

# Self-monitoring, covert narcissism, and sex as predictors of self-presentational activities on Facebook

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## *Abstract*

The popularity of photo sharing on social networking sites has steadily increased in the United States over the last decade. Some research suggests that this increase in photo sharing correlates to an increase in narcissism, or an excessive interest in oneself and one's physical appearance. This study tested how self-monitoring, narcissism, and gender are related to photo-related activities on Facebook. Results revealed that high self-monitors engaged more often in the self-presentational opportunities on Facebook, including posting their own photographs and liking and commenting on other people's photos. Similarly, people

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who scored higher on narcissism were more likely to engage in all those activities as well. However, compared to self-monitoring, narcissism could better explain photo-related activities on Facebook. In addition, sex differences emerged when it came to commenting on friends' photos.

**T**he primary goal of Facebook is to connect friends to each other and to the world around them (Facebook.com, 2016). Every user has an option to upload his or her own profile photo on Facebook, as well as an unlimited number of personal photographs, thus creating a Facebook album. Users can “tag” themselves in their friends' photos, as well as comment on other people's photos. This allows them to be seen by even more people. By controlling the kind of information displayed on their page, Facebook users can more effectively present themselves – which also includes the kind of photographs that they post for others to see. Previous studies (e.g., Ellison, Heino, & Gibbs, 2006; Kapidzic, 2013) have found that users choose the best photos of themselves, thus, showing off their ideal self, rather than their real self.

According to Goffman (1959), all of us are performers who take on unique roles in different situations. We have a “front” stage behavior and a “back” stage behavior. When we follow formal societal rules, we are on the front stage playing a “role.” Our back stage behavior, however, is more informal and includes interaction with friends (Goffman, 1959). When an individual appears in the presence of others, he or she will want to convey an impression

to them that is in his or her interests to convey. This also includes maintaining a positive self-image (Martey, & Consalvo, 2011). This can be easily done through a selective process of choosing which photographs to post on the SNS profiles. Not only do the users of social media have an option to choose a profile photo for themselves, but they can also allow others to tag them in photos that they have not taken of themselves. In the privacy settings, users can also limit who can tag a photo of them on Facebook and thus prevent an embarrassing photo from showing up on their timeline. By creating an online self-presentation, users have the opportunity to think about which photos they want on their Facebook. In other words, they can manage their self-presentations more successfully than in face-to-face interactions (Ellison et al. 2006).

Posting photographs on social media is one form of self-presentation activities. Smock, Ellison, Lampe, and Wohn (2011) studied Facebook and argued that given the wide range of activities possible on Facebook, we have to focus on what motivates users to utilize particular site features. A recent study of a random sample of 5,000 Facebook pages revealed that photos are the most engaging post types on Facebook, accounting for 93% of activities done on Facebook (socialbakers, 2013). Therefore, it is important to understand personality traits behind this most popular activity on social network sites. The Eftekhar, Fullwood, and Morris (2014) study provided evidence that Facebook users with various personality traits set up albums and upload photos differently. For instance, neuroticism and extraversion predicted more photo uploads. Conscientiousness was predictive of more self-generated albums and video uploads and agreeableness predicted the

average number of received “likes” and “comments” on profile pictures (Eftekhar et al., 2014).

Both narcissism and self-monitoring are traits that might be related to self-promotional behavior on Facebook. Narcissism is a personality trait reflecting a grandiose and inflated self-concept (Buffardi & Campbell, 2008). People who are defined as narcissists typically think that they are better than other people, special, and unique (Sheldon, 2015). Self-monitoring is the ability and willingness to adjust behavior to induce positive feedback in others (Snyder, 1974). High self-monitors are friendly and outgoing individuals who are good at reading nonverbal cues and therefore change their behavior when needed. They choose strategies to elevate their social status (Hall & Pennington, 2013). Facebook provides the perfect opportunity to do so. When people “like” and “comment” on their friends’ photos, they know that these activities will appear on their friends’ newsfeed, which helps improve their popularity among friends and family.

The purpose of this study was to examine how self-monitoring, covert narcissism, and sex relate to posting personal photographs on Facebook, as well as liking and commenting on other people’s photos.

### **Self-Monitoring and Sharing Photographs on Facebook**

*Self-monitoring* is the ability to adjust behavior to external situational factors. People who are high in self-monitoring look for cues in the situation to tell them how to behave, whereas those who are low in self-monitoring use their own values and motives to guide their behavior (Michener, DeLamater, Schwartz, & Merton, 1986, p. 334-335). High self-monitors want to be the center of attention,

are outgoing, and extraverted. They are sensitive to the reactions of others, and have the ability to adjust behavior to induce positive reactions in others (Baron & Greenberg, 1990, p. 204-206). High self-monitors behave strategically to obtain a desired outcome and that includes being accepted by the audience. They choose strategies that enhance their social connectedness and emphasize their likeable qualities (Hall & Pennington, 2013).

