

3-2016

## SOCIAL NETWORKING: CREATING A SOCIETY OF NARCISSISTS OR HELPING PEOPLE REACH SELF-ACTUALIZATION?

Kris E. Munakash

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A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Psychology: General/Experimental

---

by  
Kris Elias Munakash

March 2016

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## ABSTRACT

Social networking sites (SNSs) are growing in popularity and diversity. Prior research has shown that SNSs use is correlated with various personality traits including narcissism. To date, no work has examined the association between SNSs use and self-actualization. Given the potential overlap of narcissism and self-actualization, the goal of the present study was to first examine the conceptual overlap of these two intrapersonal characteristics. We then sought to examine the associations between SNSs use, narcissism, and self-actualization with an expectation that self-actualization would mediate the association between SNSs use and narcissism. One thousand six hundred and four adults completed an online survey with questions to assess their demographic traits, SNSs activities, and personality characteristics. Results indicated some overlap between narcissism and self-actualization; but, in general, each was a distinct personality trait. Results also demonstrated that the association between self-actualization and SNSs usage was not significant. Contrary to our prediction, self-actualization did not mediate the association between SNSs activities and narcissism. Finally, the study found that narcissism scores were reportedly higher after using SNSs than they were prior to SNSs use.

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## CHAPTER ONE

### INTRODUCTION

Social networking sites (SNSs) have grown exponentially over the past decade, boasting a membership of 72% of adult (Brenner & Smith, 2013) and 73% of teenage (Lenhart, Purcell, Smith & Zickuhr, 2010) Internet users. The most popular of these SNSs is Facebook.com (Facebook), which is ranked by Alexa.com (a company that provides commercial web traffic data) as the second most popular website in the world. According to Facebook's own data (Facebook website, 2013), it has 1.23 billion monthly active users as of December 31, 2013 and The Associated Press confirmed this statistic when it revealed that Facebook has over 1 billion active users ("How Facebook has grown," 2013). SNSs are a part of many people's daily lives and their influence is arguably growing.

Given that SNSs are playing a large role in people's lives, researchers have attempted to determine their effects on personality and quality of life. The research on SNSs and personality is limited, but most has focused on how distinct traits, such as narcissism, predict SNSs usage. The research on SNSs and narcissism has largely found that individuals with high scores on this trait tend to be more active and self-promoting on SNSs (Buffardi & Campbell, 2008). Narcissists tend to use SNSs to acquire as many online friends as possible. They also employ strategies on SNSs to highlight their idealized selves such as posting flattering profile pictures and maximizing their social interactions.

Another personality variable that may relate to SNSs activities is self-actualization, or the pursuit of one's highest potential. Much like narcissism, self-actualization drives peoples' actions and can possibly explain some of the motivation for using SNSs.

A self-actualizing individual may demonstrate SNSs behaviors that parallel those of narcissists. Like narcissists, self-actualizers utilize SNSs to produce content, and they produce content as a means to attract the attention of and solicit a response from others (Shao, 2009). Similar to narcissists, self-actualizing individuals may use SNSs as a means to access a large audience, beyond what would be possible in the physical world. These individuals may feel the importance of contributing to and improving the lives of people they know. By having access to a large network of friends through SNSs, the self-actualizing person can make contributions on a large scale. These contributions may come in the form of sharing self-help information, articles of current issues, or a calendar of events to promote philanthropy. They may also use SNSs as a way to demonstrate their identities to others (i.e., sharing information, thoughts, or experiences). Whereas narcissists use SNSs to self-promote and try to show off their perceived "greatness," the self-actualizing person may use SNSs to demonstrate a more considerate, world-conscious orientation through the things they share. In such cases, it would make sense for self-actualization to be associated with abundant SNSs activity, but for profoundly different reasons than narcissism. Though narcissism and self-actualization are arguably distinct

constructs, research comparing the two, particularly in association with SNSs activity is lacking. Such a comparison can shed light upon how SNSs have become a mechanism for positive change in the world, not merely a vehicle for self-enhancement or promotion.

One factor to consider in the present study is the direction of associations among SNSs use, narcissism, and self-actualization. That is, as an individual increases their SNSs activities, do they become more narcissistic and/or self-actualized? Or perhaps the traits of narcissism and self-actualization cause individuals to engage in more SNSs use compared to those who are low on one or both traits. If SNSs use influences both narcissism and self-actualization, will a narcissistic individual become more self-actualized over time simply through SNSs use (or vice versa)? This study provides an initial attempt at answering these questions.

