Who's Who in That Picture? The Association between Profile Picture Content and Social Well-Being

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Abstract

Despite significant interest in social well-being and its association with Facebook use, research on profile picture content has been overlooked. The current study asked participants (n = 158) to log into their Facebook account, access their profile pictures, and categorize the content of their profile pictures. Participants then completed an online personality survey at a later date. The results confirmed hypotheses that a high amount of pictures of one-

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self with close others will be associated with higher levels of social well-being, and a high amount of pictures involving the self only, strangers (celebrities and fantasy) and distant others (deceased, pet) will be associated with lower levels of social well-being. The study also showed important differences between men and women in the association between social well-being and the use of distant others and strangers as profile pictures.

People want to feel connected to others. It is therefore no wonder that Facebook has become one of the most popular social networking sites and currently has 1.32 billion active users (Roche, Jenkins, Aguerrevere, Kietlinski, & Prichard, 2015). Facebook was launched as a social networking site that involves social connections, education information, regular updates, both personal and playful, and posting pictures for other Facebook users to see (Nosko, Wood, & Molema, 2010). Various elements of Facebook may provide clues into a person's social well-being and how social media use makes people feel more or less connected to others. The purpose of the current study is to examine how profile picture content is associated with social well-being.

Social Well-Being

Feelings of well-being are fundamental to the overall health of an individual. These feelings of well-being help enable them to successfully overcome difficulties and achieve what they want out of life. Most research focuses on hedonic and eudaimonic forms of well-being. Hedonic well-being represents a subjective form of well-being (e.g.

life satisfaction, positive/negative affect), whereas eudaimonic well-being refers to being true to oneself and working toward personal growth (e.g. meaning in life, authenticity; Disabato, Goodman, Kashdan, Short, & Jarden, 2015). There are other forms of well-being, however, which focus on the person's perceived ability to navigate the social environment, such as interpersonal trust, loneliness, and shyness. The focus of our study is on this form of well-being, which we refer to as social well-being.

A sense of interpersonal trust in others allows people to derive support, comfort, and pleasure from others (Poulin & Haase, 2015). There are several benefits that people can experience by trusting others. Interpersonal trust may reduce interpersonal tension and conflict and it can promote interpersonal harmony and cooperation (Chang & Lee, 2013). Trust is a belief that others will not knowingly or willingly harm us, but it is not always accurate. Poulin and Haase (2015) suggested that trust may also put individuals at higher risks for exploitation and abuse. Thus, interpersonal trust may be one of several ways that people can experience social well-being.

Indicators of poor social well-being include loneliness and shyness. Loneliness usually includes anxious feelings of isolation or a lack of connectedness with other people, and it can be felt even when someone has a high number of relationships (Ye & Lin, 2015). Lonely people often report being bored and feeling excluded in social situations (Sheldon, 2012), possibly because they also do not typically disclose personal information and have low self-esteem (Skues, Williams, & Wise, 2012). Due to the unthreatening nature of social networking sites, however, this enables self disclosure from individuals who would not normally

disclose personal information in face-to-face interactions, compensating for their low self-esteem and building social capital (Al-Saggaf & Nielsen, 2014; Skues et al., 2012). Likewise, shyness usually leads to excessive negative emotions and low self-esteem, which makes them less involved in social activities (Zhao, Kong, & Wang, 2012). Shyness can be defined as a sense of discomfort in interpersonal situations that interfere with pursuing one's interpersonal or professional goals (Sheldon, 2012). In contrast, emotional intelligence (EI) alleviates feelings of shyness. Individuals with high EI possess a greater capacity to perceive, use, understand, and manage their emotions, which facilitates a greater sense of well-being (Zhao et al., 2012).

Due to their contributions to the quality of social interactions, trust, shyness and loneliness are highly correlated. Loneliness and shyness are strongly and directly associated with each other even after controlling for mediating variables (Fitts, Sebby, & Zlokovich, 2009; Jackson, Fritch, Nagasaka, & Gunderson, 2002; Li, Dang, He, & Li, 2013; Zhao et al., 2013), which may be rooted in their lower quality relationships (Disabato et al., 2015). Rotenberg and others have also consistently demonstrated the link between loneliness and interpersonal trust across age groups (Rotenberg, 1994; Rotenberg et al., 2010; Rotenberg, MacDonald, & King, 2004; see also Hamid & Lok, 2000). The link between trust and shyness is less clear, but both appear to be influenced by negative social experiences such as romantic infidelity (Zak et al., 2000) and bully victimization (Jantzer, Hoover, & Narloch, 2006). The similarities and strong associations among these variables suggest that they are all indicators of social well-being.

