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Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use

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ABSTRACT

Previous studies have focused on *why* people use Facebook and on the effects of “Facebooking” on well being. This study focused more on *how* people use Facebook. An international sample of 1,026 Facebook users (284 males, 735 females; mean age = 30.24) completed an online survey about their Facebook activity. Females, younger people, and those not currently in a committed relationship were the most active Facebook users, and there were many age-, sex-, and relationship-related main effects. Females spent more time on Facebook, had more Facebook friends, and were more likely to use profile pictures for impression management; women and older people engaged in more online family activity. Relationship status had an impact on the Facebook activity of males, but little effect on the activity of females. The results are interpreted within a framework generated by an evolutionary perspective and previous research on the psychology of gossip.

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1. Introduction

Since Facebook first burst upon the virtual scene in 2004, it has become the pre-eminent social networking site (SNS) on the internet (Anderson, Fagan, Woodnutt, & Chamorro-Premuzic, 2012). As of 2011, Facebook had 800 million active users, more than 50% of whom logged onto the site on any given day (Facebook.com, 2011). It is no surprise that social psychologists have flocked to this exciting new arena of social behavior with hypotheses and methodologies in tow, hoping to discover how human social interaction plays out in this ecological niche of cyberspace (Wilson, Gosling, & Graham, 2012).

Facebook activity has puzzling and contradictory effects on social interaction. It apparently satisfies many of our interpersonal intimacy needs, but at the same time it diverts us from genuine face-to-face interaction with others (Sheldon, Abad, & Hinsch, 2011), and as the use of social networking sites has increased, the use of other electronic media such as email has declined (Judd, 2010). Most studies indicate that Facebook users perceive their online time as an extension of, rather than a substitute for, face-to-face interaction (Cheung, Chiu, & Lee, 2011; Kujath, 2011), and users do not report that the community that they experience online is as satisfying as the relationships that they have in “real life” (Reich, 2010). Nevertheless, there has been concern that excessive

Facebook use can have negative effects on well being (Tanner, 2011). So far, this concern does not seem justified. Studies indicate that Facebook usage is a good behavioral measure of social integration among college students (Kalpidou, Costin, & Morris, 2011; Morris, Reese, Beck, & Mattis, 2009), and belonging to online friendship networks can be associated with higher life satisfaction and positive feelings under the right circumstances (Seder & Oishi, 2009). Individuals who are shy or low in self-esteem clearly recognize the potential of Facebook as a vehicle for increasing social connection, but it is unclear at this time if they benefit from access to online friendship networks (Ellison, Steinfeld, & Lampe, 2007; Forest & Wood, 2012; Orr et al., 2009; Valkenburg, Peter, & Schouten, 2006).

These generally desirable effects may occur because the self-presentation that goes on when one presents one's self to the world on Facebook can have a positive influence on self-esteem by increasing self-awareness of positive traits and characteristics and decreasing awareness of negative things (Gonzales & Hancock, 2011; Harris, Houston, & Wilson, 2011). On the downside, there is evidence that more time on Facebook is correlated with more frequent episodes of jealousy related feelings and behaviors, especially among women (Muise, Christofides, & Desmarais, 2009).

There are multiple motivations for using Facebook; we search for social information about others, entertain ourselves, interact with friends, and use our Facebook page as an avenue of self-expression (Baek, Holton, Harp, & Yaschur, 2011; Park, Kee, & Valenzuela, 2009; Wise, Alhabash, & Park, 2010). Younger people join Facebook to connect with friends, and their parents often join to monitor the behavior of their teenagers (Brandtzaeg, Lüders, &

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Skjetne, 2010; Cheung et al., 2011). Once the parents get hooked, however, they begin to use Facebook more like their children do, although the kids engage in a wider range of activities (such as chatting and messaging) than do their parents (Brandtzaeg et al., 2010). The intrusion of parents into the Facebook world of their children is not always welcomed. Even though Facebook pages are public, they are often perceived as private by teens who do not want to have their parents as “friends” (West, Lewis, & Currie, 2009).

