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Self-presentation and belonging on Facebook: How personality influences social media use and motivations

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ABSTRACT

The present study examined the relationship between the Big Five and the use of Facebook to fulfill belonging and self-presentational needs. One hundred and eighty four undergraduates completed a survey assessing personality and Facebook behaviors and motivations. High agreeableness and neuroticism were the best predictors of belongingness-related behaviors and motivations. Extraversion was associated with more frequent use of Facebook to communicate with others. Self-presentational behaviors and motivations were best predicted by low conscientiousness and high neuroticism. Results suggest that conscientious individuals are cautious in their online self-presentation. Neuroticism, agreeableness, and extraversion were positively associated with the tendency to express one's actual self. Neuroticism was positively associated with the expression of ideal and hidden self-aspects. The motivation to express these self-aspects mediated the relationship between neuroticism and self-disclosure.

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1. Introduction

The Internet has had a major impact on social life (see Bargh & McKenna, 2004 for review). In 2010, 61% of American adults used social networking websites (SNS) (Zickuhr, 2010). Facebook is the most popular SNS (Jain, 2010) with over one billion users (Facebook, 2012).

Recently, social scientists have begun studying Facebook, examining demographic characteristics of users; motivations for use, self-presentation, and social interactions (see Wilson, Gosling, & Graham, 2012 for review). Some studies have examined how personality relates to Facebook use (Amichai-Hamburger & Vinitzky, 2010; Moore & McElroy, 2012; Ross et al., 2009). According to Nadkarni and Hofmann's (2012) dual-factor model, Facebook use is motivated by two needs: belonging and self-presentation. The current research integrates these approaches, using the dual-factor model to examine how personality influences motivations to use Facebook to fulfill these two needs.

2. Belongingness and self-presentation as motivations for Facebook use

The need to belong is the fundamental drive to form and maintain relationships (Baumeister & Leary, 1995) and a major motivator of Facebook use. Facebook allows users to fulfill belonging needs through communicating with and learning about others. Facebook can be an effective method for coping with feelings of so-

cial disconnection (Sheldon, Abad, & Hirsch, 2011), as it enables peer acceptance and relationship development (Yu, Tian, Vogel, & Kwok, 2010) and boosts self-esteem (Gonzales & Hancock, 2011; Steinfield, Ellison, & Lampe, 2008).

The second major motivation for Facebook use is self-presentation. Facebook activities that accomplish self-presentational goals include posting photographs, profile information, and wall content (Zhao, Grasmuck, & Martin, 2008). Research has shown that popularity-seeking users tend to disclose information on Facebook (Christofides, Muise, & Desmarais, 2009; Utz, Tanis, & Vermeulen, 2012), engage in strategic self-presentation, and enhance their profiles (Utz et al., 2012). Nonetheless, profiles generally represent accurate self-presentation (Back et al., 2010).

The Internet can provide a unique venue for expressing alternate selves. According to McKenna, Green, and Gleason (2002), some individuals, particularly those high in social anxiety, feel able to express hidden self-aspects (characteristics currently part of the self, but not normally expressed in everyday life) on the Internet. Possible and ideal selves may also be presented online, as demonstrated by a content analysis of SNS profiles (Manago, Graham, Greenfield, & Salimkhan, 2008). This expression of alternate selves may seem to contradict findings that online profiles are accurate. However, elements of both actual and possible selves can be presented via online profiles, and personality may affect the extent to which these selves are presented.

3. Personality, belonging, self-presentation and Facebook use

The consensus among many researchers is that personality can be best explained by the Five Factor Model ("Big Five") (Funder,

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2000; McCrae & Costa, 1997). The five factor structure has been replicated cross-culturally, suggesting that it is universal (John & Srivastava, 1999; McCrae & Costa, 1997). The Big Five traits are openness, conscientiousness, agreeableness, extraversion, and neuroticism. Extraversion is characterized by sociability, energy, and talkativeness. Agreeableness involves warmth, cooperativeness, and helpfulness. Openness consists of creativity, intellectualism, and preference for novelty. Conscientiousness is reflected in discipline, responsibility, and orderliness. Neuroticism is characterized by anxiety, moodiness, and emotional instability.

