to-face (e.g., Knapp, Ellis, & Williams, 1980; Sinha, 1972) and computer-mediated communication (e.g., Ma & Leung, 2006). Much of the existing Facebook research samples from undergraduate students; thus, the participants do not vary much in age. However, age differences may exist in the broader Facebook population.

### 1.4. Research questions

U&G is a useful model for examining the predictors of self-disclosive behavior on Facebook. Fig. 1 presents the model tested in this study. It is expected that individual and sociological variables will predict motives for using Facebook, which in turn will predict Facebook disclosiveness. In this study, disclosiveness is considered a particular type of media use, which is fitting for U&G. To explore the relationships among study variables, the following research questions were posed:

**RQ1:** What individual variables (age, sex, Big Five traits, self-esteem), sociological variables (social cohesion), and Facebook motives characterize large amounts of self-disclosure on Facebook?  
**RQ2:** What individual variables (age, sex, Big Five traits, self-esteem), sociological variables (social cohesion), and Facebook motives characterize more depth of self-disclosure on Facebook?  
**RQ3:** What individual variables (age, sex, Big Five traits, self-esteem), sociological variables (social cohesion), and Facebook motives characterize more breadth of self-disclosure on Facebook?

### 2. Methods

A cross-sectional survey design was used to test the study’s research questions and hypotheses. The participants and procedures are described in the following sections.

#### 2.1. Participants

Participants were adults over the age of 18 who posted on Facebook at least once per month. Following approval from the Institutional Review Board, the researchers attempted to collect a random sample by utilizing a random number generator and the “People” directory provided by Facebook. However, the recruitment message was quickly reported as SPAM, which blocked the researchers from further data collection in this way. Thereafter, the researchers ultimately used a convenience sampling method, posting a call for participation in numerous venues, including listservs, Facebook groups, the researcher’s home institutions’ faculty listservs to circulate among students, and the researchers’ Facebook pages. Every attempt was made to collect data from Facebook users that were not personally connected to the researchers via a snowball technique (asking friends to post the link on their wall), but this could not be guaranteed.

Data was collected from 305 Facebook users; however, four cases were excluded because they reported no Facebook usage. The final data set include 301 Facebook users. Participants’ ages...
ranged from 18 to 68 years ($M = 31.85, SD = 12.92$). The sample was predominantly women ($n = 232, 77.1\%$; males $n = 68, 22.6\%$) who were Caucasian ($n = 276, 91.7\%$). Participants logged onto Facebook an average of 8.24 times per day ($SD = 22.31$), using Facebook a total of 109.67 min per day ($SD = 125.10$). On average, they had 434.98 Facebook friends ($SD = 758.16$).

2.2. Procedures

After providing informed consent, participants completed a battery of surveys designed in Qualtrics. Data for this study was a subset of this larger data set. Personality characteristics were measured first, followed by motives for using Facebook, self-disclosure on Facebook, and demographic and descriptive information.

2.3. Measures

All measures in this study were found to be reliable. Table 1 includes means, standard deviations, and Cronbach’s alphas for all study variables. Each measure is described in detail below.

<table>
<thead>
<tr>
<th>Individual Variables</th>
<th>Sociological Variable</th>
</tr>
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<tbody>
<tr>
<td>Age</td>
<td>Social Cohesion</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td></td>
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<tr>
<td>Agreeableness</td>
<td></td>
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<tr>
<td>Openness</td>
<td></td>
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<table>
<thead>
<tr>
<th>Facebook Motives</th>
<th>Self-Disclosure Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual community</td>
<td>Amount</td>
</tr>
<tr>
<td>Companionship</td>
<td>Depth</td>
</tr>
<tr>
<td>Exhibitionism</td>
<td>Breadth</td>
</tr>
<tr>
<td>Relationship maintenance</td>
<td></td>
</tr>
<tr>
<td>Passing time</td>
<td></td>
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</tbody>
</table>

Note: Age was measured with one item each. Therefore, reliability estimates could not be computed. All other variables were measured on a 1–5 scale, with 5 representing more of the measured variable.

