**Machiavellianism, Self-Monitoring, Self-Promotion and Relational Aggression on Facebook**

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Machiavellianism is a personality trait characterized by cynicism, emotional detachment and a willingness to manipulate others. Research investigating the behavior of Machiavellian men and women has focused on its influence in offline relationships. The popularity of social networking sites suggests that it is also important to consider the interactions of Machiavellian men and women in this context as well. Men (*N*=54) and women (*N*=189) completed questionnaires assessing Machiavellianism, self-monitoring, self-promotion and relational aggression. Analyses revealed that women who were high in Machiavellianism engaged in more dishonest-self-promotion and relational aggression towards a close friend on Facebook whilst males with high levels of Machiavellianism engaged in more self-promoting behavior. In addition, both men and women high in Machiavellianism engaged in more self-monitoring. The findings demonstrate the importance of considering the influence of personality on online behavior and associated gender differences.

Keywords: Facebook; Machiavellianism; Relational Aggression; Self-Monitoring; Self-Promotion

**1.0 Introduction**

Machiavellianism is a personality trait characterized by emotional detachment, low empathy and a willingness to exploit others (Christie & Geis, 1970; Vecchio & Sussman, 1991; Wastell & Booth, 2003; Wilson, Near, & Miller, 1998). Those with high levels of Machiavellianism demonstrate strategic planning, suspicion of others and protective self-monitoring and employ a range of strategies to influence their offline relationships (Christie & Geis, 1970; Rauthmann, 2011). These strategies include projecting intimacy, making the other person feel ashamed, embarrassed or guilty, selecting friends that may be easier to manipulate and regulating the amount or depth of personal information revealed (Austin, Farrelly, Black, & Moore, 2007; Blumstein, 1973; Brewer, Abell & Lyons, 2014; Jonason & Schmitt, 2012). However, whilst research has demonstrated the influence of Machiavellianism in offline interactions (e.g. Chen, 2010; Jonason & Kavanagh, 2010; Lyons & Aiken, 2010), little is known about Machiavellianism in the context of online relationships. Therefore, the current study investigates the influence of Machiavellianism on online behavior and interactions that take place on social networking sites.

Social networking sites allow the user to create a profile, regulate connections with others, interact and monitor interactions between other users (Boyd & Ellison, 2008). The use of these sites is widespread. Over 50% of Internet users report using at least one social networking site and over 90% of these use Facebook, often as part of their daily routine (Boyd & Ellison, 2008; Hampton, Sessions, Goulet, Rainie, & Purcell, 2011). Although social networking sites support both the formation and maintenance of personal relationships (Murray & Weller, 2007), they also provide opportunities to artificially enhance individual reputation or manipulate relationships.

The majority of Facebook users report that their profiles provide an accurate representation of the self (Stern & Taylor, 2007). However, research indicates that Facebook identities are socially desirable and difficult to obtain offline (Zhao, Grasmuck, & Martin, 2008), suggesting that the manipulation of information (e.g. self-monitoring and self-promotion) is a well-established strategy amongst Facebook users (Kramer & Winter, 2008; Nadkarni & Hofmann, 2012; Pempek, Yermolayeva, & Calvert, 2009). In particular, controlling the amount and type of information posted (e.g. emphasising positive qualities) enables the user to create and enhance a particular image (Chen & Marcus, 2012; Kim & Lee, 2011; Schlenker & Pontari, 2000; Utz, 2010; Zhang, 2010), which may encourage the trust or cooperation of other users. Indeed, though explicitly false information may be identified by familiar online and offline friends, online interactions provide more opportunities than offline interactions for the strategic impression management conducive to manipulation (Bibby, 2008; Buffardi & Campbell, 2008; Kramer & Winter, 2008).