I will discuss how the Big Five relate to the use of Facebook to fulfill belonging and self-presentation needs, including expression of different self-aspects. Two types of belongingness-related behaviors: information-seeking (using Facebook to learn about others) and communication (using Facebook to communicate with others), and two types of belongingness motives: acceptance-seeking and connection/caring (connecting with or supporting others) will be examined. Two types of self-presentational behaviors will be examined: general self-disclosure (posting information about oneself) and emotional disclosure. Self-presentational motivations will also be examined: attention-seeking and presentation of actual, hidden, and ideal self-aspects.

3.1. Extraversion

Extraversion is related to several belongingness-related constructs. Extraverts have more friends, higher quality friendships (Asendorpf & Wilpers, 1998) and more satisfying romantic relationships than introverts (White, Hendrick, & Hendrick, 2004). Thus, it is unsurprising that extraversion is associated with greater Facebook use (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011; Wilson, Fornasier, & White, 2010) and more friends (Amichai-Hamburger & Vinitzky, 2010; Moore & McElroy, 2012; Ryan & Xenos, 2011). Research shows that extraverts use Facebook to communicate with others by contacting friends (Correa, Hinsley, & de Zúñiga, 2010) and commenting on friends' pages (Gosling et al., 2011). Surprisingly, introverted individuals are more likely to report using Facebook to keep up with friends (Moore & McElroy. 2012); however Gosling et al. (2011) found that extraversion was positively associated with viewing others' Facebook pages. Thus, it is unclear how extraversion is related to the use of Facebook to learn about others, but the current study will test this relationship.

Hypothesis 1: Extraversion will be positively associated with communication.

Extraversion is related to strategic self-presentation. Extraversion is associated with public self-consciousness (Trapnell & Campbell, 1999) and self-monitoring (John, Cheek, & Klohnen, 1996). Findings on the relationship between Facebook selfdisclosure and extraversion have been mixed. Bibby (2008) found that extraversion was associated with greater self-disclosure on Facebook, while Amichai-Hamburger and Vinitzky (2010) found that extraverts reveal less personal information in their profiles. This may be explained by findings showing that although extraverts are more likely to replace their profile photograph and post photographs containing others, they are not more likely to post photographs of themselves alone, update their profile text, (Gosling et al., 2011) or post on their walls (Moore & McElrov. 2012). These contradictory findings suggest that focusing on motivations rather than specific activities may be useful in understanding extraverts' self-presentation. Extraverts are likely to use the same strategic self-presentational strategies online as they do offline and should strive to present the same traits they present in person (regardless of the specific Facebook features used to accomplish this), but they should be no more likely to self disclose through Facebook than introverts. Introverts tend to feel more able to express hidden self-aspects online (Amichai-Hamburger, Wainapel, & Fox, 2002) as do individuals high in social anxiety (McKenna et al., 2002), a trait positively correlated with introversion (Trapnell & Campbell, 1999), suggesting that extraversion is negatively related to displaying hidden qualities on Facebook.

Hypothesis 2: Extraversion will be positively associated with expression of *actual self*-aspects and negatively associated with expression of *hidden self*-aspects.

3.2. Agreeableness

Agreeable individuals have successful friendships (Asendorpf & Wilpers, 1998) and romances (White et al., 2004). Because of their orientation toward others, belongingness motivations should be important to agreeable individuals and they may choose Facebook as one way to fulfill those needs. However, despite predicting an association between agreeableness and Facebook communication, neither Moore and McElroy (2012), nor Ross et al. (2009) found evidence for this relationship, but it will be tested in the current study. In addition to focusing on these behaviors, as past research has, the current study will also examine motivations.

Hypothesis 3: Agreeableness will be positively associated with information-seeking, acceptance-seeking and connection/caring.

Agreeable individuals present a more consistent and authentic version of themselves (Leary & Allen, 2011), and have greater perceived control over their online self-presentation (Sun & Wu, 2011). Thus, they may use Facebook to present actual self traits and refrain from attention-seeking. Agreeableness has not been associated with specific SNS self-presentational behaviors, other than Amichai-Hamburger and Vinitzky's (2010) finding that agreeable females posted more photographs. Therefore, the current study's focus on self-presentation motives may provide a useful understanding of the relationship between agreeableness and Facebook use.

Hypothesis 4: Agreeableness will be positively associated with expression of *actual self*-aspects and negatively associated with *attention-seeking*.

3.3. Openness

Openness is correlated with greater social media use (Correa et al., 2010). Research examining Facebook as a means of maintaining connections has found that open individuals report posting more on others' walls (Ross et al., 2009; see Moore & McElroy, 2012 for exception) and supplementing real-life interactions by using Facebook to learn about others and plan activities (Carpenter, Green, & LaFlam, 2011).