## CHAPTER TWO

### REVIEW OF LITERATURE

#### Social Networking Sites

##### What are Social Networking Sites?

SNSs are Internet sites that allow individuals to communicate and interact with people on a large scale and through a robust set of features. To take advantage of SNSs offerings, individuals must create a user profile. Typically, the user will personalize their profile by adding pictures and information about their demographics, career, and relationship status (e.g., single, married). Individuals communicate and/or share information through their profiles. However, to interact with others, the user must locate people (e.g., friends, family, acquaintances) and invite them (or be invited by them) to become friends or followers within the SNSs. Once an individual has established a set of friends or followers, they have a social network.

The user can then share content either directly with the network or individually with friends in the network. Information is shared through features offered by SNSs. Although many SNSs share features, each has its own unique combination that sets it apart from the rest. The SNS with the most robust set of features is Facebook, which allows users to share or “post” pictures, links to articles of interest, videos, music, and/or comments. Friends can then comment on or indicate that they “like” the user’s posts. Facebook also allows for direct

communication with users through email or instantaneous messaging. It also allows the user to maintain photo albums that can be permanently stored, shared, and commented on or “liked” by others.

Though Facebook is currently the most popular SNS because of its abundant features and large membership – and thus the focus of most research to date – other SNSs such as Twitter.com (Twitter) and Instagram.com (Instagram) are gaining popularity for their unique offerings. Like Facebook, they enable the user to establish a network of friends or followers and post information. What makes them unique is their streamlined approach to social networking. Twitter’s posts are limited to 140 characters or less which allow for quick, short bursts of information or commentary to be disseminated through the network. Pictures can be shared, but the site does not offer albums for storage. Comparatively, Instagram does not offer written posts. The site’s central focus is photo-sharing and album archival. Network members can additionally post comments on the user’s photos. In general, SNSs features are varied and offer distinct experiences and communication methods. The literature review that follows will largely focus on Facebook because researchers have most often examined this site and because it is currently the most popular SNS.

#### Activities on Social Networking Sites

Individuals engage in a variety of SNSs activities. The average time spent on Facebook is 30 minutes per day and most of this time is spent observing, rather than adding content (Pempek, Yermolayeva & Calvert, 2009). A majority

of communication occurs in a “one-to-many” format where an individual sends information to all their friends rather than individually emailing or instantaneously messaging those people (Pempek et al., 2009). Facebook is primarily used for social communications with past acquaintances or offline friends (Pempek et al., 2009). Young adults also use Facebook as a means for expressing their identities: They share ideas, information, and pictures that reflect their personalities.

### Reasons for Using Social Networking Sites

The two driving forces for Facebook use include the need to belong and the need for self-presentation (Nadkarni & Hoffman, 2012). The need to belong is motivated by cultural and demographic factors, whereas the need for self-presentation is influenced by personality traits such as introversion/extroversion, shyness, and self-esteem (Nadkarni & Hoffman, 2012). Regarding the need to belong, one of the most commonly cited reasons for using Facebook is to maintain relationships with existing close friends. The need to belong is also achieved on SNSs through “social information-seeking”, which involves supplementing how much one knows about an individual they have met offline (i.e., face-to-face) (Ellison, Steinfield & Lampe, 2011). Social information-seeking helps people become acquainted with new friends created in the physical world as well as deepen already established relationships. For self-presentation, individuals tend to portray an ideal self, which may or may not be consistent with a true self (Zhao, Grasmuck & Martin, 2008). Zhao et al. argued

that ideal selves reflect the epitome of self-presentation that for any number of reasons has yet to manifest in the real world.

### Personality and Social Networking Sites

Most social science research on SNSs has examined the correlation between personality and SNSs activities. Researchers report a strong association between personality and Facebook use in that individuals with high levels of openness to experience (i.e., those with an active imagination, attentiveness to inner feelings, preference for variety) spend more time, have more friends, and use more features on Facebook than their less open counterparts (Amichai-Hamburger & Vinitzky, 2010; Back et al., 2010; Correa, Hinsley & Zuniga, 2010; Ryan & Xenos, 2011; Siedman, 2013; Skues, Williams & Wise, 2012). Individuals with high levels of openness use SNSs because they care about and actively engage in more items of interest than those low on openness. SNSs expose individuals to a wide array of information and enable them to quickly find people who share their interests (Skues et al., 2012). Similarly, extroverts have tended to use the Internet (including SNSs) as an extension of their social selves or as a way to interact with an already established social circle (Tosun & Lajunen, 2010).