There is some debate about the extent to which Facebook usage is about impression management and the expression of identity as opposed to merely being about social interaction. Since Facebook can be a way of publicly expressing “the hoped for possible self” (Mehdizadeh, 2010) [p. 358], some researchers believe that impression management is the most important reason for having a Facebook page (Krämer & Winter, 2008). It is certainly true that virtual impression management takes place and that it can be effective. People are more likely to initiate friendships with individuals displaying attractive profile pictures (Wang, Moon, Kwon, Evans, & Stefanone, 2010), and even trivial manipulations in the photos can have desirable (or undesirable) effects. For example, Tifferet, Gaziel, and Baram (2011) found that women responded more favorably to friend requests from a man with a profile picture of himself holding a guitar vs. a request from the same man pictured without a guitar, and the aforementioned study by Wang et al. (2010) found that displaying *no* picture at all is preferable to displaying an unattractive photo. Walther, Van Der Heide, Kim, Westerman, and Tong (2008) even found that we are judged by the attractiveness of our *friends'* photographs on Facebook!

Be that as it may, studies designed to test the hypothesis that Facebook usage is primarily about impression management have concluded that this is not usually the case. Back et al. (2010) and Buss (2012) discovered that Facebook portrayals of individuals tend to be accurate reflections of their personality rather than idealized versions of themselves, and when Pempek, Yermolayeva, and Calvert (2009) had 92 undergraduates keep a diary of their Facebook usage for 1 week, it was clear that their Facebook time was primarily about social interaction and less about the expression of identity. The fact that extraverts show more Facebook activity than introverts (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011) offers additional evidence that Facebook usage is heavily driven by a desire for social interaction.

Narcissism may be the one personality trait that identifies those who may be inclined to use Facebook for self-aggrandizement, as narcissism is positively related to the frequency of Facebook activities such as checking one's own page, updating one's status, and posting self-promotional notes and photographs (Mehdizadeh, 2010; Ong et al., 2011). In a study by Buffardi and Campbell (2008), volunteers had their Facebook profiles objectively analyzed and subjectively rated by others. They also filled out a narcissism scale. Narcissism was positively related to the attractiveness and sexiness of the photos that were posted as well as with the posting of self-promotional quotes and personal information. Buffardi and Campbell also found that observers could accurately estimate the level of a Facebook Page owner's narcissism. Aside from narcissism, little is known about how useful personality is for predicting Facebook use, with opinions among researchers ranging from it being quite useful (Carpenter, Green, & LaFlam, 2011; Gosling et al., 2011) to being not very useful at all (Ross et al., 2009).

Given all of the research that has been done to date, we still know surprisingly little about demographic influences on Facebook use. Young people disclose more personal information than older people (Christofides, Muise, & Desmarais, 2009, 2012), and people seeking relationships disclose more personal information than people who are not actively seeking a new relationship (Nosco, Wood, & Molema, 2010). The sex of the Facebook owner is a

particularly promising yet understudied variable. Stefanone, Lakkoff, and Rosen (2011) found that women have larger Facebook networks than men, and Walker, Cohen, and Sibbald (2008) found that women are more likely than men to introduce topics on Facebook that could lead to gossip about themselves. Beyond these few promising tidbits, however, we do not know much.