Previous research indicates that a number of personality factors (e.g. neuroticism, narcissism, shyness, self-esteem and self-worth) influence the manner in which people engage in online interactions (Nadkarni & Hofmann, 2012). For example, extraversion is associated with use of social networks (Correa, Hinsley, & de Zuniga, 2010; Wehrli, 2008; Wilson, Fornasier, & White, 2010), Facebook use (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011), number of Facebook friends (Amichai-Hamburger & Vinitzky, 2010; Ong et al, 2011), membership of Facebook groups (Ross et al, 2009), disclosure of information on Facebook (Bibby, 2008; Chen & Marcus, 2012) and the use of Facebook to broadcast activities (Correa, et al, 2010). Neuroticism is positively related to use of social media (Wehrli, 2008), conscientiousness is negatively related to time spent on social networking sites (Wilson et al, 2010) and openness is positively related to amount of time spent on Facebook and number of Facebook friends (Skues, Williams & Wise, 2012). In addition, those using Facebook are more narcissistic i.e. self-absorbed, sensitive to slights from others and likely to bolster self-esteem through admiration from others (Luchner, Mirsalimi, Moser & Jones, 2008; Wink, 1991) than non-Facebook users (Ryan & Xenos, 2011).

Whilst a range of studies have demonstrated the relationship between personality and online behavior, there is a paucity of research investigating the importance of Machiavellianism in this context. Initial findings are consistent with the notion that Machiavellianism influences online behavior and that motivations for Facebook activity are self-centred rather than cooperative. In particular, Machiavellian Facebook users are more concerned with themselves than the ‘friend’ they are interacting with on Facebook and aggressive interactions provide Machiavellian men and women with opportunities to dominate and exploit other users (Li, 2007; Rosenberg & Egbert, 2011). However, further research is required to investigate the influence of Machiavellianism on computer mediated interaction.

The present study investigates whether Machiavellian men and women employ self-presentation tactics (i.e. self-monitoring and self-promotion) and how honest they are in their interactions on Facebook. Machiavellianism is more strongly related to behavior for men than women (McHoskey, 2001) and gender differences exist in Facebook behavior (e.g. McAndrew & Jeong, 2012; Stefanone, Lackaff, & Rosen, 2011). Therefore the current study investigated the potential relationship between Machiavellianism and self-promotion, self-monitoring, dishonest self-promotion and relational aggression via Facebook separately for male and female participants.

**2.0 Method**

*2.1 Participants*

Men (*N*=54) and women (*N*=189) were recruited via a research website (*N*=210) and opportunity sampled from the campus of a British university (*N*=33). Men (Mage = 24.65, SD = 6.50) and women (Mage = 23.81, SD = 8.38) were aged 18-44 and 18-69 years respectively. Participants completing questionnaires online and offline did not differ with regards to Machiavellianism (*t*(54.53)= -.23, *p*>.05), self-promotion (*t*(241)= 1.26, *p*>.05), self-monitoring (*t*(51)= 1.27, *p*>.05), honest-dishonest self-promotion (*t*(240)= .31, *p*>.05) and relational aggression (*t*(55.76)= 1.73, *p*>.05), therefore these samples were analysed together.

*2.2 Measures*

Participants first provided preliminary demographic information (age, gender) and then completed a series of items (devised by the researchers) assessing Facebook activity (e.g. frequency of viewing friend’s activity). Participants responded based on their frequency of behavior on a typical day (once or less per day to more than 10 times per day). To measure less frequent behavior (e.g. viewing friend’s ‘friends’ list), questions were also devised that asked participants to respond based on their behavior in a typical week (once or less per week to more than 10 times per week). In addition, participants were asked to report the amount of time engaged in the behavior on a typical day or week (up to 15 minutes to over 4 hours).

The Mach IV (Christie & Geis, 1970) measures the cynicism, morality and manipulative behavior which constitute Machiavellianism. Items include ‘*The best way to handle people is to tell them what they want to hear’* and ’*It is wise to flatter important people’*. Participants responded on a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree. Facebook self-promotion was measured using five statements derived from Carpenter (2012). Items included ‘*How often do you post status updates to Facebook’* and ‘*How often do you tag pictures of yourself on Facebook?*’ Participants responded on a 5-pont Likert scale from 1 = never to 5 = all the time.