Individuals high on the trait of loneliness (as captured by the UCLA Loneliness Scale Version 3; Russell, 1996) find SNSs useful as well. Loneliness is characterized by a disconnect with intimate and social others as well as feelings of exclusion (Austin, 1983). Lonely people often use SNSs as a means

to access and interact with others (Skues et al., 2012). For these individuals, online relationships often meet social needs that are unmet in face-to-face relationships. As a result, they tend to have more online friends than those who are less lonely (Skues et al., 2012). Also, lonely people are hypothesized to have low social capital (i.e., the resources offered through relationships) and to use SNSs to build more of it (Ellison, Steinfield & Lampe, 2007).

Other personality traits influence SNSs activities as well. Those high in neuroticism post more photos on their Facebook profiles than those low in neuroticism (Amichai-Hamburger & Vinitzky, 2010). Individuals high in agreeableness use fewer page features than those low in agreeableness. Additionally, individuals high in conscientiousness present themselves more cautiously online (Siedman, 2013). Adult Facebook users tend to be more narcissistic and extraverted than non-users. In general, certain feature preferences on Facebook (e.g., posting to one's wall or commenting on others' posts) as well as the frequency of use tend to vary based on personality type (Ryan & Xenos, 2011).

Although numerous studies have demonstrated an association between personality type and SNSs use, only a few researchers have examined the directional effects of SNSs use on personality. This research has demonstrated that positive and negative feedback, conveyed through SNSs profiles, impact teenagers' social identities, social capital, self-esteem, and psychological well-being (Ahn, 2010; Valkenburg, Peter & Schouten, 2006). For adults, Facebook



use has been shown to positively impact self-esteem (Gonzales & Hancock, 2011; Omolayo, Balogun & Omole, 2013), except among those with exceptionally low self-esteem (Frost & Wood, 2012). The difficulty in determining directional effects has likely limited the amount of research in this area, yet more work is needed, especially because SNSs are growing in membership and variety.

## Narcissism

### Narcissistic Personality

An abundance of research examining the association between personality and SNSs activity has focused on narcissism. Narcissistic personality disorder (NPD) is defined as a “pervasive pattern of grandiosity, need for admiration and lack of empathy” (American Psychiatric Association, 1994, p. 714). Though there is agreement across researchers regarding the definition of narcissism, its operationalization is often debated. Miller and Campbell (2008) found that the Narcissism Personality Inventory (NPI: Raskin & Terry, 1988), which is used in social psychology and measured on a continuum, captures an emotionally resilient, extroverted form of narcissism, whereas clinical measures capture an emotionally unstable, introverted form. For the purpose of this study, the social psychological conceptualization will be used.

There are several reasons for focusing on the social psychological definition of narcissism. First, few individuals meet the clinical diagnosis of narcissism as outlined by the Diagnostic and Statistical Manual of Mental

Disorders (DSM). On the other hand, many individuals can be assessed using a narcissistic continuum with measures such as the NPI. Second, measuring people on a narcissistic continuum does not require clinical administration. Third, individuals with a clinical diagnosis of narcissism tend to experience more life disruption compared to those falling along a continuum who tend to manage their lives with less difficulty. Finally, participants who fall along the narcissism continuum are much more convenient to access for large studies than those who meet the clinical definition of narcissistic personality disorder.

Narcissism, as defined in social psychology, can be divided into two main sub-components: narcissistic grandiosity and narcissistic vulnerability (Pincus & Roche, 2011). Grandiosity refers to traits such as arrogance, conceit, and feelings of superiority (Buss & Chiodo, 1991). Vulnerability pertains to perceived ego threat or failure. When the ego is threatened (or there is a perceived failure), the vulnerable narcissist will overreact either emotionally or behaviorally. This overreaction is usually in the form of aggression towards others (Pincus & Roche, 2011).

By North American standards, narcissism is associated with positive and negative qualities. On the positive end, it is associated with having high self-esteem (Jackson, Ervin & Hodge, 1992; Rhodewalt & Morf, 1995; Watson, Hickman & Morris, 1996), being outgoing and extroverted (Bradlee & Emmons, 1992), being less socially anxious or depressed (Watson & Biderman, 1993), and being more bold in social contexts (Emmons, 1984). On the potentially negative

side, those high in narcissism tend to be less agreeable (Bradlee & Emmons, 1992), driven by extrinsic rather than intrinsic motivation (Kasser & Ryan, 1996), prone to bragging about their accomplishments, and more likely to display arrogance (Paulhus, 1998). Narcissism is also associated with feelings of entitlement (Campbell, Bonacci, Shelton, Exline & Bushman, 2004), aggressive reactions to ego-threats (Bushman & Baumeister, 1998), and social rejection (Twenge & Campbell, 2003).