Most previous studies have focused on *why* people use Facebook and on the effects of “facebooking” on the well being of Facebook users. The present study focuses more on the question of *how* people use Facebook, with an emphasis on how age, sex, and relationship status influence Facebook use. Much of what we did was admittedly exploratory in nature. However, broad theoretical perspectives such as evolutionary psychology generate a number of hypotheses about how people will pursue social information and present themselves on the internet (Piazza & Bering, 2009), and the results of studies on gossip which tell us what we want to know about whom, and why, also suggest hypotheses that we could test. For example, the gossip studies by McAndrew, Bell, and Garcia (2007) and McAndrew and Milenkovic (2002) indicate that most people have a greater interest in gossip about same-sex and same-age individuals, with women being especially interested in gossip about other women. They concluded that this was rooted in the evolutionary necessity of keeping tabs on our competitors for status and mates, and traditionally our chief competitors are those in our own age and sex cohorts. Similarly, it is well replicated that men and women have very different mating strategies and preferences, with men seeking attractiveness, youth, and fertility in mates while advertizing their own status, achievement, and access to resources; women show the opposite pattern (Buss, 1989a, 1989b; Buss & Schmitt, 1993; Geary, 2010). These findings, combined with behaviors one would reasonably expect from a person's relationship status, suggest the following predictions:

1. Everyone will spend more time looking at the Facebook pages of people about the same age as themselves. However, to the extent that this interest is driven by the social comparison needs described above, older people should be under less pressure to do so and will exhibit less interest in same-sex peers and more interest in family.
2. There will be more interest in looking at the pages of same sex others vs. opposite sex others, and this tendency will be even stronger in females than in males.
3. Because of the greater emphasis placed on the physical appearance of women, Females, compared to males, will spend more time on activities related to impression management with their profile pictures.
4. Related to the prediction above, females will also spend more time looking at the photos of other people.
5. Males, compared to females, will spend more time looking at items on the pages of others' that reflect an individual's status or prestige: Educational background, work/career information, and number of Facebook friends.
6. People not currently in a relationship, compared to those who are currently in a relationship, will spend less time looking at the pages of same-sex others (On the assumption, of course, that the majority of our sample was heterosexual).
7. People not currently in a relationship will expend more effort at impression management via their Facebook profile pictures than those in a committed relationship.

2. Method

2.1. Participants

A snowball sampling technique was employed to recruit Facebook users who were at least 18 years old. Participants were re-

cruited through invitations to Facebook events that were created by the researchers, through campus-wide emails distributed to students, faculty, and staff at a liberal arts college in the American Midwest, and through the “Social Psychology Network” website. Volunteers were encouraged to forward the link to the online survey to their friends and acquaintances. A brief description of the study and a link to the survey were posted on the invitation page. Seven participants were excluded either because they were not old enough or because they were not Facebook users. This resulted in a final sample of 1,026 Facebook users (284 male and 735 female) ranging in age from 18 to 79 with a mean age of 30.24 ($SD = 11.99$). There were participants from 54 different nations ranging alphabetically from Argentina to Zimbabwe, but the only countries that had more than 10 participants were Germany, South Korea, the United Kingdom, and the United States (by far the largest group). 390 of our subjects were college students (38%), 618 were not college students (60.2%), and 18 did not report their student status (1.8%).

2.2. Procedure and materials

An online survey was created using Snap Survey Software. The participants were informed that the survey would take no more than 15 min. The first section of the survey consisted of a 16 items assessing the type of profile photos that participants displayed. Each item asked the subject to respond to a question (e.g., “Do you usually post a profile picture?”) on a “1” (Never) to “5” (Always) scale. One item in this section (i.e., How often do you change your profile picture?) was scored on a five-point scale ranging from “Never” to “Frequently.” Only participants who usually display profile photos filled out this section of the survey; others were asked to skip to the second portion of the survey. The second portion of the survey consisted of 28 items that assessed how often the individual engaged in various Facebook activities (e.g., “looking at others’ photo albums”) on a “1” (Never) to “5” (Always) scale. Many of the items in this part of the scale were adapted from a measure developed by Pempek et al. (2009). The third and final section of the survey asked participants to supply information about their country of origin, their age and sex, whether or not they were college students, and their relationship status. They also estimated the number of hours spent on Facebook in a typical week and the number of Facebook friends that they currently had. Finally, they expressed their level of agreement with the following three statements on a five-point scale, ranging from Strongly Disagree (1) to Strongly Agree (5):

I spend most of my time looking at pages of individuals around my own age.