Facebook Use and Social Well-Being

There are several links between Facebook use and a person's social well-being. Online social networking takes place in a context of trust (Grabner-Krauter & Bitter, 2015), so people are willing to share personal information on Facebook, mainly due to the trust in fellow group members (Chang & Lee, 2013). Valenzuela, Park, and Kee (2009) found that the intensity of Facebook use — based on the number of friends, time spent on a typical day, and the emotional attachment a person had to his or her Facebook page — was positively associated with trust and participation in social activities.

In contrast to the research on social interactions that occur in the same room, many studies show that the more lonely a person is, the more likely he or she is to engage in Facebook use (Al-Saggaf & Nielsen, 2014; Ryan & Xenos, 2011; Skues, Williams, & Wise, 2012; Ye & Lin, 2015). Perhaps this is to compensate for their lack of offline relationships. Deters and Mehl (2013) found that those who increased their status-updating activity were less lonely due to feeling more connected to their friends on a daily basis. Similarly, shyness is positively correlated with time spent on Facebook, but it is negatively correlated with the number of Facebook friends they have (Orr et al., 2009). There is also evidence that using Facebook is indicative of high social well-being. When compared to non-users of Facebook, individuals using Facebook score lower on shyness and are more socially active (Sheldon, 2012). Despite the examinations between Facebook use and social well-being, identifying the importance in profile picture content that indicate a healthy connection with others or difficulties connecting with others has been overlooked. The current

study expands on the association between Facebook profile picture content and well-being.

An individual can chose many different options for his or her profile picture content. Individuals may have pictures of themselves, other people, their pets or even a celebrity. In essence, a Facebook user's profile picture folder may be considered a photobiography (Hormuth, 1990), which is one of the many ways to study the self-concept, particularly as the self relates to the social and physical world. Although photographic and other visual displays have come under scrutiny as being poor representations of reality (Tagg, 1993), recent evidence suggests that profile pictures are indeed accurate depictions of personality traits (Back et al., 2010).

Recently, Hum et al. (2011) examined identity construction and gender roles in social networking sites by studying Facebook content regarding the individual's quantity of photos, candidness, number of subjects, and professionalism and/or appropriateness. They found that college students may be aware of the importance of constructing such an identity, as the majority of their profile photographs were inactive, posed, appropriate, and they contained only the owner of the account. This may suggest that they are choosing to provide multiple identity clues to other Facebook users through their profile pictures.

More recently, Hudson and Gore (2017) examined profile picture content, including pictures of the individual alone, the individual with close others, and photos of only close others. They found that the number of profile pictures an individual had of themselves with close others was associated with having a sociable personality (high extraversion and high agreeableness). This suggests that

including oneself and others in profile pictures means that the person is well-integrated into her or his social network. If this is the case, then a high proportion of this type of profile picture should also be associated with social well-being. To date, however, this has not been tested.

There were also gender differences in how profile picture content related to personality traits, especially regarding the use of oneself only or close others only in profile pictures. For men, their openness to experience (a trait associated with having an independent sense of self) was positively associated with profile pictures of just themselves and negatively associated with pictures of just close others. In contrast, women's agreeableness was positively associated with profile pictures of just close others and negatively associated with pictures of just themselves.

These findings may provide some clues into how profile pictures relate to social well-being differently for men and women. From an early age, boys are socialized by peers and adults to be the dominant member of a group (see Rose & Rudolph, 2006). In other words, they are socialized to stand out, be unique and define themselves as independent more so than girls (Cross & Madson, 1997). In contrast, girls are socialized within their social environment to maintain and create close relationships with others (Rose & Rudolph, 2006), so females are more inclined than males to define themselves based on their close relationships (Cross & Madson, 1997). It would seem to follow then that males who represent themselves through their profile pictures as an independent person (i.e., with several pictures of themselves alone) would report higher levels of social well-being than females who did the same. In contrast, females who represent themselves through their

profile pictures as a close other (e.g., several pictures of their baby) would report higher levels of social well-being than males who did the same. This is because, in each case, the person represents the characteristics that are indicative of successful socialization practices. If they have been successfully socialized to exhibit these characteristics, then they should feel more connected to their social environment. However, no one has tested these associations yet.