Note: Pass time Facebook motive was measured with two items, yielding a significant, large correlation ($r = .66, p < .001$).

Table 1
Means, standard deviations, and Cronbach’s alphas for all study variables.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>31.85</td>
<td>12.92</td>
<td>.88</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>3.94</td>
<td>.68</td>
<td>.88</td>
</tr>
<tr>
<td>Extraversion</td>
<td>3.43</td>
<td>.80</td>
<td>.89</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>3.81</td>
<td>.55</td>
<td>.79</td>
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<tr>
<td>Neuroticism</td>
<td>2.93</td>
<td>.69</td>
<td>.83</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>3.79</td>
<td>.57</td>
<td>.80</td>
</tr>
<tr>
<td>Openness</td>
<td>3.76</td>
<td>.59</td>
<td>.84</td>
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<tr>
<td>Social cohesion</td>
<td>3.89</td>
<td>.73</td>
<td>.94</td>
</tr>
<tr>
<td>Facebook motives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virtual community</td>
<td>2.02</td>
<td>.92</td>
<td>.89</td>
</tr>
<tr>
<td>Companionship</td>
<td>1.93</td>
<td>1.07</td>
<td>.94</td>
</tr>
<tr>
<td>Exhibitionism</td>
<td>2.01</td>
<td>1.00</td>
<td>.90</td>
</tr>
<tr>
<td>Relationship maintenance</td>
<td>4.18</td>
<td>.72</td>
<td>.87</td>
</tr>
<tr>
<td>Passing time</td>
<td>4.05</td>
<td>.92</td>
<td>$r = .66^{***}$</td>
</tr>
<tr>
<td>Self-disclosure dimensions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount</td>
<td>2.34</td>
<td>.64</td>
<td>.71</td>
</tr>
<tr>
<td>Depth</td>
<td>1.92</td>
<td>.73</td>
<td>.79</td>
</tr>
<tr>
<td>Breadth</td>
<td>3.37</td>
<td>.79</td>
<td>.76</td>
</tr>
</tbody>
</table>

2.3.1. Self-esteem

Trait self-esteem was measured with Rosenberg’s (1979) 10-item self-esteem scale. This 5-point, Likert-type scale measures trait self-esteem. Five items were reverse-coded, and then scores were summed and averaged to reveal each participant’s scores. Higher scores indicate higher self-esteem.

2.3.2. “Big Five” personality traits

John et al.’s (1991) Big Five Inventory (BFI) was used to test extraversion, agreeableness, conscientiousness, neuroticism, and openness. The BFI has undergone extensive testing, resulting in a relatively short, reliable, and valid instrument (see John, Naumann, & Soto, 2008, for a thorough review of the BFI). This 5-point, Likert-type scale asks participants to indicate how much they agree that they are like the 44 phrases in the scale. Each dimension is measured by 8–10 items. When averaged, higher scored indicate more of the measured personality trait.

2.3.3. Social cohesion

Social cohesion was measured by Malone, Pillow, and Osman (2012) 10-item General Belongingness Scale. All items were measured on a 5-point, Likert-type scale, with 5 indicating high social cohesion. Five items were reverse-coded and all items were averaged to form a composite measure of cohesion.

2.3.4. Facebook motives

There have been several inventories of Facebook motives forwarded by researchers. Sheldon’s (2008b) Facebook motives index appeared to be heavily used in existing research. Therefore, it was adopted in this study. This 26-item measure asks participants to indicate on a 5-point scale how likely they are to use Facebook for each of six motives – relationship maintenance, passing time, virtual community, entertainment, coolness, and companionship. To ensure that we measured all relevant motives, we included 10 items from Barker and Ota’s (2011) research in the virtual community and companionship motives, as well as three items from Hollenbaugh’s (2011) blogging motives index measuring exhibitionism. The full index included 39 items.