Hall and Pennington (2013) examined the relationship between self-monitoring and Facebook behavior and they found that user self-monitoring was associated with posting a profile picture at a younger age, posting more frequently, and using more shorthand in status updates. High self-monitors' Facebook status updates received more "likes" from Facebook friends as well.

A number of studies (e.g., Dutta-Bergman, 2003; Shavitt & Nelsen, 2002) have found that the social identity (value-expressive) function of a product is more important for high self-monitors than for low self-monitors who prefer the utilitarian function of a product. Thus, high self-monitors preferred advertisements with social appeal (e.g., being cool) over those with utilitarian appeals (e.g., saving time). Low self-monitors preferred utilitarian appeals. Being cool is one of the reasons people use Facebook (see Sheldon, 2008). It is then likely to expect that self-monitoring might be related to sharing personal photographs on Facebook, but also engaging in other activities such as commenting on and liking other people's photos.

**H1:** Self-monitoring will be positively associated with the frequency of sharing personal photographs on Facebook, changing the profile photo, commenting on and liking other users' photos.

## **Narcissism and Sharing Photographs on Facebook**

Mendelson and Papacharissi (2010) studied “collective narcissism” in college students’ Facebook photo galleries. They argued that students are consciously uploading photos on Facebook, selecting certain subjects and events such as high school proms, sporting events, and road trips. Many photographs focused on huge milestones (birthdays, holidays, weddings), and very few included students’ families. Overall, Mendelson and Papacharissi concluded that images on Facebook were highly conventional, documenting rituals and relationships. Contextual elements and backgrounds were deemphasized.

Other scholars (Buffardi & Campbell, 2008; Kapidzic, 2013; Winter et al., 2014) have examined the relationship between narcissism and the use of the social network site Facebook. Buffardi and Campbell (2008) argued that narcissists use social network sites because they function well in the context of shallow relationships and highly controlled environments, where they have complete power over self-presentation. In their study, higher scores on narcissism were related to a higher quantity of interactions on Facebook. Narcissism was related to a higher amount of self-promoting information on the “about me” section, and it was correlated with the main photo’s attractiveness. Owners with higher narcissism scores were seen as more physically attractive. According to Buffardi and Campbell (2008), the most important indicators of narcissism on Facebook are the main photo and the number of social contacts. Of secondary importance were the “about me” and quotes sections. Kapidzic (2013) also found that narcissism was associated with a higher motivation to choose profile photos that emphasize attractiveness. Win-

ter et al. (2014) discovered that narcissism is the most important predictor of the frequency of status updates. Marshall, Lefringhausen, and Ferenczi (2015) confirmed that narcissists' use of Facebook for attention-seeking and validation explained their greater likelihood of updating about their accomplishments and their diet and exercise routine. This might be explained by narcissists' tendencies to take particular care of their physical appearance (Vazire, Naumann, Rentfrow, & Gosling, 2008).

There are two subtypes of narcissism though: overt and covert narcissism. Overt narcissists, according to Raskin and Novacek (1989), tend to be extraverted with an open display of grandiosity, also scoring high on the Narcissistic Personality Inventory (NPI). Covert narcissists, who also experience a sense of grandiosity, are not as comfortable displaying these characteristics (Gabbard, 1983). They score higher on the Hypersensitive Narcissism Scale (HSNS). Ljepava, Orr, Locke, and Ross (2013) found that Facebook non-users scored higher on covert narcissism compared to overt narcissism. Overt narcissism was the important factor predicting frequent Facebook use. Most studies looking at the relationship between narcissism and Facebook use have used the overt measure of narcissism. In this study, we are interested if covert narcissism might be related to posting photographs on Facebook in order to gain attention. Because narcissists want to gain the attention of the widest audience possible (Ackerman et al., 2011), we speculate that they are more likely to like and comment on photos of other people.

Therefore, it was hypothesized that:

**H2:** Covert narcissism will be positively associated with the frequency of sharing personal photographs

on Facebook, changing the profile photo, commenting on and liking other users' photos.

## Methods

### Participants and Procedure

Participants included 133 undergraduate students (60 men and 73 women), ranging in age from 19 to 48 (mean age = 23 years;  $SD = 5.38$ ). Approximately 57% of the participants were self-identified as Caucasian, 26% African American, 8% Asian American, 2% Native American, 3% Hispanic, while the remaining participants (4%) did not fit into provided categories.