Hypothesis 5: Openness will be positively associated with communication and information-seeking.

In their online self-presentation, open individuals are more self-disclosing. They are more likely to blog (Guadagno, Okdie, & Eno, 2008) and reveal personal information in their Facebook profiles (Amichai-Hamburger & Vinitzky, 2010).

Hypothesis 6: Openness will be positively associated with general self-disclosure and emotional disclosure.

3.4. Neuroticism

Neuroticism is associated with several outcomes relating to belongingness needs. Neurotic individuals are less satisfied with romantic partners (White et al., 2004) and more sensitive to rejection (Downey & Feldman, 1996; Malone, Pillow, & Osman, 2012); and thus may seek acceptance and social contact through Facebook. Forest and Wood (2012) found that low esteem, a trait closely linked to neuroticism (Judge, Erez, Bono, & Thoresen, 2002), was associated with the belief that Facebook provided opportunities to connect with others, and to get support and attention under circumstances they feared would burden others offline.

Hypothesis 7: Neuroticism will be positively associated with communication, information-seeking, and acceptance-seeking.

Research suggests that neurotic individuals are anxious about self-presentation. Neuroticism is correlated with social anxiety and public self-consciousness (Trapnell & Campbell, 1999). Neurotic individuals tend to have large discrepancies between the actual and ideal self (Watson & Watts, 2001) and present themselves in ways that differ from their own self-perceptions (Leary & Allen. 2011), suggesting that they may present idealized selves online. Neuroticism is correlated with both social anxiety (associated with expressing hidden self-aspects online; McKenna et al., 2002), and low self esteem, which is associated with the tendency to see Facebook as a safe place for self-expression (Forest & Wood, 2012). Thus it is expected that, consistent with Amichai-Hamburger et al. (2002) findings, neurotic individuals will use Facebook to express hidden self-aspects. Additionally, because Facebook represents a safe place, actual self-expression and self-disclosure should be greater among neurotic individuals. Supporting this notion, research has shown that neurotic individuals are more likely to blog (Guadagno et al., 2008) and post on their walls (Ross et al., 2009; see Moore & McElroy, 2012 for exception). Additionally, low self esteem is related to negative emotional expression in wall postings (Forest & Wood, 2012); thus it is likely that neurotic individuals will vent negative emotions via Facebook.

Hypothesis 8: Neuroticism will be positively associated with general self-disclosure, emotional disclosure and expression of actual, hidden, and ideal self aspects.

3.5. Conscientiousness

Conscientiousness is positively correlated with the quality and quantity of interpersonal relationships (Asendorpf & Wilpers, 1998), suggesting that conscientious individuals may use Facebook to seek and maintain social connections. However, conscientiousness is negatively associated with SNS use (Ryan & Xenos, 2011; Wilson et al., 2010), implying that conscientious individuals are cautious online and may choose to meet belonging needs offline.

Hypothesis 9: Conscientiousness will be negatively associated with communication, information-seeking, acceptance-seeking and connection/caring.

Conscientiousness appears to be related to cautious and authentic self-presentation. Leary and Allen (2011) found that conscientious participants presented themselves in ways consistent with group norms, congruent with their self-perceptions, and took on fewer distinct personas. Supporting the notion that conscientious individuals present themselves cautiously online, Moore and McElroy (2012) found that conscientiousness was associated with greater regret over inappropriate Facebook posts.

Hypothesis 10: Conscientiousness will be negatively associated with general self-disclosure, emotional disclosure, attention-seeking, and expression of hidden and ideal self-aspects.

4. Method

4.1. Participants

Participants were 184 undergraduates (51males, 133 females, $M_{\rm age}$ = 19.51, $SD_{\rm age}$ = 1.56), receiving extra credit for participation. Participants reported using Facebook between 0 and 50 h per week (M = 8.68, SD = 8.34).

4.2. Materials and procedure

Participants followed an emailed link to an online survey. Participants progressed through questions assessing demographic characteristics, Facebook use and motivations (items described below), the Big Five, and additional items not relevant to the present analysis.

4.2.1. Big Five

Participants completed Saucier's (1994) brief version of Goldberg's Big Five markers. They rated themselves on 40 traits (eight per Big Five trait), using 5-point Likert scales. The last row of Table 1 displays descriptive statistics.