I spend more time looking at my page than at the pages of others.

I spend more time looking at the pages of people of the same sex than of the opposite sex.

3. Results

3.1. Data reduction

The first step in our data analysis was to factor analyze the 44 items in the first two sections of the survey in an attempt to reduce the number of “dependent” variables. A screen test indicated that the extraction of nine factors would provide optimal organization of the data. Thus, using SPSS software, a principal components factor analysis using varimax rotation was conducted on 44 items, with nine factors being extracted. Only items with a factor loading exceeding .50 were included in a factor, with two exceptions to be

described shortly. “Choice of the cutoff for size of factor loading to be interpreted is a matter of researcher preference” (Tabachnick & Fidell, 2007), and we elected to use the traditional factor loading size that reflects a “good” amount of overlap in the variables (Comfrey & Lee, 1992). The list of variables loading on each factor and their corresponding values are presented in Table 1. The extracted factors were labeled as follows:

- “Social Comparison.” This factor includes items that a person looks at on the Facebook pages of others that could facilitate comparisons between the observer and the page owner: relationship status, educational background, career information, interests, and favorite music, books, & TV shows.
- “Photo Activity.” This factor reflects the frequency with which individuals engage in activity focused on photographs: posting them, tagging people in them, commenting on them, and reading comments on them.

Table 1
Factor analysis of Facebook items.

Factor name	Factor loading
<i>Social comparison</i>	
– Looking at other’s relationship status	.565
– Reading other’s educational background	.829
– Reading others’ work/career information	.808
– Reading others’ interests/activities	.855
– Reading others’ favorite music, TV, books, quotes	.798
<i>Photo activity</i>	
– Posting photographs	.763
– Tagging/untagging photographs	.781
– Commenting on photographs	.751
– Reading comments on photographs of others	.559
– Reading comments on one’s own photographs	.605
<i>Seeking personal information about others</i>	
– Looking at or reading others’ profiles	.674
– Looking at others’ photo albums	.585
– Reading posts on others’ walls	.703
– Reading others’ mini-feed	.597
<i>Group interaction</i>	
– Looking at or interacting with groups	.621
– Responding to events or invitations	.592
– Creating events or invitations	.758
– Creating groups	.729
<i>Photo impression management</i>	
– How often are you posing like a model?	.632
– How often are you making faces? (funny, cute, sexy, etc.)	.623
– Do you graphically edit your profile photos?	.456
– How often do you struggle to decide which profile picture to post?	.589
– Is it important that your photo makes you “look good?”	.448
<i>Social interaction</i>	
– Reading posts on your own wall	.522
– Reading private messages from others	.866
– Sending private messages to others	.799
<i>Linking</i>	
– Looking at links (e.g., YouTube) or video clips on others’ profiles	.712
– Posting links or video clips on your own profile	.721
<i>Photo avoidance</i>	
– Is the picture of your face only a “headshot?”	–.712
– How often do you use a portrait (i.e., background hardly visible)	–.740
– How often does your photo show the background and location?	.685
– How often does your photo show you in action? (e.g., playing sport or working)	.551
<i>Family activity</i>	
– How often are you in photographs with your family?	.754
– Looking at pages of relatives	.600