### Narcissism and Relationships

The literature on relational narcissism highlights how narcissism operates in the context of SNSs because such sites provide a forum for interacting with others. In general, narcissism negatively impacts close relationships. Narcissists' self-esteem is greatly influenced by their social relations, a phenomenon that Morf and Rhodewalt (2001) termed "self-construction" or self-enhancement. Narcissists engage in self-enhancement in order to maintain feelings of power or dominance over others (Bradlee & Emmons, 1992; Carroll, 1987). In the virtual environment, narcissists use SNSs for self-promotion (Buffardi & Campbell, 2008; Mehdizadeh, 2010). However, they view themselves as superior to others and demonstrate little interest in other people's needs. This dismissal of others and their needs is what keeps narcissists from maintaining the very relationships from which they derive esteem (Morf & Rhodewalt, 2001). As such, narcissists constantly strive to create new relationships and acquire numerous online friends.

Although narcissists are eager to initiate relationships (Morf & Rhodewalt, 2001), they lack the motivation to maintain them (Campbell, 1999; Campbell & Foster, 2002). They espouse characteristics such as confidence, risk-taking (Campbell, Goodie & Foster, 2004), and sexual intrigue (Foster, Shrira & Campbell, 2006), which are often perceived positively by new acquaintances. However, positive first impressions tend to erode with time as people gradually detect and are repelled by narcissists' excessive self-promotion (Paulhus, 1998). With regards to romantic relationships, narcissists tend to pursue attractive or "trophy" partners (Campbell, 1999), are less committed to their relationships (Campbell & Foster, 2002), and exhibit a game-playing style of love that may include infidelity and psychological control (Campbell, Foster & Finkel, 2002). Therefore, narcissism involves taking advantage of others and SNSs provide an ideal platform for interacting with their targets on a large and direct scale.

### Narcissism and Social Networking Sites

Researchers have repeatedly found a strong, positive association between narcissism and SNSs use (Buffardi & Campbell, 2008; DeWall, Buffardi, Bonser & Campbell, 2011; Gentile, Twenge, Freeman & Campbell, 2012). One of the first studies on narcissism and SNSs found it to be positively associated with Facebook characteristics including number of friends, number of wall posts, self-promotion, and having a sexual profile image (Buffardi & Campbell, 2008). Mehdizadeh (2010) similarly found a positive correlation between narcissism and self-promotion when she examined Facebook profile pictures, the first 20 pictures

in users' "photos" section, status updates, and "notes." Narcissism is also positively associated with the number of times an individual checks their profile each day and the length of time they spend on Facebook per login.

Most research on narcissism and SNSs has examined SNSs usage for individuals high on narcissism versus those who are low on this trait. Compared to those low in narcissism, those high in narcissism are more likely to believe that people on SNSs are interested in what they are doing (Bergman, Bergman, Ferrington & Davenport, 2011). They similarly express a greater desire to have others know what they are doing. Bergman et al. found that narcissists were more concerned than those low on this trait with posting images promoting a positive image on their Facebook profiles. They prioritize having pictures of themselves rather than other people on their profiles and particularly value images that portray them as the center of attention. This finding is consistent with research indicating that narcissists use a variety of strategies to maintain their egos (Buss & Chiodo, 1991).

Those high in narcissism exhibit more anti-social behaviors on SNSs. Carpenter (2012) found that two distinct narcissism subscales – grandiose exhibitionism and entitlement/exhibitionism – to be positively associated with anti-social behavior. Individuals with high scores on either subscale were more likely to retaliate against mean comments and seek unreciprocated social support from their friends (Carpenter, 2012).

The association between age, narcissism and choice of SNSs has also been examined. Panek, Nardis and Konrath (2013) identified age distinctions in SNSs use for Facebook and Twitter. For young adults (i.e., student participants), they found a significant positive association between the frequency of Facebook and Twitter use and certain types of narcissism including superiority, entitlement, and exhibitionism. Facebook served a different psychological purpose than Twitter. Panek et al. determined that Facebook use was associated with exhibitionism and entitlement. Young adults high on exhibitionism/entitlement used Facebook to put forth their “best self” in order to receive positive feedback from others. Otherwise stated, they used Facebook for self-promotion. The use of Twitter, however, differed in that it was a way for young adults with high scores on superiority to demonstrate their perceived advantage. For older adults (i.e., non-student participants), the researchers also found a significant positive association between narcissism and SNSs use. People high on narcissism used SNSs as a way of demonstrating and maintaining a positive image. Contrary to their young adult counterparts, older adults high on narcissism used Facebook, instead of Twitter, as a means of demonstrating superiority.