4.2.2. Belongingness

In order to assess the extent to which participants used Facebook to facilitate belongingness, four scales were computed, two assessing belongingness behaviors (information-seeking and communication) and two assessing motivations (acceptance-seeking and connection/caring). Participants rated how frequently they engaged in a behavior or how often their Facebook activity was inspired by each motive, using 7-point Likert scales. Information-seeking (α = .812, M = 5.19, SD = 1.37) consisted of three items: viewing others' profiles, viewing others' photographs, and viewing news feed. Communication (α = .847, M = 4.39, SD = 1.43) was assessed by two items: writing on others' walls and commenting on others' posts. Acceptance-seeking (α = .777, M = 3.72, SD = 1.68) had two items: posting to feel included and posting to make others feel closer to oneself. *Connection/caring* (α = .729, M = 4.28, SD = 1.50) consisted of three items: posting to feel closer to others, show caring for others, and support others.

4.2.3. Self-presentation

In order to assess the extent to which participants used Facebook to facilitate self-presentation, six scales were computed, two assessing self-presentational behaviors (general self-disclosure and emotional disclosure), one assessing attention-seeking motivation, and three assessing the extent to which Facebook was used to express different self-aspects (actual, hidden, and ideal). Ratings were made on 7-point Likert scales. General self-disclosure ($\alpha = .870$, M = 3.37, SD = 1.29) was assessed by six items: changing status, updating profile, posting about special events, posting about daily events, posting photographs of special events, and posting photographs of daily events. Emotional disclosure ($\alpha = .909$, M = 2.58, SD = 1.64) consisted of two items: posting about "drama in my life" and venting frustrations. Attention-seeking ($\alpha = .749$, M = 2.92, SD = 1.61) consisted of two items: showing off and getting attention. To assess expression of the actual self, participants reported on how frequently they posted status updates, posted photographs, updated their profile, and generally used Facebook to express "who I really am" ($\alpha = .789$, M = 3.96, SD = 1.44). Similar items assessed expression of the hidden self: "aspects of myself that I don't feel comfortable expressing offline" ($\alpha = .729$, M = 2.31,

Table 1Regression results predicting belongingness and self-presentation behaviors and motivations.

Belongingness		Predictors B (SE)					ΔR^2
	Criterion variables	Extraversion	Agreeableness	Openness	Neuroticism	Conscientiousness	
	Communication	0.26 (.13)*	0.42 (0.16)	0.06 (0.16)	$0.43 (0.17)^*$	-0.08(.15)	.062*
	Information-seeking	0.15 (0.12)	0.15 (0.16)	-0.21(0.16)	$0.40~(0.17)^{*}$	0.16 (0.15)	.037
	Acceptance-seeking	-0.08(0.17)	$0.36 (0.21)^{\dagger}$	0.02 (0.21)	0.29 (0.22)	$-0.73 (0.20)^{**}$.091**
	Connection/caring	-0.09 (0.15)	0.54 (0.19)**	-0.02 (0.18)	0.32 (0.19)	$-0.30 (0.17)^{\dagger}$	$.056^{\dagger}$
Self-presentation	General self-disclosure	0.20 (0.13)	0.16 (0.16)	0.08 (0.16)	0.28 (0.17)†	-0.21 (0.15)	.041
	Emotional disclosure	$0.30 (0.16)^{\dagger}$	0.03 (0.21)	0.07 (0.20)	0.57 (0.21)**	-0.13 (0.19)	.063*
	Attention-seeking	0.16 (0.15)	$-0.56(0.20)^{**}$	-0.14(0.19)	0.16 (0.20)	$-0.51 (0.18)^{**}$.138**
	Actual self-presentation	0.31 (0.13)*	0.37 (0.17)	0.21 (0.17)	$0.40~(0.17)^{*}$	-0.16(0.16)	.075**
	Hidden self-presentation	0.07 (0.11)	-0.04(0.14)	-0.08(0.14)	0.32 (0.14)*	$-0.32(0.13)^*$.085**
	Ideal self-presentation	0.22 (0.14)	0.08 (0.18)	-0.10(0.18)	0.66 (0.19)**	$-0.33(0.17)^*$.111**
	M (SD)	3.35 (0.74)	4.07 (0.66)	3.72 (0.58)	2.58 (0.62)	3.70 (0.66)	

 ΔR^2 represents ΔR^2 from Step 1 to Step 2.

SD = 1.23) and *ideal self*: "the way I'd ideally like to be" ($\alpha = .828$, M = 2.82, SD = 1.47).