The original self-monitoring scale (Snyder, 1974) contains 25 statements and measures self-monitoring behavior in (offline) social interactions. In the present study, 16 statements were selected and adapted to measure participants self-monitoring of behavior on Facebook. Adapted statements included ‘*When I am uncertain of what to put as a status update, I look at the updates of my Facebook friends*’ and ‘*Even if I am not enjoying myself, I often pretend on Facebook that I am*’. Participants responded by answering true or false to each statement. The honesty of self-promotion behaviors were measured using 14 statements. These items (devised by the researchers) included: ‘*I often update my status saying I am doing something exciting even though this is not true*’ and ‘*I often send friend requests to people I don’t know in order to increase my number of Facebook friends*’. Participants responded on a 5-point Likert Scale from 1 = strongly disagree to 5 = strongly agree and seven items were reverse coded to create a total dishonesty self-promotion score.

Finally, relational aggression specific to Facebook activity was measured using 19 statements developed by the researchers. Participants were asked to respond to this with reference to a close friend whom they interact with both offline and via Facebook. These statements include: ‘*I often ignore my friend when they try to speak to me on Facebook chat*’ and ‘*I often write something embarrassing about my friend in my Facebook status’*. Participants responded on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree). In the present study, all scales demonstrated acceptable reliability: Machiavellianism: α= .75; Facebook self-promotion: α=.80; dishonest self-promotion: α=.74 and relational aggression: α=.94, with the exception of self-monitoring: α=.56. Higher scores represent higher levels of Machiavellianism, self-promotion, self-monitoring, relational aggression and self-promotion which contains a greater amount of dishonesty. Items developed by the researchers are available on request.

**3.0 Results**

Posting status updates was the most frequent Facebook activity reported by participants, followed by posting photographs, changing the profile picture, tagging pictures and updating profile information. Participants typically accessed Facebook, viewed the news feed and checked their friend’s activity between 2 and 4 times per day. Friend’s walls and status updates were typically viewed once or less per day. The majority of participants spent a relatively low proportion of their time viewing the status, wall or activity of their friends (i.e. 15 minutes or less per option).

Correlation analyses revealed significant positive relationships between Machiavellianism and self-monitoring for both men and women. For women, Machiavellianism was also positively associated with the use of dishonest self-promotion and relational aggression. For men, Machiavellianism was positively associated with self-promotion. In addition, self-monitoring was positively correlated with self-promotion, dishonest self-promotion and relational aggression in women, whilst self-promotion was negatively correlated with -dishonest self-promotion and positively correlated with relational aggression. For men, self-monitoring was positively correlated with self-promotion and relational aggression was positively correlated with self-promotion and dishonest self-promotion. These data are presented in Table 1.

Standard regressions were conducted to investigate the influence of Machiavellianism on Facebook self-promotion, self-monitoring, dishonest self-promotion and relational aggression. Machiavellianism significantly predicted self-monitoring behavior on Facebook for both men (*F* (1, 52) =5.05, *p*=.029) and women (*F* (1, 182) =7.80, *p*=.006). Higher Machiavellianism scores were associated with higher levels of self-monitoring for both men and women with the model explaining 30% of the variance for men and 20% of the variance for women. Machiavellianism significantly predicted self-promotion on Facebook for men (F (1, 52) = 4.10, *p*=.048) but not for women (F (1, 184) = 1.24, *p*=.266). Higher Machiavellianism scores were associated with higher self-promotion behavior with the model explaining 27% of the variance.