An additional limitation to Hudson and Gore's (2017) study was that they only examined profile picture content that either involved the individual or a close other. They did not examine the inclusion of other individuals in these pictures. Other common profile picture content can include people who are deceased (used either as a tribute or form of remembrance), pets, celebrities, sports figures, fantasy characters, and cartoon characters. An important distinction among these content areas and close others is that connecting with close others allows for strong, intimate human relationships whereas connecting with the other content areas listed above does not. Close relationships provide the foundation for social well-being (high interpersonal trust, low levels of loneliness and shyness). As a result, people who frequently represent themselves using distant others (either deceased or nonhuman) or strangers (celebrities, sports figures, fantasy or cartoon characters) may also have low levels of social well-being. The current study seeks to examine these associations.

The Current Study and Hypotheses

Although past research gives insight into how profile picture content and personality are associated, the current

study aims to examine profile picture content and its association to social well-being. Despite the importance of profile pictures for creating first impressions, no one to date has examined this association. The current study seeks to identify the important profile picture content areas that either indicate a healthy connection with others or difficulties connecting with others. Doing this requires an inclusive list of profile picture categories. Thus, we examine the association between social well-being with content involving the self, close others, distant others and strangers. The current study tests four hypotheses:

(1) pictures of oneself with close others will be associated with higher levels of social well-being,

(2) pictures involving oneself only, strangers (celebrities and fantasy) and distant others (deceased, pet) will be associated with lower levels of social well-being,

(3) pictures involving close others only should be more strongly associated with social well-being for women than for men, and

(4) pictures involving the self alone should be more strongly associated with social well-being for men than for women.

Method
Participants and Procedure

The participants in this study were 324 undergraduate students (79 males, 245 females). To create equal groups, we obtained a random sample of 79 females from the larger sample. This resulted in a final sample of 158 (50% male, 50% female). The majority (88%) were Caucasian. Other ethnicities within the sample included African-

American (8%), Latino (1%), Asian/Pacific Islander (1%), Middle Eastern (1%), and Multi-ethnic (1%). The age ranged from 18 through 46 with an average age of 20.88 years old. The majority of participants spent at least one hour a day on Facebook, with the number of hours ranging from 0 to 15 ($M = 2.85$, $SD = 2.58$). As an incentive, participants were awarded outside activity course credits.

On the day the study was conducted, participants had a unique identification numbers that only they knew. As the participants arrived, they were informed that this study had two parts. The researchers mentioned that only people who could attend both sessions should participate. Participants were given an informed consent statement to read and sign. Afterward, the participants were asked to log into their Facebook account and access their profile pictures. The participants were asked to complete the Profile Picture Coding Sheet based on each picture regarding content. After completion of the coding sheet, the participants were given a brief description for the online survey for Part Two. This description told them about the name of the study and that their answers from the coding session would be matched with their answers from the online survey, but no identifiable information would be used in matching their data. At the participant's convenience, they logged in to complete an online personality survey. Afterward, they received a debriefing statement.

Materials

Social Well-Being. The Social Well-Being Index was composed of three instruments. The 25-item Interpersonal Trust Scale (Rotter, 1967, 1971; $M = 2.62$, $SD = 0.38$, $\alpha = .80$) was used to measure one's expectation that the be-

havior, promises, or statements of other individuals can be relied upon. The response format was a Likert-type scale (1 = strongly agree, 5 = strongly disagree). An example of an item is, "Parents usually can be relied on to keep their promises." The 20-item UCLA Loneliness Scale (Version 3; Russell & Cutrona, 1988; M = 2.14, SD = 0.68, α = .92) was used to measure conceptualized loneliness. The response format was a Likert-type scale (1 = never, 4 = always). An example of an item is, "How often do you feel a lack of companionship?" The 13-item Revised Shyness Scale (Cheek & Buss, 1981; M = 2.76, SD = 0.67, α = .87) was used to measure shyness as discomfort and inhibition in the presence of others. The response format was Likert-type scale (1 = very uncharacteristic or untrue, strongly disagree, 5 = very characteristic or true, strongly agree). An example of an item is, "I feel tense when I'm with people I don't know well." To create the Social Well-Being Index, the mean across ratings was calculated for each variable, then those mean scores were standardized. A total score was then calculated using the following equation: z Trust – z Loneliness – z Shyness. This final score was used as the Social Well-Being Index (M = -0.06, SD = 2.10). A composite reliability coefficient for the Social Well-Being Index was obtained by using the calculation described in Nunnally (1978). The coefficient suggested that these three variables formed a reliable, second-order variable (Composite reliability = .88).