Responses on the full index were subjected to a two-stage exploratory factor analysis with Varimax rotation to reveal latent factors. Analyses revealed a five-factor solution, including 24 items and accounting for 71.60% of the variance. See Table 2 for items, factor loadings, and variance explained by each motive. Scores were computed by summing and averaging each participant’s responses on the items loaded on each factor.

Fig. 1. Proposed model of self-disclosure in Facebook.
Factor 1, virtual community, included seven items from the corresponding a priori motive that measure people’s need to use Facebook to forge new relationships. Factor 2, companionship, consisted of five items from the a priori category. Participants who scored high on this motive used Facebook to compensate for loneliness. Exhibitionism was Factor 3, which measures participants’ desire to use Facebook to get attention. This factor included five items from the a priori motives of coolness and exhibitionism. The fourth factor, relationship maintenance, included five items from the same a priori category. This motive represents using Facebook to sustain existing relationships. Factor 5, passing time, consisted of two items that were highly correlated with one another. These items represent a well-established motive of media use – to relieve boredom.

2.3.5. Self-disclosure dimensions

The researchers used a modified version of Wheeless’ (1978) Revised Self-disclosure Scale (RSDS) to measure amount and depth of self-disclosure. This scale asks participants to indicate how much they agree on a scale from 1 (‘strongly disagree’) to 5 (‘strongly agree’) with each statement about self-disclosive behavior. Amount is measured by seven items, and depth is measured by five. The researchers revised the scale to fit within the Facebook context. Responses were averaged for each of the subscales to reveal scores for amount and depth of self-disclosure.

A close examination of the RSDS in relation to foundational research in self-disclosure (e.g., Altman & Taylor, 1973) revealed that breadth, a central dimension of self-disclosure in much disclosure research and theory, was not measured in this scale. Therefore, five items were created to measure breadth of self-disclosure, including items such as “My Facebook posts range over a wide variety of topics” and “My Facebook posts tend to center around one subject of interest” (reverse coded).

2.3.6. Demographics and descriptive information

Participants reported age, sex, ethnicity, and amount of time spent on Facebook on an average day to describe the sample. The researchers also asked participants to log onto their Facebook accounts to look up and provide their number of Facebook friends. Age and sex were used to address the study’s research questions.

3. Results

Path analyses were conducted with regression to test the research questions. U&G was consulted to determine how the independent variables would be entered into the models (see Fig. 1). To conduct the path analysis, five separate regressions were run to determine the predictors of Facebook motives (see Table 3). In these analyses, Facebook motives were regressed on individual and sociological variables (age, sex, self-esteem, Big Five traits, and social cohesion). Results are summarized in Table 3 and below, as they serve as indirect predictors of certain disclosive behaviors. Next, hierarchical regressions were run on each of the three self-disclosure dimensions. Individual and sociological variables were entered as the first block of predictors, followed by Facebook motives as the second block (see Table 4). This two-stage method of regression analysis allows the researchers to examine direct and indirect predictors of the outcome variables. See Fig. 2 for significant study results.

3.1. Amount of self-disclosure

RQ1 was posed to explore the characteristics of Facebook users who disclose large amounts of personal information. The total model explained 17% of the variance in amount of self-disclosure, $F(14,285) = 4.05, p < .001$. Two motives were direct predictors of
The exhibitionism motive (see Table 3 and Fig. 2). Participants low in conscientiousness, agreeableness, and social cohesion, as well as those higher in openness disclosed more information on Facebook.

3.2. Depth of self-disclosure

Depth of self-disclosure was explored in RQ2. To determine the characteristics associated with participants who disclosed more intimate information on Facebook, the path analysis was examined. The total model explained 24% of the variance in depth of self-disclosure, $F(14,285) = 6.42$, $p < .001$. Extraversion and virtual community were direct predictors of depth (see Table 4). Specifically, more extraverted individuals who used Facebook to develop online social networks disclosed more intimate, personal information on Facebook than others. Conscientiousness and agreeableness were indirect predictors through the virtual community motive (see Table 3 and Fig. 2). Less conscientious, more agreeable individuals who were motivated by the desire to meet new people online disclosed information of greater depth.