5. Results and discussion

To test the relationship of the Big Five to belonging and self-presentation, regression analyses were conducted with each of the scales described in Section 4 as criterion variables and the Big Five as predictors. Gender and number of hours per week the participant reported using Facebook were entered in Step 1 as control variables. The Big Five were entered in Step 2. For all models, except information-seeking and emotional disclosure, the Big Five traits together accounted for a significant amount of variance beyond the control variables. Table 1 shows regression coefficients and standard errors for each predictor. To determine if motivations mediated the relationship between personality and behaviors, mediational analyses were conducted for any cases in which a trait significantly predicted one or more motivations and one or more behaviors. Mediational analyses were conducted using the steps recommended by Baron and Kenny (1986) with a Sobel test to determine significance of the mediation effect.

5.1. Belongingness-oriented behavior and motivations

Contrary to *Hypothesis* 3, agreeableness was unrelated to *information-seeking*, but was positively correlated with *communication*, contradicting past research showing that agreeableness is unrelated to Facebook communication. As predicted, agreeable individuals were more likely to use Facebook to *seek acceptance* and maintain *connection*. Additionally, the relationship between agreeableness and *communication* was not mediated by *acceptance* motivation, but was partially mediated by *connection* (z = 2.36, p < .05).

Extraversion was associated with *communication*, consistent with Bibby (2008), but contrary to Moore and McElroy (2012). However, the latter examined actual profiles, unlike the present study. Contrary to predictions and past research, openness was unrelated to *information-seeking* and *communication*. However, SNS use has become so ubiquitous among college students (Junco, 2012) that it may no longer be related to openness.

Neuroticism was associated with *communication* and was the only trait related to *information-seeking*. These results suggest that extraverted and agreeable individuals may use Facebook as a way to actively supplement offline relationships; whereas neurotic individuals may also use Facebook as a passive way to learn about others. Contrary to *Hypothesis 7*, neuroticism was not associated with *acceptance-seeking*. Perhaps rejection concerns prevent neurotic individuals from seeking acceptance online. Future research should examine influences on acceptance-seeking behavior in neurotic individuals.

Contrary to hypotheses, conscientiousness was unrelated to *information-seeking* and *communication*. It is possible that what differentiates more conscientious users is the content rather than the frequency of activity; this issue merits further study. As predicted, conscientiousness was negatively correlated with *acceptance-seeking* and *connection*.

5.2. Self-presentation-oriented behavior and motivations

Consistent with predictions, extraversion was associated with actual self-presentation. Surprisingly, extraversion was marginally positively related to emotional disclosure, an association partially mediated by actual self-expression (z = 2.17, p < .05). It is possible that extraverts simply feel more comfortable expressing their feelings to others, especially feelings reflecting their authentic self. Contrary to $Hypothesis\ 2$ and Amichai-Hamburger et al. (2002) results, extraversion was unrelated to $hidden\ self$ -expression, perhaps because Facebook is relatively public and Amichai-Hamburger's findings were based on anonymous communication. In accordance with predictions, agreeableness was positively related to actual self-presentation and negatively related to attention-seeking. Contrary to $Hypothesis\ 6$, openness was unrelated to disclosure. Again, this may be due to the recent prevalence of SNS.

In accordance with *Hypothesis* 8, neuroticism was positively associated with *general self-disclosure*, *emotional disclosure*, and presentation of *actual*, *ideal*, and *hidden self-aspects* (consistent with Amichai-Hamburger et al., 2002). The relationship between neuroticism and *emotional disclosure* was partially mediated by *actual* (z = 2.09, p < .05), *ideal* (z = 3.01, p < .01), and *hidden* (z = 2.14, p < .05) self-expression. The association between neuroticism and *general self-disclosure* was completely mediated by *actual* (z = 2.23, p < .05), *ideal* (z = 3.12, p < .01), and *hidden* (z = 2.17, p < .05) self-expression. This suggests that the relationship between neuroticism and disclosure of both personal information and emotions is due largely to self-presentational needs.

In support of *Hypothesis 10*, conscientiousness was negatively associated with *attention-seeking* and *hidden* and *ideal self-expression*, but contrary to this hypothesis, conscientiousness was unrelated to *emotional* and *general self-disclosure*. However, separate analysis of individual items showed that conscientiousness was negatively correlated with posting photographs.