Machiavellianism significantly predicted dishonest self-promotion on Facebook for women (*F* (1, 184) = 18.08, *p*<.001) but not for men (*F* (1, 51) = .69, *p*=.410). Higher Machiavellianism scores were associated with more dishonest self-promotion for women with the model explaining 30% of the variance. Finally, Machiavellianism significantly predicted relational aggression on Facebook for women (*F* (1, 182) =12.28, *p*=.001) but not for men (*F* (1, 52) = 2.02, *p*=.161). Results demonstrated that higher Machiavellianism scores were associated with more relational aggression on Facebook for women with the model explaining 25% of the variance in relational aggression. These data are presented in Table 2.

**4.0 Discussion**

The current study demonstrates that Machiavellianism (characterized by cynicism, emotional detachment and a willingness to manipulate others) influences behavior online. Furthermore, these relationships differ for men and women. Specifically, this study shows that Machiavellian women were more dishonest in their self-promotion and were more relationally aggressive towards a Facebook friend. For men, the findings indicate that Machiavellian men engaged in more self-promotion online. Finally, Machiavellian men and women engaged in higher levels of self-monitoring on Facebook than those with low levels of Machiavellianism.

Machiavellian adults employ a range of manipulation tactics, such as making others feel ashamed, embarrassed or guilty to navigate their offline social world (Austin, Farrelly, Black, & Moore, 2007). Protective self-monitoring (Rauthman, 2011) may facilitate this manipulation and allow the Machiavellian man or woman to avoid detection and associated consequences such as loss of reputation or retaliation. The findings from the current study demonstrate that both men and women with high levels of Machiavellianism also employ self-monitoring in an online environment. The use of impression management strategies on Facebook by Machiavellian men and women may reflect a conscious effort to avoid being perceived as manipulative or exploitative. The dual nature of these friendships may increase the importance of online self-monitoring as dishonest or misleading information may be detectable by offline friends. Future research may consider differences between self-monitoring of global information (i.e. viewed by all users) and self-monitoring of private messages sent directly to one individual.

The current findings indicate that Machiavellian men engaged in more Facebook self-promotion than men with lower levels of this personality trait. This self-promotion may facilitate the manipulation and exploitation of others by enhancing attractiveness and social network size, thus increasing opportunities for exploitation. In addition self-promotion may increase their social status and dominance within the group (of particular importance for male interpersonal interactions) enabling them to manipulate and exploit others easily and reducing the likelihood of retaliation or resistance. The absence of a relationship between level of self-promotion and Machiavellianism in women, may reflect the social acceptance of self-promoting behavior in men and the more overt interactions typically displayed by men, particularly with regard to competition and aggression (Campbell, 1999; Singleton & Vacca, 2007).

Machiavellian women engaged in more dishonest self-promotion and relational aggression towards their close friend whilst online. These findings are consistent with previous research reporting that Machiavellian individuals make their target feel ashamed, embarrassed or guilty so that they are able to manipulate their behavior (Austin, Farrelly, Black, & Moore, 2007) and have a tendency to worsen the moods of others within offline relationships (Austin & O’Donnell, 2013). The greater use of relational aggression amongst Machiavellian women (but not Machiavellian men) may reflect the greater sharing of personal information within female personal relationships (Vigil, 2007) which affords greater opportunities for exploitation.

The current study was limited by a reliance on self-report data and a Western sample with a relatively small number of male participants. Participants are likely to over-estimate possession of socially desirable qualities (Pedregon, Farley, Davis, Wood, & Clark, 2012) and the amount of time spent on Facebook (Junco, 2013). Therefore future research should consider the direct evaluation of Facebook profiles, such as the frequency and type of information shared in Facebook updates and the descriptions and sharing of photographs. It should be noted however that objective and subjective measures of Facebook activity are strongly related (Junco, 2013). Previous research also identifies cross-cultural differences in Facebook activity (Buote, Wood, & Pratt, 2009; Caplan, 2007; Chen & Marcus, 2012; Vasalou, Joinson, & Courvoisier, 2010) and motivations for Facebook membership (Al Omoush, Yaseen, & Alma’aitah, 2012). Future studies should therefore consider the relationships between Machiavellianism, self-monitoring, self-promotion and relational aggression on social networking sites in other cultural populations as well as with a larger number of male participants, particularly if samples vary in relation to Facebook access. We also suggest that future research should focus on validating the measures that were devised or adapted for this study, such as the relational aggression and self-promotion measures. It would be beneficial to investigate their factor structures and relationships with other validated measures. In addition, we also note the low Cronbach’s for the self-monitoring measure.