- “Seeking Personal Information about Others.” This factor reflects activities that involve seeking personal information about other people not directly relevant to ascertaining status: Looking at their profiles, photo albums, reading posts on their walls, reading their mini-feeds.
- “Group Interaction.” This factor reflects the degree to which individuals engage in group activities on Facebook: interacting with groups, responding to events, or creating groups and events.
- “Photo Impression Management.” This factor reflects the degree to which individuals seem to be concerned with presenting themselves effectively through their profile pictures: Posing like a model, making faces, graphically editing the picture, struggling to decide which picture to post, and concern about looking good in the photo. Table 1 shows that we have included two items on this factor that failed to strictly meet the criterion of .50 for inclusion. This was done because of the strong intuitive logic of including these variables and because they fell just below the .50 cutoff, and statisticians agree that even a load of .45 qualifies as “fair” (Comfrey & Lee, 1992). These variables did not load significantly on any other factor.
- “Social Interaction.” This factor reflects behaviors that involve direct social interaction with single other individuals: Reading posts from individuals on one’s own wall, reading private messages from or sending private messages to others.
- “Linking.” This factor is based on the frequency of looking at or posting links to video clips, web sites, and so on.
- “Photo Avoidance.” This factor reflects the extent to which the individual appears to be avoiding a profile picture that is a clear photo of nothing but one’s face: Is the picture only a headshot, is a formal portrait used, does the picture feature much of the background, is it an action shot of the person engaged in an activity?
- “Family Activity.” This factor consisted of including family members in one’s photographs and looking at the pages of relatives.

Nine new variables were computed by calculating a mean of all of the variables loading on each of the nine factors. The two items that loaded negatively on the “photo avoidance” variable were reverse scored before the mean was calculated. These nine combined variables, plus the number of hours spent on Facebook per week, the estimated number of current Facebook friends, the responses to the three questions at the end of Part Three of the survey, and four other individual items that were not part of the composite variables constituted the set of variables to be analyzed.

This list of variables was analyzed via a 2 (sex) X 2 (relationship status) MANOVA. In the original questionnaire, participants had six response choices for identifying their relationship status: “in an exclusive relationship,” “married,” “engaged,” “in an open relationship,” “not currently in a relationship,” and “it’s complicated.” For the sake of analysis, these six choices were recoded into two groups: Those clearly in a committed relationship (exclusive, married, engaged) vs. those not clearly in a committed relationship (in a complicated, open, or no relationship).

3.2. Tests of predictions

Our first prediction was that there would be a strong overall preference for looking at the Facebook pages of individuals roughly the same age as the observer, and that this trend would be less pronounced among older people. Both parts of this prediction were supported. A one-sample *t* test revealed that the average level of agreement on the statement “I spend more time looking at pages of individuals around my own age” ($M = 3.73$, $SD = .998$) was significantly higher than the neutral point of 3.0 that represents no age preference, $t(1018) = 23.29$, $p < .0001$. Furthermore, a strong

negative correlation between age and agreement with this question indicated that the older a person was, the less likely he or she was to agree with this statement, $r(1007) = -.51$, $p < .0001$. As predicted, there was also a strong positive correlation between age and “Family Activity” (posting pictures with family members and looking at pages of relatives), $r(988) = +.23$, $p < .0001$.

Our second prediction was that there would be a strong overall preference for looking at the pages of same-sex others, and that this preference would be even stronger in females than in males. This prediction was only partially supported. A one-sample *t* test indicated no significant deviation from the neutral point of 3.0 for agreement with the statement “I spend more time looking at pages of people of the same sex than the opposite sex” ($M = 2.97$, $SD = .794$; $t(1021) = 1.10$, $p > .05$). However, the MANOVA revealed a significant main effect for sex on agreement with this statement, with females being significantly more likely to agree that they spent more time looking at the pages of same-sex others, $F(1, 816) = 101.80$, $p < .0001$, $\eta^2 = .111$, $M(SD) = 3.14(.723)$ vs. $2.58(.730)$. Thus, we did not find an overall preference for looking at the pages of same-sex others, but females were significantly more likely to do this than males.

The third prediction was that females would spend more time on activities related to impression management through their own profile pictures than do males. The variable most relevant to this prediction was the composite “Photo Impression Management” variable that was recalculated following the factor analysis. The prediction was supported. The MANOVA revealed a significant main effect for sex on the photo impression management variable, $F(1, 816) = 30.48$, $p < .0001$, $\eta^2 = .036$, with females being significantly more likely than males to use their profile picture for impression management, $M(SD) = 2.40(.639)$ vs. $2.13(.658)$.