Following Institutional Review Board approval, participants were recruited through classes offered in the College of Liberal Arts at a southern research university in the U.S. Some participants received extra credit for their participation. The first question following the consent form asked participants whether they use Facebook. In order to participate in the study, they had to be Facebook users. Students were then asked a series of demographic questions, followed by questions related to their sharing and posting of photographs on Facebook. Finally, participants answered the narcissism and self-monitoring Likert-scale questions.

### Measures

**Demographics.** Participants were first asked to indicate their sex, age, and race.

**Facebook Use.** Participants were asked six questions to measure how often (1 = *never* and 4 = *very often*) they a) upload personal photographs on Facebook, b) allow others to tag the photos of them on Facebook, c) "like"



other people's photos on Facebook, d) "comment" on other people's photos on Facebook, and e) change their profile photo. They were asked to answer an open-ended question about the main reason they upload photographs on Facebook. They were then instructed to access their Facebook page and indicate how many Facebook friends they have as well as how many photos they have in their Facebook albums. One question asked participants to estimate how many hours they spend on Facebook per day.

***Self-monitoring.*** Thirteen items from Lennox and Wolfe's (1984) Revised Self-monitoring scale were used to measure self-monitoring. Seven items measured *the ability to modify self-presentation* (e.g., "In social situations, I have the ability to alter my behavior if I feel that something else is called for," and "I have the ability to control the way I come across to people, depending on the impression I wish to give them"), and six items measured *the sensitivity to expressive behavior of others* (e.g., "I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly," and "I am often able to read people's true emotions correctly through their eyes"). All of the items were measured on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Two items were reverse-coded. The items were then summed into a scale, such that the larger the value of each scale, the greater the self-monitoring ability. Internal consistency of the self-monitoring scale was very good: Cronbach's alpha = .86 ( $M = 3.04$ ;  $SD = .42$ ). For the sensitivity subscale, the alpha was .81 ( $M = 3.05$ ;  $SD = .53$ ), and for the self-presentation subscale, the alpha was .83 ( $M = 3.04$ ;  $SD = .46$ ).

***Narcissism.*** The 10-item Hypersensitive Narcis-

sis Scale was used to measure participants' narcissism score (Hendin & Cheek, 1997). This measure was derived from Murray's (1938) Narcissism scale by correlating the items of Murray's (1938) original scale with an MMPI-based composite measure of covert narcissism. All of the items were measured on a 4-point Likert scale (1 = *strongly disagree*; 4 = *strongly agree*). Sample items include: "I can become entirely absorbed in thinking about my personal affairs, my health, my cares, or my relations to others," and "My feelings are easily hurt by ridicule or the slighting remarks of others." The items were summed into a scale, such that the larger the value of each scale, the greater the narcissism. Internal consistency of the scale was good: Cronbach's alpha = .79 ( $M = 2.7$ ;  $SD = .66$ ).

## Results

### Correlation Analysis

Hypothesis 1 proposed that self-monitoring will be positively associated with the frequency of sharing personal photographs on Facebook, changing the profile photo, commenting on and liking other users' photos. Statistical analysis (Table 1) showed three (out of four) statistically significant relationships. Self-monitoring and the frequency of uploading personal photographs on Facebook were positively related, as well as self-monitoring and the frequency of liking other people's photos on Facebook, and self-monitoring and the frequency of commenting on other people's photos on Facebook. In other words, individuals who purposefully adjust their behavior to external situational factors will more often engage in the self-presentational opportunities on Facebook, including posting their own photographs, and liking and commenting on

Table 1  
*Correlations among Self-Monitoring, Narcissism, and Facebook Behavior*

	1	2	3	4	5	6
1. Self-monitoring	-					
2. Narcissism	.08	-				
3. Freq. of uploading photographs	.27**	.16*	-			
4. Freq. of "liking" other people's photos	-.18*	.18*	.56**	-		
5. Freq. of commenting on other people's photos	.20**	.22**	.64**	.69**	-	
6. Freq. of changing the profile photo	.08	.11	.56**	.42**	.41**	-

*Note.* \* $p < .05$ ; \*\*  $p < .01$ ; one-tailed.

other people's photos. However, there was no significant relationship between self-monitoring and the frequency of changing the profile photo ( $p > .05$ ). Even significant relationships were not too strong.