4. Discussion

This study used U&G to examine the predictors of self-disclosure on Facebook. Ultimately, the purpose of this study was to determine which predictors and motives were characteristic of disclosure Facebook users. Facebook users disclosing the largest amount of information used the medium for exhibitionism and relationship maintenance. These participants were also likely to be less conscientious, be less agreeable, perceive less social cohesion, and be more open. The profile of the most disclosive Facebook users in terms of amount, therefore, includes those who want to maintain their existing relationships, as well as those who want to get attention, perhaps because of their diminished social cohesion and agreeableness offline.

Facebook users who were more extraverted and who used Facebook to establish a virtual community disclosed the most personal information. Less conscientiousness and more agreeableness were indirect predictors of depth of self-disclosure through the virtual community motive. Finally, Facebook users posted about a wider variety of topics when they had lower self-esteem, lower neuroticism, and more openness. Additionally, participants who used Facebook to maintain their existing relationships discussed more breadth of topics.

The results of this study are in many ways confirming of existing research and theory. U&G provides a helpful framework with which to study Facebook self-disclosure. Each of the total models predicting self-disclosiveness was significant at the $p < .001$ level.

Note: All betas are standardized betas. Although openness was a significant individual predictor of relationship maintenance, this predictor was not interpreted in the present study because the model was not significant. $N = 301$.

$^* p < .05$.

$^{**} p < .01$.

$^{***} p < .001$.

### Table 3
Regressing Facebook motives on individual and sociological variables.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Virtual community</th>
<th>Companion-ship</th>
<th>Exhibitionism</th>
<th>Relationship maintenance</th>
<th>Passing time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$-.08$</td>
<td>$-.05$</td>
<td>$-.04$</td>
<td>$-.03$</td>
<td>$-.27^{***}$</td>
</tr>
<tr>
<td>Sex</td>
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<td>$-.04$</td>
<td>$-.03$</td>
<td>$.10$</td>
<td>$.09$</td>
</tr>
<tr>
<td>Self-esteem</td>
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<td>$-.12$</td>
<td>$.05$</td>
<td>$.03$</td>
<td>$-.01$</td>
</tr>
<tr>
<td>Extraversion</td>
<td>$.10$</td>
<td>$.03$</td>
<td>$.02$</td>
<td>$.08$</td>
<td>$-.03$</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>$-.16$</td>
<td>$-.11$</td>
<td>$-.15$</td>
<td>$-.00$</td>
<td>$-.11$</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>$-.07$</td>
<td>$.11$</td>
<td>$.05$</td>
<td>$.05$</td>
<td>$.03$</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>$.13^{*}$</td>
<td>$.00$</td>
<td>$-.17^{*}$</td>
<td>$.01$</td>
<td>$.03$</td>
</tr>
<tr>
<td>Openness</td>
<td>$.06$</td>
<td>$.12$</td>
<td>$.13$</td>
<td>$.13$</td>
<td>$.04$</td>
</tr>
<tr>
<td>Social cohesion</td>
<td>$-.15$</td>
<td>$-.38^{***}$</td>
<td>$-.20$</td>
<td>$.13$</td>
<td>$.07$</td>
</tr>
<tr>
<td>Model $R^2$</td>
<td>$.09^{*}$</td>
<td>$.34^{***}$</td>
<td>$.16^{***}$</td>
<td>$.04$</td>
<td>$.10^{***}$</td>
</tr>
</tbody>
</table>

Note: All betas are final standardized betas on the last step of the regression. $N = 301$.

$^* p < .05$.

$^{**} p < .01$.

$^{***} p < .001$.