The fourth prediction was that females would spend more time than males on photograph-related activity in general, apart from things that they do with their own profile pictures. This prediction was also supported in that females scored higher than males on the “Photo Activity” composite measure, $F(1, 816) = 37.71$, $p < .0001$, $\eta^2 = .044$, $M(SD) = 3.05(.689)$ vs. $2.70(.689)$. There was also an interaction between sex and relationship status on this variable, as males who were not in a relationship spent significantly more time on photo activity than males who were in a relationship, while relationship status had no effect on females’ photo activity, $F(1, 816) = 7.04$, $p < .008$, $\eta^2 = .009$.

The fifth prediction was that males should spend significantly more time looking at markers of achievement and status than do females. We found partial support for our prediction. Independent sample *a priori t* tests revealed no difference between males and females in the frequency with which they checked others’ educational background, $t(1011) = 1.36$, $p > .05$, or others’ work/career information, $t(1014) = .42$, $p > .05$. However, males were significantly more likely to check the number of friends that their friends had, $t(1012) = 2.53$, $p < .01$, $M(SD) = 1.97(.972)$ vs. $1.81(.919)$. Interestingly, females checked other individuals’ relationship status more often than did males, $t(1009) = 2.58$, $p < .01$, $M(SD) = 2.51(.979)$ vs. $2.34(.963)$.

The sixth prediction was supported. Those not currently in a relationship spent significantly less time looking at pages of same-sex others, $F(1, 816) = 3.81$, $p < .05$, $\eta^2 = .005$, $M(SD) = 2.94(.845)$ vs. $3.03(.706)$. However, this effect was almost entirely due to the responses of males, as there was a significant interaction between sex and relationships status on this variable, $F(1, 816) = 4.25$, $p < .04$, $\eta^2 = .005$. Males who were not in a relationship spent less time looking at the pages of same-sex others than males in a relationship, but relationship status had no effect on the tendency of females to do so.

The final prediction was that those not in a committed relationship would spend more time engaged in impression management

with their profile pictures. This prediction was supported, as those not in a relationship scored significantly higher on the composite “Photo Impression Management” variable, $F(1, 814) = 32.51$, $p < .0001$, $\eta^2 = .038$, $M(SD) = 2.47(.676)$ vs. $2.22(.620)$.

3.3. Exploratory MANOVA analyses

Although there were a number of significant univariate ANOVAs that reflect an interaction between sex and relationship status, the multivariate interaction effect was not significant, $F(17, 800) = 1.29$, $p = .189$. Thus, we will not discuss any interaction effects other than the ones discussed previously that were relevant to our predictions. There were however, significant multivariate main effects for sex, $F(17, 800) = 16.30$, $p < .0001$, $\eta^2 = .257$, and for relationship status, $F(17, 800) = 6.84$, $p < .0001$, $\eta^2 = .127$. Therefore, we can examine the significant univariate effects to see what else was going on.

There were several significant univariate main effects for sex. The results of these ANOVAs are presented in Table 2. There were only two exploratory variables on which males scored higher than females: the tendency to have a serious expression in the profile picture ($M(SD) = 2.36(1.03)$ vs. $1.89(.882)$), and the frequency of posting a celebrity picture, cartoon, or symbol in place of a profile picture ($3.10(.673)$ vs. $2.89(.631)$). On all other significant exploratory measures, females showed more Facebook activity than males. These include the number of hours spent on Facebook in a typical week ($10.16(10.36)$ vs. $7.50(7.93)$), having a profile picture ($4.91(.297)$ vs. $4.80(.632)$), time spent looking at the pages of same-age others (marginal) ($3.82(.931)$ vs. $3.69(1.03)$), seeking personal information about others ($3.18(.685)$ vs. $3.00(.644)$), interacting directly with individuals ($3.23(.927)$ vs. $3.02(.918)$), and engaging in family activity ($2.63(.808)$ vs. $2.41(.844)$).