Hypothesis 2 proposed that covert narcissism will be positively associated with the frequency of sharing personal photographs on Facebook, changing the profile photo, commenting on and liking other people's photos. Statistical analysis (Table 1) again showed three (out of four) statistically significant relationships. Narcissism and the frequency of uploading personal photographs on Facebook were positively correlated, as well as narcissism and

Table 2  
*Hierarchical Multiple Regression Analysis Predicting the Frequency of Uploading Personal Photographs on Facebook*

<i>Predictor</i>	<i>B</i>	<i>b</i>	$\Delta R^2$	<i>p</i>
Age	.01	.06	.00	.37
Gender	.16	.10	.01	.18
Hours on Facebook	<b>.17</b>	.30	.09	.00
Self-monitoring	<b>.43</b>	.22	.06	.00
Narcissism	<b>.23</b>	.18	.03	.00

the frequency of liking other people's photos on Facebook, and narcissism and the frequency of commenting on other people's photos on Facebook. Although significant, these associations were also weak. Overall, as the results show, narcissists are more likely to post their own photographs on Facebook, and are also more likely to engage in commenting and liking of their friends' photos. The correlation between narcissism and the frequency of changing the profile photo was not statistically significant ( $p > .05$ ).

### **Hierarchical Multiple Regression Analysis**

In order to calculate the percentage of variance explained by self-monitoring and narcissism, four separate hierarchical multiple regressions were conducted. Age, gender, and the number of hours spent on Facebook were entered as the control variables as these demographics might likely influence the results. For the variable measuring the frequency of uploading personal photographs on Facebook, both narcissism and self-monitoring, but also the number of hours spent on Facebook were significant predictors,  $F(5,132) = 6.09$ ;  $p = .001$  (Table 2).

Table 3  
*Hierarchical Multiple Regression Analysis Predicting  
 the Frequency of Changing Profile Photo on Facebook*

<i>Predictor</i>	<i>B</i>	<i>b</i>	$\Delta R^2$	<i>p</i>
Age	-.00	.01	.01	.59
Gender	.04	.03	.00	.18
Hours on Facebook	<b>.12</b>	.25	.06	.04
Self-monitoring	.09	.05	.00	.06
Narcissism	<b>.15</b>	.14	.02	.04

Table 4  
*Hierarchical Multiple Regression Analysis Predicting  
 the Frequency of Commenting on Other People's Photos  
 on Facebook*

<i>Predictor</i>	<i>B</i>	<i>b</i>	$\Delta R^2$	<i>p</i>
Age	.02	.12	.01	.14
Gender	<b>.33</b>	.18	.03	.03
Hours on Facebook	<b>.14</b>	.23	.05	.01
Self-monitoring	.32	.15	.03	.07
Narcissism	<b>.35</b>	.26	.06	.00

For the frequency of changing the profile photo, the number of hours spent on Facebook, as well as narcissism were the significant predictors,  $F(5,132) = 2.37$ ;  $p = .04$ . Self-monitoring  $p$  value was slightly higher than .05 (Table 3).

For the frequency of commenting on other people's photos on Facebook, gender, hours spent on Facebook, and narcissism were significant predictors,  $F(5,131) = 5.72$ ;  $p = .001$  (Table 4). Female students were more likely to comment on their friends' photos than male students,  $M_m(59)$

Table 5  
*Hierarchical Multiple Regression Analysis Predicting  
 the Frequency of Liking Other People's Photos on  
 Facebook*

<i>Predictor</i>	<i>B</i>	$\beta$	$\Delta R^2$	<i>p</i>
Age	.01	.03	.01	.70
Gender	.17	.10	.01	.24
Hours on Facebook	.08	.13	.02	.14
Self-monitoring	.29	.14	.03	.10
Narcissism	<b>.25</b>	.19	.04	.03

= 2.58;  $SD = .99$ ;  $M_f(73) = 2.90$ ;  $SD = .80$ ;  $t(130) = -2.10$ ;  $p = .014$ .

For the frequency of “liking” other people’s photos on Facebook, only narcissism was a significant predictor,  $F(5,132) = 2.42$ ,  $p = .04$  (Table 5).

## Discussion

Young people today have a need to broadcast their lives online. They have been videotaped during their childhood and youth and also exposed to reality TV shows where people disclose their private lives (Peluchette & Karl, 2010; Robinson, 2006). Many feel that posting interesting photographs on social media enhances their social acceptability (Peluchette & Karl, 2010).