### Table 4
Regressing self-disclosure on individual variables, social cohesion, and motives.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Amount</th>
<th>Depth</th>
<th>Breadth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$-.02$</td>
<td>$-.05$</td>
<td>$.00$</td>
</tr>
<tr>
<td>Sex</td>
<td>$-.08$</td>
<td>$-.10$</td>
<td>$.10$</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>$-.12$</td>
<td>$-.14$</td>
<td>$-.22^{**}$</td>
</tr>
<tr>
<td>Extraversion</td>
<td>$.09$</td>
<td>$.15$</td>
<td>$.08$</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>$.00$</td>
<td>$.01$</td>
<td>$.01$</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>$.00$</td>
<td>$-.02$</td>
<td>$-.22^{**}$</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>$-.03$</td>
<td>$-.02$</td>
<td>$.06$</td>
</tr>
<tr>
<td>Openness</td>
<td>$.05$</td>
<td>$.08$</td>
<td>$.20^{***}$</td>
</tr>
<tr>
<td>Social cohesion</td>
<td>$.02$</td>
<td>$.07$</td>
<td>$.07$</td>
</tr>
</tbody>
</table>

Step 2

| Virtual Community | $.09$  | $.18^{**}$ | $.05$   |
| Companionship    | $.06$  | $.14$     | $.16$   |
| Exhibitionism     | $.21$  | $.12$     | $.07$   |
| Relationship maintenance | $.14$  | $.09$ | $.29^{**}$ |
| Passing Time      | $-.03$ | $.00$     | $.01$   |
| Final model $R^2$ | $.17^{***}$ | $.24^{***}$ | $.18^{***}$ |

Note: All betas are final standardized betas on the last step of the regression. $N = 301$.

$^* p < .05$.

$^{**} p < .01$.

$^{***} p < .001$. 
and the only motive that was not significantly explained by the predictor variables was relationship maintenance. Scholars should employ U&G as they continue to examine such individualized, active uses of the internet.

Facebook is a highly social environment, and its users do seem to adjust their verbal communication to convey affection and sociability (Walther, 1992). Open, extraverted individuals who use Facebook for relationship maintenance and to establish a virtual community are generally more disclosive, as measured by amount, depth, and breadth of self-disclosure. This is fitting considering our traditional views of the role of self-disclosure in relationship development (Altman & Taylor, 1973).

Along with the more expected findings, there were several new contributions made to the literature. For example, using Facebook for exhibitionism resulted in high amounts of self-disclosure. Although little research has supported this, it is not surprising due to the highly textual Facebook environment; self-disclosure is likely to get people’s attention. Another quite surprising finding was the lack of significant relationships among age, sex, and self-disclosure dimensions. These two demographic characteristics – sex in particular – have consistently shown to affect self-disclosure patterns. Perhaps the social environment of Facebook where everyone, regardless of sex or age, is encouraged to self-disclose is scrubbing out these traditional differences. On the other hand, an examination of the relatively low means and standard deviations of scores for the self-disclosure dimensions in this study suggest that perhaps Facebook users are becoming more selective in when, how, and to whom they disclose.

In addition to the findings regarding predictors of self-disclosive behavior, another contribution of this study concerns the motives for using Facebook. The exploratory factor analyses revealed the same motives as previous research (e.g., Sheldon, 2008b), with the exception of coolness. Items from the coolness and exhibition motive loaded together, revealing the latent motive exhibitionism. Due in part to the ubiquity of Facebook, it is no longer very “cool” to maintain a Facebook profile. In fact, anecdotal evidence would suggest that it is, in fact cooler to not be on Facebook. However, Facebook users can get attention and establish a sense of coolness through the things they post on Facebook.

This research has also contributed to the discipline by revealing the individual and social factors that affect people’s motives for using Facebook (see Table 3). The Big Five seem to be useful in this model, as consciousness, agreeableness, and openness predicted motives, while extraversion, neuroticism, and openness directly predicted self-disclosure dimensions. However, age and sex made little to no impact in the total model to predict motives or self-disclosure. The only significant difference among these well-established predictors of online behavior was that younger participants were more motivated to use Facebook to pass time than older participants.