6. Conclusions

The present study examined the relationship between the Big Five and the use of Facebook to fulfill belonging and selfpresentational needs. High agreeableness and neuroticism were the best predictors of belongingness. Belongingness motivations

^{*} p < .05.

^{**} p < .01.

[†] p < .10.

are strong in agreeable individuals and these results suggest that Facebook is one tool by which they meet these needs. Neurotic individuals often have social difficulties; thus Facebook may be a way for them to meet belongingness needs not sufficiently met offline. High neuroticism and low conscientiousness were the best predictors of self-presentation. Conscientious individuals are cautious in their online self-presentations. Neurotic individuals may use Facebook as a safe place for self presentation, including hidden and ideal self-aspects. Mediational analyses suggest that the opportunity to express these self-aspects motivates the greater use of Facebook as a tool for personal disclosure.

The current findings show that focusing on motivations for Facebook use, rather than frequency of specific behaviors, may aid in understanding the relationship between personality and Facebook use. In the present study, conscientiousness and agreeableness were generally better predictors of motivations than behaviors. In addition, in many cases, motivations mediated the relationship between personality and behavior. Past research on personality and Facebook use has often yielded mixed findings. In part this may be due to the inherent weaknesses of self-report, but it may also be due to the limitations of focusing solely on behavior. Future research should continue to examine motivational variables and behaviors may need to be assessed in a variety of ways, including focusing on the specific content of posts, rather than just the frequency of objective behavioral measures.

A major limitation of this work is reliance on self-report. However, many of the variables assessed in the present study were subjective. Another limitation of the current research is that the dependent measures were created for the purpose of this study and thus their reliability and validity are not well-established.

The present research extends past work on the Big Five and Facebook by examining their relationship within the simpler theoretical framework of belonging and self-presentation proposed by Nadkarni and Hofmann (2012). This categorization may be especially useful in understanding how certain traits are linked to Facebook use. For example, agreeable individuals appear to be more motivated by belonging than self-presentational needs. Neurotic individuals, on the other hand, appear to be more motivated by self-presentational needs, particularly the need to express different facets of the self. Thus, the current findings support the notion that these two motivations are important in understanding the relationship between personality and Facebook use.

References

- Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. Computers in Human Behavior, 26, 1289–1295.
- Amichai-Hamburger, Y., Wainapel, G., & Fox, S. (2002). 'On the internet no one knows I'm an introvert': Extroversion, neuroticism, and internet interaction. *Cyberpsychology and Behavior*, 5, 125–128.
- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. Journal of Personality and Social Psychology, 74, 1531–1544.
- Back, M. D., Stopfer, J. M., Vazire, S., Gaddis, S., Schmukle, S. C., Egloff, B., et al. (2010). Facebook profiles reflect actual personality, not self-idealization. *Psychological Science*, *21*, 372–374.
- Bargh, J. A., & McKenna, K. Y. A. (2004). The internet and social life. Annual Review of Psychology, 55, 573–590.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Bibby, P. A. (2008). Dispositional factors in the use of social networking sites: Findings and implications for social computing research. *Lecture Notes in Computer Science*, 5075, 392–400.
- Carpenter, J. M., Green, M. C., & LaFlam, J. (2011). People or profiles: Individual differences in online social networking use. *Personality and Individual Differences*, 50, 538–541.
- Christofides, E., Muise, A., & Desmarais, S. (2009). Information control and disclosure on Facebook: Are they two sides of the same coin or two different processes? Cyberpsychology and Behavior, 12, 1–5.