The current study investigated the influence of Machiavellianism on one particular form of online behavior i.e. the use of social networking sites. Future research may consider manipulation by Machiavellian men and women in other online contexts. Online dating websites are an increasingly popular method of finding a romantic partner whereby men and women typically post a photograph online and create a personal description similar to the vignettes often adopted within psychological research (Ellison, Heino, & Gibbs, 2006; Gibbs, Ellison, & Heino, 2006). The descriptions created by online daters vary in accuracy and level of self-disclosure (Lo, Hsieh, & Chiu, 2013), providing valuable opportunities for Machiavellian men and women to manipulate potential partners through self-monitoring and self-promotion. Future research should investigate the influence of Machiavellianism on these personal descriptions and engagement in online dating.

To conclude, Machiavellianism women engaged in dishonest-self-promotion and relational aggression on Facebook whilst Machiavellianism men engaged in self-promoting behavior. Both high Machiavellian men and women engaged in greater self-monitoring on Facebook than those with lower levels of this personality trait. Future research may consider the influence of Machiavellianism on other online contexts such as online dating or relationships between online and offline exploitation and manipulation by Machiavellian men and women.

**5.0 References**

Amichai-Hamburger, Y., & Vinitzky, G (2010). Social network use and personality. *Computers in Human Behavior, 26*, 1289-1295. doi: [10.1016/j.chb.2010.03.018](http://dx.doi.org/10.1016/j.chb.2010.03.018).

Austin, E.J., Farrelly, D., Black, C. & Moore, H. (2007). Emotional intelligence, Machiavellianism and emotional manipulation: Does EI have a dark side? *Personality and Individual Differences*, *43*, 179-189. doi: 10.1016/j.paid.2006.11.019.

Austin, E.J., & O’Donnell, M.M. (2013). Development and preliminary validation of a scale to assess managing the emotions of others. *Personality and Individual differences, 55*, 834-839. doi:10.1016/j.paid.2013.07.005.

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.

Blumstein, P.W. (1973). Machiavellianism and Tactics of Identity Bargaining. *Sociometry*, 36 (3), 346-365.

Boyd, d. m. and Ellison, N. B. (2007), Social Network Sites: Definition, History, and Scholarship. Journal of Computer-Mediated Communication, 13: 210–230. doi: 10.1111/j.1083-6101.2007.00393.x

Brewer, G., Abell, L., & Lyons, M. (2014). Machiavellianism, Competition and Self-Disclosure in Friendship. *Individual Differences Research*. In Press.

Buffardi, L.E., & Campbell, W.K. (2008). Narcissism and social networking sites. *Personality and Social Psychology Bulletin, 34,* 1303-1314. doi: 10.1177/0146167208320061.

Campbell, A. (1999). Staying alive: Evolution, culture, and women's intrasexual aggression. *Behavioral and Brain Sciences, 22*, 203-252.

Chen, S. Y. (2010). Relations of Machiavellianism with emotional blackmail orientation of sales people*. Procedia Social and Behavioral Sciences,* 5, 294–298.

Chen, B., & Marcus, J. (2012). Students’ self-presentation on Facebook: An examination of personality and self-construal factors. *Computers in Human Behavior*, *28*, 2091-2099. doi: [10.1016/j.chb.2012.06.013](http://dx.doi.org/10.1016/j.chb.2012.06.013).

Cheung, C.M.K., Chiu, P.Y., & Lee, M.K.O. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior, 27*, 1337-1343. doi:10.1016/j.chb.2010.07.028.

Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. London: Academic Press.

Correa, T., Hinsley, A.W., & de Zuniga, H.G. (2010). Who interacts on the Web?: The intersection of users’ personality and social media use. *Computers in Human Behavior, 26*, 247-253. doi: 10.1016/j.chb.2009.09.003.

Ellison, N.B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends”: Social capital and college students’ use of online social networking sites. *Journal of Computer-Mediated Communication, 12,* 1143-1168. doi: 10.1111/j.1083-6101.2007.00367.x.

Falbo, T. (1977). Multidimensional scaling of power strategies. *Journal of* *Personality and Social Psychology, 35*, 537-547. doi: [10.1037/0022-3514.35.8.537](http://psycnet.apa.org/doi/10.1037/0022-3514.35.8.537).

Gosling, S.D., Augustine, A.A., Vazire, S., Holtzman, N., & Gaddis, S. (2011). Manifestations of personality in online social networks: Self-reported Facebook-related behaviors and observable profile information. *Cyberpsychology Behavior and Social Networking, 14*, 483-488.

Hampton, K., Sessions Goulet, L., Rainie, L., & Purcell K. (2011). *Social networking sites and our lives*. Washington, DC: Pew Internet and American Life Project. http://www.pewinternet.org/Reports/2011/Technology-and-social-networks.aspx. Retrieved 26th September, 2013.

Jonason, P.K., & Webster, G.D. (2012). A protean approach to social influence: Dark Triad personalities and social influence tactics. *Personality and Individual Differences, 52*, 521-526. [doi:10.1016/j.paid.2011.11.023](http://dx.doi.org/10.1016/j.paid.2011.11.023)

Jonason, P. K., & Schmitt, D. P. (2010). What have you done for me lately?: Friendship-selection in the shadows of the Dark Triad traits. Evolutionary Psychology, 10, 400-421

Jonason, P. K., & Kavanah, P. (2010). The dark side of love: Love styles and the Dark Triad. *Personality and Individual Differences, 49*, 606-610. doi:10.1016/j.paid.2010.05.030

Kim, J.H., Kim, M.S., & Nam, Y. (2010). An analysis of self-construals, motivations, Facebook use and user satisfaction. *International Journal of Human-Computer Interaction, 26*, 1077-1099.

Kim, J., & Lee, J.E.R. (2011). The Facebook paths to happiness: Effects of the number of Facebook friends and self-presentation on subjective well-being. *Cyberpsychology, Behavior and Social Networking, 14*, 359-364.

Kramer, N.C., & Winter, S. (2008). Impression management 2.0: The relationship of self-esteem, extraversion, self-efficacy, and self-presentation within social networking sites. *Journal of Media Psychology: Theories, Methods and Applications, 20*, 106-116.

Kujath, C.L. (2011). Facebook and MySpace: Complement or substitute for face-to-face interaction? *Cyberpsychology, Behavior, and Social Networking, 14*, 75-78. doi: 10.1089/cyber.2009.0311.

Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior, 23*, 1777-1791. doi: [10.1016/j.chb.2005.10.005](http://dx.doi.org/10.1016/j.chb.2005.10.005).

Luchner, A.F., Mirsalimi, H., Moser, C.J., & Jones, R.A. (2008). Maintaining boundaries in psychotherapy: Covert narcissistic personality characteristics and psychotherapists. *Psychotherapy: Theory. Research, Practice Training, 45*, 1-14. doi: 10.1037/0033-3204.45.1.1.

Lyons, M., & Aitken, S. (2010). Machiavellian friends? The role of Machiavellianism in friendship formation and maintenance. *Journal of Social, Evolutionary and Cultural Psychology, 4*, 194-202.

McAndrew, F.T., & Jeong, H.S. (2012). Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use. *Computers in Human Behavior, 28*, 2359-2365. doi:10.1016/j.chb.2012.07.007.