Similarly, there were a number of significant differences between those in a committed relationship vs. those who were not (see Table 2). Those currently in a committed relationship engaged in more family activity ($2.75(.819)$ vs. $2.31(.763)$). On all of the other exploratory measures, those not currently in a committed relationship showed more Facebook activity. This included hours spent on Facebook in a typical week ($10.18(10.12)$ vs. $8.93(9.60)$), having more Facebook friends ($398.45(277.74)$ vs. $328.32(239.47)$), spending more time looking at the pages of same-age others ($3.90(.958)$ vs. $3.71(.956)$), interacting with groups (marginal) ($2.07(.583)$ vs. $2.01(.606)$), posting, sharing, and looking at links ($3.68(.649)$ vs. $3.50(.691)$), and posting something other than

a photograph of one's self as a profile picture ($3.00(.635)$ vs. $2.92(.657)$).

3.4. Exploratory correlational analyses

There were far too many variables for a complete correlational matrix involving all variables to be meaningful, and undoubtedly many of the measures of Facebook activity are highly correlated with each other. For exploratory purposes, we were primarily interested in the relationship of age and the number of Facebook friends one has with the other variables in the study. In the description of the results below, we have tried to improve readability by not reporting the significance levels separately for each correlation coefficient. Unless otherwise noted, all coefficients reported below were significant at the level of $p < .001$ or beyond.

Age was negatively related to most types of Facebook activity, including posting profile pictures, $r(1008) = -.20$, number of hours per week on Facebook, $r(1001) = -.19$, number of Facebook friends, $r(988) = -.36$, and spending time on pages of same-age, $r(1007) = -.51$, and same-sex individuals, $r(1010) = -.07$, $p = .036$. Age was also a negative predictor of looking at social comparison information, $r(998) = -.14$, engaging in frequent photo activity, $r(1006) = -.13$, seeking personal information about others, $r(986) = -.23$, interacting with groups, $r(992) = -.12$, engaging in impression management with photographs, $r(966) = -.36$, posting something other than a photo of one's self as a profile picture, $r(976) = -.15$, and posting and looking at links, $r(1007) = -.27$. There were only three variables that age was positively associated with: family activity, $r(988) = +.23$, interacting with individuals, $r(1002) = +.07$, $p = .024$, and spending more time looking at one's own Facebook page, $r(1008) = +.07$, $p = .026$.

The number of Facebook friends that an individual has was positively associated with having a profile picture, $r(989) = +.19$, the number of hours per week on Facebook, $r(983) = +.21$, looking at the pages of same-aged individuals, $r(991) = +.17$, engaging in social comparison, $r(978) = +.08$, $p = .013$, photo activity, $r(987) = +.24$, personal information seeking, $r(966) = +.19$, interacting with groups, $r(989) = +.20$, and individuals, $r(983) = +.08$, $p = .012$, engaging in impression management with photographs, $r(949) = +.27$, using links, $r(988) = +.23$, and using something other than one's own photograph as a profile picture, $r(958) = +.13$. The negative relationship between age and the number of Facebook friends has already been noted. The number of Facebook friends was also negatively associated with having a serious profile picture,

Table 2
Exploratory ANOVA main effects of sex and relationship status on Facebook activity.