- Correa, T., Hinsley, A., & de Zúñiga, H. (2010). Who interacts on the web?: The intersection of users' personality and social media use. *Computers in Human Behavior*, 26, 247–253.
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70, 1327–1343. http://dx.doi.org/10.1037/0022-3514.70.6.1327.
- Forest, A. L., & Wood, J. V. (2012). When social networking is not working: Individuals with low self-esteem recognize but do not reap the benefits of self-disclosure on Facebook. *Psychological Science*, 23, 295–302.
- Funder, D. C. (2000). Personality. Annual Review of Psychology, 52, 197-221.
- Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology Behavior and Social Networking*, 14, 79–83.
- Gosling, S. D., Augustine, A. A., Vazire, S., Holtzman, N., & Gaddis, S. (2011). Facebook-related behaviors and observable profile information. *Cyberpsychology, Behavior, and Social Networking, 14*, 483–488.
- Guadagno, R., Okdie, B., & Eno, C. (2008). Who blogs? Personality predictors manifestations of personality in online social networks: Self-reported of blogging. Computers in Human Behavior, 24, 1993–2004.
- John, O. P., Cheek, J. M., & Klohnen, E. C. (1996). On the nature of self-monitoring: Construct explication with Q-sort ratings. *Journal of Personality and Social Psychology*, 71(4), 763–776.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), Handbook of personality: Theory and research (2nd ed., pp. 102–138). New York, NY, US: Guilford Press.
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83(3), 693–710.
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. Computers and Education, 58(1), 162–171
- Leary, M. R., & Allen, A. (2011). Self-presentational persona: Simultaneous management of multiple impressions. *Journal of Personality and Social Psychology*, 101, 1033–1049.
- Malone, G. P., Pillow, D. R., & Osman, A. (2012). The general belongingness scale (GBS): Assessing achieved belongingness. *Personality and Individual Differences*, 52(3), 311–316.
- Manago, A. M., Graham, M. B., Greenfield, P. M., & Salimkhan, G. (2008). Self-presentation and gender on my space. *Journal of Applied Developmental Psychology*, 29, 446–458.
- McCrae, R. R., & Costa, P. T. Jr., (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509–516.
- McKenna, K. A., Green, A. S., & Gleason, M. J. (2002). Relationship formation on the internet: What's the big attraction? *Journal of Social Issues*, 58, 9–31.
- Moore, K., & McElroy, J. C. (2012). The influence of personality on Facebook usage, wall postings, and regret. *Computers in Human Behavior*, 28(1), 267–274.
- Nadkarni, A., & Hofmann, S. G. (2012). Why do people use Facebook? Personality and Individual Differences, 52, 243–249.
- Ross, C., Orr, S., Sisic, J., Arseneault, J. M., Simmering, M., & Orr, R. (2009). Personality and motivations associated with facebook use. *Computers in Human Behavior*, 25, 578–586.
- Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. Computers in Human Behavior. 27(5), 1658–1664.
- Saucier, G. (1994). Mini-Markers: A brief version of Goldberg's unipolar Big-Five markers. Journal of Personality Assessment, 63, 506-516.
- Sheldon, K. M., Abad, N., & Hirsch, C. (2011). A two-process view of Facebook use and relatedness need-satisfaction: Disconnection drives use, and connection rewards it. *Journal of Personality and Social Psychology*, 100, 766–775.
- Steinfield, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29(6), 434–445.
 Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-
- Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology*, 76(2), 284–304.
- Utz, S., Tanis, M., & Vermeulen, I. (2012). It is all about being popular: The effects of need for popularity on social network site use. Cyberpsychology, Behavior, and Social Networking, 15, 37–42.
- Watson, N., & Watts, R. Jr., (2001). The predictive strength of personal constructs versus conventional constructs: Self-image disparity and neuroticism. *Journal of Personality*, 69(1), 121–145.
- White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big Five personality variables and relationship constructs. *Personality and Individual Differences*, 37(7), 1519–1530.
- Wilson, K., Fornasier, S., & White, K. M. (2010). Psychological predictors of young adults': Use of social networking sites. Cyberpsychology, Behavior, and Social Networking, 13, 173–177.
- Wilson, R. E., Gosling, S. D., & Graham, L. T. (2012). A review of Facebook research in the social sciences. *Perspectives on Psychological Science*, 7, 203–220.
- Yu, A. Y., Tian, S. W., Vogel, D., & Kwok, R. C.-W. (2010). Can learning be virtually boosted? An investigation of online social networking impacts. *Computers and Education*, 55, 1494–1503.
- Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. Computers in Human Behavior, 24, 1816–1836.

Web references

Facebook (2012). Statistics. Facebook.com. Retrieved from http://newsroom.fb.com/

content/default.aspx?NewsAreald=22.

Jain, S. (2010). 40 most popular social networking sites of the world.

Socialmediatoday.com. Retrieved from http://socialmediatoday.com/node/

Sun, T., & Wu, G. (2011). Traits, predictors, and consequences of Facebook self-presentation. *Social Science and Computer Review*. Advance online publication. Retrieved from http://ssc.sagepub.com.felix.albright.edu/content/early/recent.

Zickuhr, K. (2010). Generations 2010. Pew Internet and American Life Project.

Retrieved from http://pewinternet.org/~/media//Files/Reports/2010/PIP_
Generations_and_Tech10.pdf.