McHoskey, J.W. (1999). Machiavellianism, intrinsic versus extrinsic goals, and social interest: A self-determination theory analysis. *Motivation and Emotion, 23*, 267-283. doi: 10.1023/A:1021338809469.

McHoskey, J.W. (2001). Machiavellianism and sexuality: On the moderating role of biological sex. *Personality and Individual Differences, 31*, 779-789.

McKenna, K.Y.A., & Bargh, J.A. (2000). Plan 9 from cyberspace. The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review, 4*, 57-75. doi: 10.1207/S15327957PSPR0401\_6

Murray, K.E., & Weller, R. (2007). Social networking goes abroad. *International Educator, 16*, 56-59.

Nadkarni, A., & Hofmann, S.G. (2012). Why do people use Facebook*? Personality and Individual Differences, 52*, 243-249. doi: [10.1016/j.paid.2011.11.007](http://dx.doi.org/10.1016%2Fj.paid.2011.11.007).

O’Connor, E. M., & Simms, C. M. (1990). Self-revelation as manipulation: The effects of sex and Machiavellianism on self-disclosure. *Social Behavior and Personality, 18*, 95-100.

Ong, E.Y.L., Ang, R.P., Ho, J.C.M., Lim, J.C.Y., Goh, D.H., Lee, C.S., & Chua, A.Y.K. (2011). Narcissism, extraversion and adolescents’ self-presentation on Facebook. *Personality and Individual Differences, 50*, 180-185. doi:10.1016/j.paid.2010.09.022

Pempek, T.A., Yermolayeva, Y.A., & Calvert, S.L. (2009). College students’ social networking experiences on Facebook. *Journal of Applied Developmental Psychology, 30*, 227-238. doi: 10.1016/j.appdev.2008.12.010.

Preece, J., Nonnecke, B., & Andrews, D. (2004). The top five reasons for lurking: Improving community experiences for everyone. *Computers in Human Behavior, 20*, 201-223. doi: 10.1016/j.chb.2003.10.015.

Ragsdale, J.D., & Brandau-Brown, F.E. (2005). Individual differences in the use of relational maintenance strategies in marriage. *The Journal of Family Communication, 5*, 61-75.

Rauthmann, J.F. (2011). Acquisitive or protective self-presentation of dark personalities? Associations among the dark triad and self-monitoring. *Personality and Individual Differences*, *51*, 502-508. doi: 10.1016/j.paid.2011.05.008.

Rosenberg, J., & Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. *Journal of Computer-Mediated Communication, 17*, 1-18. doi: 10.1111/j.1083-6101.2011.01560.x.

Ross, C., Orr, E.S., Sisic, M., Arseneault, J.M., Simmering, M.G., & Orr, R.R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior, 25*, 578-586. doi: 10.1016/j.chb.2008.12.024.

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*, 1658-1664. doi: 10.1016/j.chb.2011.02.004.

Schlenker, B. R., & Pontari, B.A. (2000). The strategic control of information: Impression management and self-presentation in daily life. In A. Tesser, R. Felson, and J. Suls (Eds.), *Perspectives on self and identity* (pp. 199-232). Washington, DC: American Psychological Association.

Singelton Jr, R.A., & Vacca, J. (2007). Interpersonal competition in friendships. *Sex Roles, 57*, 617-627. doi: 10.1007/s11199-007-9298-x.

Skues, J.L., Williams, B., & Wise, L. (2012). The effects of personality traits, self-esteem, loneliness, and narcissism on Facebook use among university students. *Computers in Human Behavior, 28*, 2414-2419. doi: 10.1016/j.chb.2012.07.012.

Special, W.P., & Li-Barber, K.T. (2012). Self-disclosure and student satisfaction with Facebook. *Computers in Human Behavior, 28*, 624-630. doi:10.1016/j.chb.2011.11.008.