Dependent variable	F	df	Significance	Effect size (η^2)
Main effect				
<i>Sex</i>				
Serious Expression in profile picture	58.35	1, 816	.0001	.067
Posting a celebrity picture, cartoon, or symbol in place of profile picture	17.57	1, 816	.0001	.021
Hours on Facebook in a typical week	10.56	1, 816	.001	.013
Usually having a profile picture	12.30	1, 816	.0001	.015
Time looking at pages of same-age others	3.55	1, 816	.060	.004
Seeking personal information about others	9.79	1, 816	.002	.012
Interacting directly with individuals	7.06	1, 816	.008	.009
Family activity	8.85	1, 816	.003	.011
<i>Relationship status</i>				
Family activity	45.00	1, 816	.0001	.052
Hours spent on Facebook in a typical week	4.36	1, 816	.037	.005
Number of Facebook friends	18.65	1, 816	.0001	.022
Time looking at the pages of same-age others	6.54	1, 816	.011	.008
Interacting with groups	3.62	1, 816	.057	.004
Posting, sharing, and looking at links	16.12	1, 816	.0001	.019
Posting a celebrity picture, cartoon, or symbol in place of profile picture	6.20	1, 816	.013	.008

$r(981) = -.07, p = .039$, and with spending time looking at one's own page, $r(992) = -.07, p = .022$.

4. Discussion

For the most part, the predictions that we made were supported and they were in keeping with what would be expected if internet behavior is tapping into the same set of social and cognitive mechanisms that trigger gossip-seeking behavior.

Overall, females engaged in far more Facebook activity than did males. They spent more time on Facebook and they had more Facebook friends, and, consistent with previous research on gossip seeking behavior (e.g., McAndrew, 2008; McAndrew & Milenkovic, 2002), females were more interested than males in the relationship status of others and they were more interested in keeping tabs on the activity of other women than men were in keeping tabs on the activity of other men. They also expended more energy than men in using profile photographs as a tool for impression management and in studying the photographs of other people. On the other hand, males, aside from the fact that they were more interested in how many friends their Facebook friends had, were not more likely than women to attend to the educational and career accomplishments of others.

In hindsight, we wish we had done a few things differently that would have permitted a cleaner parsing out of how much and what kind of social comparison is going on through Facebook. Specifically, we should have asked our participants to compare how much they looked at different types of information separately for same sex vs. opposite sex others, as this is the kind of data that is really needed to answer the question. Clearly, the next study will address this issue.

Perhaps the most interesting sex difference involved the finding that a man's relationship status predicted his use of Facebook but a woman's did not. Men who were in a committed relationship spent less time looking at the pages of women and less time posting, looking at, or commenting on photographs. Curiously, whether or not a woman was involved in a committed relationship seemed irrelevant to her Facebook use. However, it should be noted that in general people *not* in a committed relationship apparently worried a bit more about self-presentation via their profile picture, and a post-hoc *t*-test revealed that this was true for females, $t(702) = 5.18, p < .0001, M(SD) = 2.55(.660)$ vs. $2.29(.631)$, just as much as for males. Why men acted this way is not clear, since it flies in the face of the well-replicated finding that men are more interested in casual sex than women even if they are in a committed relationship (Back et al., 2010; Buss, 2012). It may be that men in a relationship simply have less free time and are not seeking relationships with women, but this does not explain why women failed to show the same pattern. It may be that men are using Facebook as a mate-seeking tool more than women are; this is yet another question begging to be pursued by future researchers.

The relationship of age to Facebook use was fairly consistent. Older people spent less time on Facebook, they had fewer Facebook friends, and generally did less of everything on Facebook than younger people did. During the time that older people are on Facebook, however, they are more likely to be interacting with individuals directly, more likely to be looking at their own page, and more likely to be looking at family pictures than their younger counterparts. The finding that older people are less likely to be looking at the pages of same age others than younger people probably has a fairly mundane explanation: Since there are far more young people than older people who have Facebook accounts, there would simply be fewer same-aged others to look at if you are older.

In summary, this study is just scratching the surface of what promises to be a very rich domain of research. Demographic infor-

mation, especially sex and relationship status, are clearly important correlates of Facebook use, and a full understanding of how humans use online social networking tools cannot be complete unless this important part of the puzzle is in place.

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