Profile Picture Content. Participants were asked to open up their profile pictures folder and then complete a profile picture coding sheet to indicate the primary content for each of their profile pictures. Facebook automatically creates this folder for all users so that they have a reposi-

tory of the pictures that they used when they post their profile picture. Therefore, most users have multiple pictures stored in that folder. The participants were given a sheet with 20 picture code options to indicate the content of their photos, including an "other" category for content that could not be categorized into the other options. This study focused on categories that involved the self and/or other people:

- "me alone,"
- "me with close other(s),"
- "me with someone who has died,"
- "me with a pet,"
- "someone or some people I'm close to,"
- "someone who has died,"
- "my pet(s),"
- "celebrity or sports figure," and
- "fantasy or cartoon character."

The categories were created based on focus group discussions of the content of Facebook profile pictures. Although this is not an exhaustive list, the low frequency of pictures designated as "other" suggested that most pictures fit into one of the categories. For each participant, a total number of picture options for the indicated content was counted. The number of pictures counted within a domain were then divided by the total number of profile pictures in the Profile Pictures folder, so that each score represented the proportion of each domain for all their profile pictures. This resulted in nine separate proportion scores: Self Only (M = 0.40, SD = 0.25, range = 0.00 to 1.00), Self with Close Others (M = 0.41, SD = 0.28, range = 0.00 to 1.00), Self with Deceased (M = 0.01, SD = 0.05, range =

0.00 to 0.45), Self with Pet (M = 0.01, SD = 0.05, range = 0.00 to 0.50), Close Others Only (M = 0.08, SD = 0.13, range = 0.00 to 1.00), Deceased Only (M = 0.01, SD = 0.03, range = 0.00 to 0.21), Pet Only (M = 0.01, SD = 0.06, range = 0.00 to 0.67), Celebrity (M = 0.01, SD = 0.03, range = 0.00 to 0.25), and Fantasy (M = 0.02, SD = 0.06, range = 0.00 to 0.50).

Results

An independent samples t-test was conducted to examine gender differences in regards to profile picture content and social well-being. Gender was entered as the independent variable and profile picture content and social well-being were entered as the dependent variables. Women had more profile pictures of themselves with close others than men (M_{men} = 0.36, SD = 0.28, M_{women} = 0.46, SD = 0.25, t (153) = 2.22, p < .05), whereas men had more profile pictures of fantasy characters than women (M_{men} = 0.03, SD = 0.08, M_{women} = 0.01, SD = 0.04, t (153) = 2.15, p < .05).

To test the first two hypotheses, which stated that pictures of oneself with close others will be associated with higher levels of social well-being, and pictures involving oneself only, strangers (celebrities and fantasy) and distant others (deceased, pet) will be associated with lower levels of social well-being, a bivariate correlation analysis was conducted among the nine profile picture category scores and Social Well-Being (see Table 1). The results showed that Social Well-Being was positively associated with Self with Close Others, and Social Well-Being was negatively associated with Self with Deceased, Self with Pet, Deceased Only, Pet Only, and Fantasy. Social Well-Being was not associated with Self Alone. These generally

Table 1

Correlations among Profile Picture Content and Social Well-Being for the Total Sample, and by Biological Sex

Profile Content	Total	Men	Women
Self Only	-.02	-.13	.06
Self with Close Other	.20**	.34**	.13+
Self with Deceased	-.15*	.02	-.29**
Self with Pet	-.17*	-.22*	-.15+
Close Other Only	.06	-.09	.12
Deceased Only	-.25**	-.14	-.31**
Pet Only	-.17*	.05	-.23*
Celebrity	.10+	.05	.15+
Fantasy	-.16*	-.27**	-.09

$**p < .01$, $*p < .05$, $+p < .10$

support the first two hypotheses, except for the predicted association between celebrities as profile pictures and social well-being, and the predicted association between the self alone and social well-being.