Results from this study demonstrate that narcissism is related to photo-sharing activities on Facebook. Those who score higher on narcissism are liking, commenting, and uploading their own photos on Facebook more often than those who score lower on narcissism. Self-monitoring only emerged as a significant predictor of the frequency of posting personal photographs on Facebook. A

previous study (Fuglestad & Snyder, 2009) has actually found that high self-monitors tend to be more social and extraverted and post more frequently on Facebook (as cited in Hall & Pennington, 2013). High self-monitors choose the strategies that elevate their status, and, one of those strategies is sharing personal photographs. As evident from this study, high self-monitors might be inclined to post their own photographs to appear outgoing. As Gogolinski (2010) discovered, high self-monitors prefer to use Facebook to express themselves. This expression can be done through photography. Interestingly, as Table 2 shows, self-monitoring had a higher variance than narcissism in explaining the predictors of uploading personal photographs on Facebook. This interesting result might be due to the measures used in this study. Covert narcissism is expressed in a less direct way. High self-monitors tend to worry about their own behavior in a more direct way with fewer likes and comments made on other people's walls.

Compared to self-monitoring, narcissism can better explain photo-related activities on Facebook. Being related to all the dependent variables in our study, it is safe to conclude that narcissists enjoy Facebook, which allows them to gain attention and appear important to others. Interestingly, this study measured covert or shy narcissism as opposed to overt or arrogant narcissism. Covert narcissists are preoccupied with fantasies of grandiose achievements, imagining themselves as centers of attention – however, their fantasies are not expressed in overt behavior (Cooper, 1998). This result raises another question: if they are not expressing their fantasies directly, do covert narcissists use Facebook photographs as an oppor-

tunity to be the center of attention? This is also a new finding considering that most studies focus on overt narcissism. Clearly, covert narcissists care about the impressions they make on Facebook. Narcissists tend to overrate their own attractiveness (Gabriel, Critelli, & Ee, 1994). They post more photos on Facebook and change their profile photo more often. Covert narcissism was also related to “liking” and commenting on other people’s photos. For narcissists this activity might be a way of self-presentation. When a person “likes” or comments on somebody else’s photos (especially those posted for the public to see), the friends of the person who liked them will get the newsfeed of the activity. This again helps them to affirm themselves. One of the psychological needs individuals have includes the need to feel seen and valued (Greenwood, 2013). Nadkarni and Hofmann (2012) discovered two basic social needs when using Facebook: the need to belong and the need for self-presentation. Social support of others, either through “likes” or “comments” through Facebook can positively affect one’s self-esteem and self-worth (Baumeister & Leary, 1995).

Another interesting finding is the fact that the number of hours spent on Facebook can actually explain the most variance when it comes to sharing photographs on Facebook. It is likely that students who are already on Facebook are more likely to share personal photographs with others just because they are searching for something to do. With smartphone applications, many individuals upload their photos on Facebook immediately after taken. The more time they spend on Facebook, the more urge they might feel to change or to add something to their profile.



Although women spend more time on Facebook than men (Sheldon, 2008), they do not have more photographs on Facebook, and they do not post them more often. These results are somewhat surprising. However, sex differences emerged when it came to commenting on friends' photos. Women post more comments on their friends' photos. This finding could be related to the fact that females go to Facebook for relationship maintenance and entertainment more often than males (Sheldon, 2008). In Sheldon's study, one of the items measuring entertainment included seeing other people's photos. According to social role theory (Eagly, 1987; Eagly, Wood, & Diekmann, 2000), there are different expectations of male and female social behavior. Females are expected to be communal caregivers, friendly, unselfish, and expressive. Males are expected to be independent, assertive, and competent. By commenting on their friends' photos, women are sending a message that they "care." Bond (2009) found that females are also more likely to post on Facebook photos that include images portraying family and friends, while male participants uploaded more sports-related photos. Mesch and Beker (2010) also found that teenage girls ages 12-17 were more likely than teenage boys to post photos on Facebook, while boys were more likely to post videos of themselves on the site.

While this study did not examine what type of personal photographs users upload on Facebook, future research should continue with that line of inquiry in order to better understand the relationship between personality traits and photo-related activities on Facebook. A content analysis conducted simultaneously with surveys could provide that answer. This study only asked participants about

their behavior on Facebook rather than testing their actual online behavior. Based on the variance explained in the dependent variables, it is likely that other personality factors might affect why college students post personal photographs on Facebook. The self-monitoring  $p$  value was also close to .05 in all of the models tested in this study. It would also be interesting to explore who the people are whose photos our participants like and comment on. Are they their friends, relatives, or close family members? The limitation of this study also includes the small sample size. A bigger sample would allow for a more advanced statistical analysis. Next, respondents were recruited through convenient sampling; thus, not allowing generalizations about the whole population. Due to the survey methodology, we cannot establish a causal relationship between variables in the study.

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