This study’s findings related to self-esteem and social cohesion lend support to the social compensation hypothesis. Although social cohesion was not a direct predictor of self-disclosure, it was inversely related to the motives of companionship and exhibitionism. In other words, those who felt less connected to their social groups were drawn to Facebook to feel less lonely by connecting to others, as well as to get attention. Similarly, those with lower self-esteem were more likely to disclose about a variety of topics on Facebook. In these ways, it appears that Facebook is one way that some choose to fill a void in their lives.

On the other hand, there is some support for the social enhancement hypothesis as well. Participants who were more open as a

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**Fig. 2.** Model of significant profile characteristics of Facebook users’ self-disclosure (SD). Significant predictors of each Facebook motive are listed in the box in parentheses. See Table 4 for beta weights. Solid lines indicate positive relationships, and dashed lines indicate negative relationships.
personality trait disclosed with more breadth and tended to use Facebook for companionship and exhibitionism. Extraverted Facebook users reported greater depth of self-disclosure. Clearly the use of Facebook is complex enough to accommodate all types of individuals, whether they are searching to compensate for something missing in their everyday lives or to extend their existing sociability online.

4.1. Limitations and future research directions

The implications of this study should be interpreted with some reservation due to study's limitations. Facebook in itself posed a limitation with regard to data collection. As noted previously, attempts to randomly select users through the “People” directory were met with spam reports. Based on this experience, random sampling may not be a reality in the Facebook realm. There is a general distrust of email requests, so it is becoming more difficult to convince people to participate in social scientific research. As advertisements increase in newsfeeds and viruses are spread through unknown links, it is becoming increasingly difficult to gain trust from strangers via Facebook. Paid advertisements can be utilized, but researchers are limited to people who self-select into their study. At the time of this study, it seems that random sampling of Facebook users poses a challenge that must be met by future researchers.

As a result of the challenges of data collection, a convenience sample was chosen. While the sample does reach beyond the social networks of the two researchers, this sample may not be representative of the Facebook population. This sample was predominantly Caucasian women, and although this group does make up the majority of Facebook users (Hampton et al., 2011), this group was overrepresented in the present study. Perhaps sex differences did not emerge because there were not enough men to test for them. While the average age of the participants in this study was lower than the average Facebook user (38 years), the study does move Facebook research beyond the college/high school student demographic. Future research should consider a quota sample to mimic the Facebook landscape more closely.

Another potential limitation involves the relatively narrow scope of measuring self-disclosure. The present study asked participants to consider only their self-disclosive behavior, but in fact self-disclosure does not exist in a vacuum. Instead, the social networking capabilities of Facebook allow for others to contribute to the body of information about a person (Walther, Van Der Heide, Kim, Westerman, & Tong, 2008). Facebook users can post verbal information on others' walls, tag each other in pictures or in geographic locations, and comment on each other's posts, contributing more information than one individual may disclose about him/herself. Furthermore, pictures may disclose more information than words for certain types of Facebook users (Van Der Heide, D’Anglejo, & Schumaker, 2012). Future research should make every attempt to explore how people co-create identities on Facebook by contributing personal information about others to the greater Facebook community through text, picture, and video.

This study revealed some intriguing findings related to self-esteem and social cohesion. Namely, individuals with lower self-esteem and less social cohesion were more disclosive, either directly or indirectly through motives. More research is needed to look at the reasons for and social implications of self-disclosure in such a public format for these individuals. People with lower self-esteem tend to disclose more negative and less positive information on Facebook (Forest & Wood, 2012), which may be perceived socially as fishing for compliments or searching for confirmation. It is unclear how this is received within their online networks, as well as whether or not this exchange of disclosure and responses is personally fulfilling.

In conclusion, this research builds upon existing motives studies and supports the application of U&G in studying the implications of Facebook use. Individual and sociological variables, as well as Facebook motives were shown to have a significant impact on users’ self-disclosure. As Facebook continues to dominate the social networking landscape, it is important to persist in making sense of this important medium in 21st century culture.

References