To test the next two hypotheses, which stated that pictures involving close others only should be associated with social well-being for women but not for men, pictures involving the self alone should be associated with social well-being for men but not for women, a second series of correlations was conducted for men and women separately (see Table 1). The results yielded non-significant associations between Self Only with Social Well-Being and Close Other Only with Social Well-Being for both men and women, which did not support the hypotheses. However, some noteworthy differences emerged from these analyses. The

negative associations of Social Well-Being with Self with Deceased, Deceased Only and Pet Only were significant for women but not for men. There was also a significant positive correlation between Social Well-Being and Celebrity for women. In addition, the negative association of Social Well-Being with Fantasy was significant for men but not for women. These results suggest that there are some important distinctions to make between men and women in their use of distant others and strangers as profile pictures and how this relates to their social well-being.

Discussion

Social well-being has a significant association with profile picture content. In general, people who have a large amount of profile pictures containing themselves with close others have higher levels of social well-being. In contrast, people who have a large amount of profile pictures containing distant others and strangers have lower levels of social well-being. There were also gender differences in how profile picture content related to social well-being. For men, having a large amount of profile pictures of fantasy or cartoon characters (a stranger category) is connected with lower levels of social well-being. For women, having a large amount of profile pictures with distant others in them is connected with lower levels of social well-being. The only profile picture content that was not linked to social well-being for either men or women was the number of pictures with only a close other in it. This may be because the inclusion of only a close other as a profile picture may indicate several different characteristics. The inclusion of a close other with oneself may suggest that the person feels close to that other person, but the inclusion of just

the close other could mean that they feel close to that other person, that their identity is primarily centered around that other person, that they have a desire to be closer to that other person, or that this is just one of many people they feel close to. These varying reasons may be why the inclusion of a close other only was not associated with social well-being without making these other distinctions.

We found that social well-being is associated with profile picture content and that there were differences between men and women. Despite significant interest in social well-being and its association with Facebook, research examining social well-being and profile picture content has been largely overlooked. Previous research has shown that correlations exist between social well-being and the use of Facebook (Chang & Lee, 2013; Sheldon, 2012; Ye & Lin, 2015), but only certain elements of Facebook have been examined. The current study built upon previous research by identifying the importance in profile picture content areas that either indicate a healthy connection with others or difficulties connecting with others. By adding these into the study, we are able to provide a clearer picture into how profile picture content is related to social well-being and how those associations differ by gender. Social well-being can be depicted by profile picture content in the sense that having more pictures with close others is a good sign that the person has a good sense of social well-being and can navigate through the social environment whereas, having several pictures containing distant others is a sign that the individual may have some awkwardness or difficulties navigating the social environment.

Limitations and Future Directions

It should be noted that most of the sample was Caucasian young adult females. As a result, we may have obtained a sample who is more inclined to use profile pictures of themselves or themselves with a close other than other social or cultural groups would. This sample also included only students, most of whom are not currently on the job market, which may influence how they display their profile picture content. If they were looking for a job, they may be more inclined to go through and create more professional picture content. Some things they may have changed may include the people they are with or maybe using a more conservative picture of themselves rather than using other people, since these are not the type of photos that indicate a sense of social integration. To improve the methodology, future research should include a more representative sample of Facebook users, including those who are seeking jobs. Having a better understanding of the accuracy of profile picture content could help employers to accurately judge perspective employees.

Another limitation is that we do not know how central to people's self-concept the profile pictures actually are. The degree to which each picture is "who I am" was never rated, and that could make a big difference in knowing which ones count more than others. Future research should assess that in order to ascertain the centrality of those pictures in describing the self-concept to others.

A third limitation was the definition of social well-being as based primarily on the perceptions of the participants, rather than assessing multiple ratings from close others. The quality of a person's social environment can be based on how much he or she feels connected to others, but

it can also be based on how much the social environment includes, supports and cares for him or her. Future research should expand the definition of social well-being to include the actual contributions of close others to the person's well-being.

Future reach could make an effort to investigate whether or not outsiders could accurately judge someone's profile picture content and whether or not their judgment mated the individual's social well-being. Researchers could pick a man or women who are the same age and same level of attractiveness, with a variety of profile pictures, and see what people have to say about their profile picture content in regards to their social well-being.

Conclusion

The current study examined how social well-being related to profile picture content and whether there was a difference between men and women. The results of this study showed that social well-being was higher when people used themselves with close others in their profile pictures, and lower when they used distant others or strangers in their profile pictures. For women, the link between the use of distant others and low social well-being was particularly pronounced. For men, it was the link between the use of strangers and low social well-being. Rather than searching through posts and information pages, people may consider how a photo-biography, like profile pictures, provides valuable information for how well that person connects with others.

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