Stefanone, M.A., Lackaff, D., & Rosen, D. (2011). Contingencies of self-worth and social-networking-site behavior. *Cyberpsychology, Behavior, and Social Networking, 14*, 41-49.

Stern, L.A., & Taylor, K. (2007). Social networking on Facebook. *Journal of the Communication, Speech and Theatre Association of North Dakota, 20*, 9-20.

Utz, S. (2010). Show me your friends and I will tell you what type of person you are: How one’s profile, number of friends, and type of friends influence impression formation on social network sites. *Journal of Computer-Mediated Communication, 15*, 314-335. doi: 10.1111/j.1083-6101.2010.01522.x.

Vecchio, R. P., & Sussman, M. (1991). Choice of influence tactics: Individual and organizational determinants. *Journal of Organizational Behavior, 12*, 73-80.

Vigil, J.M. (2007). Asymmetries in the friendship preferences and social styles of men and women*. Human Nature*, *18*, 143-161.

Wastell, C., & Booth, A. (2003). Machiavellianism: An alexithymic perspective. *Journal of Social and Clinical Psychology, 22*, 730-744. doi: 10.1521/jscp.22.6.730.22931.

Wehrli, S. (2008). Personality on social networking sites: An application of the five factor model. Eth zurich sociology working papers. *ETH Zurich, Predictors*, 0.37-33.54.

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. doi: 10.1089/cyber.2009.0094.

Wilson, D.S., Near, D., & Miller, R.R. (1996). Machiavellianism: A Synthesis of the Evolutionary and Psychological Literatures. *Psychological Bulletin,* 119 (2), 285-299

Wilson, D. S., Near, D. C., & Miller, R. R. (1998). Individual differences in Machiavellianism as a mix of cooperative and exploitative strategies. *Evolution and Human Behavior, 19*, 203-212.

Wink, P. (1991). Two faces of narcissism. *Journal of Personal and Social Psychology, 61*, 590-597. doi: [10.1037/0022-3514.61.4.590](http://psycnet.apa.org/doi/10.1037/0022-3514.61.4.590).

Zhang, J. (2010). Self-enhancement on a self-categorization leash: Evidence for a dual-process model of first- and third-persona perceptions. *Human Communication Research, 36*, 190-215. doi: 10.1111/j.1468-2958.2010.01373.x.

Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior, 24*, 1816-1836. doi: 10.1016/j.chb.2008.02.012.

**Table 1: Correlations between Machiavellianism and elf-monitoring, self-promotion and relational aggression**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Machiavellianism | Self-monitoring | Self-promotion | Dishonest self-promotion | Relational aggression |
| Machiavellianism |  | .20\*\* | -.08 | .30\*\* | .25\*\* |
| Self-monitoring | .30\* |  | .24\*\* | .15\* | .42\*\* |
| Self-promotion | .27\* | .60\*\* |  | -.31\*\* | .32\*\* |
| Dishonest self-promotion | .12 | -.12 | -.23 |  |  |
| Relational aggression | .19 | .25 | .40\*\* | .34\* |  |

\* *p* < .05, \*\* *p* < .01. Correlations for women in upper triangle and correlations for men in lower triangle.

**Table 2: Summary of the regression analyses investigating Machiavellianism, self-monitoring, self-promotion and relational aggression amongst men and women**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Measure | Self-monitoring | | | Self-promotion | | | Dishonest self-promotion | | | Relational aggression | | |
|  | B | SEB | β | B | SEB | β | B | SEB | β | B | SEB | β |
| **Men** |  | | |  | | |  | | |  | | |
| Machiavellianism | .05 | .02 | .30\* | .06 | .03 | .27\* | .06 | .07 | .12 | .16 | .11 | .19 |
| **Women** |  | | |  | | |  | | |  | | |
| Machiavellianism | .04 | .01 | .20\*\* | -.02 | .02 | -.08 | .16 | .04 | .30\*\* | .22 | .06 | .25\*\* |

\* *p* < .05, \*\* *p* < .01