Most of the research on the narcissism/SNSs association has examined the impact of narcissism on SNSs. Only one group of researchers investigated the inverse association or how SNSs affect narcissism. Gentile et al. (2012) had an experimental group of participants focus on Myspace.com (Myspace) for fifteen minutes, while a control group focused on an online campus map for the

same amount of time. After filling out a questionnaire about their respective sites, participants completed the NPI and a self-esteem assessment.

Participants who focused on Myspace scored significantly higher on narcissism than the control group who focused on the campus map. However, when the researchers tried to replicate their finding using Facebook instead of Myspace, they did not obtain the same result. In this case, those who focused on Facebook scored higher on general self-esteem than the control group. The researchers concluded that SNSs use (via Myspace and Facebook) predicted more positive self-views. Their study was important because it provided a first attempt at explaining the impact of SNSs on personality and narcissism, in particular.

## Self-Actualization

### Defining Self-Actualization

Self-actualization is arguably a concept that opposes narcissism.

Narcissists tend to have delusions of grandeur and an over-inflated sense of self; they engage in regular self-promotion and lack empathy; and they have difficulty establishing meaningful relationships. Most of their life is spent in search of superficial endeavors and interactions. The alternative to this quest is self-actualization. Goldstein (1934) first described self-actualization as an individual's attempt to become the best version of themselves or to reach one's full potential. More recently, self-actualization has been defined as "a process through which

one's potential is developed in congruence with one's self-perception and experience" (Leclerc, Lefrancois, Dube, Hebert & Gaulin, 1998, pp. 78-79).

Researchers have identified various underlying components of self-actualization including the ability to establish relationships based on mutual respect, being capable of empathy, having a realistic perception of oneself, being capable of not focusing on oneself, not being paralyzed by the judgment of others, and having a well-developed sense of ethics (Leclerc et al., 1998). As demonstrated by this list, self-actualization is defined by properties that contrast the indicators of narcissism.

Maslow (1943) argued that human needs exist on a hierarchy with self-actualization at the top. Self-actualization is typically pursued once humans' basic needs – or those on lower levels of the hierarchy – have been met. This phenomenon is age-related in that motivation for the hierarchy of needs changes as people get older. Reiss and Havercamp (2005) argued that lower level needs such as food, water, and shelter are more important for younger individuals, whereas higher level needs (e.g., morality, creativity, and inner potential) are more salient for older adults, once lower level needs have been secured. Self-actualization is not an end goal, but a process (Harre' & Lamb, 1983).

### Self-Actualization and Social Networking Sites

Very little research has examined the association between SNSs and self-actualization. However, evidence suggests that some components of SNSs activities fulfill self-actualization needs such as the ability for individuals to



produce content (Shao, 2009). Content production refers to creating and publishing media online such as videos and pictures. Shao argued that the drive to produce content is related to the need for self-expression and self-actualization, both of which are used to create personal identity. Moreover, the need for self-actualization may motivate an individual to produce online content with a goal of “seeking recognition, fame, or personal efficacy” (Shao, 2009, p. 14). Additionally, both narcissists and self-actualizers are in constant communication with their networks of friends. Narcissists use these communications for self-promotion, whereas self-actualizing individuals may use them as a means to contribute to the lives of others. Given that the SNSs activities of people high on narcissism and self-actualization may overlap, research is required to elucidate their associations.

#### Limitations of Prior Research

A number of limitations exist in the research on SNSs, narcissism, and self-actualization. To date, the SNSs research has primarily focused on Facebook. Given the array of SNSs, including the range of communication methods and features, other sites are worthy of study. It is likely that each site satisfies unique needs for users. New SNSs are gaining popularity such as Instagram and Vine.com (Vine) and are diverting traffic away from Facebook. Investigation of different SNSs may reveal that narcissists have a preferred medium for self-promotion and gathering followers. The research on SNSs is

also limited in terms of how SNSs use has been assessed. Some researchers have examined hours logged, pictures posted, or number of friends in a participant's network. To our knowledge, no study has taken a more robust approach such as examining all possible SNSs components. Another limitation is that few researchers have distinguished between younger and older individuals. A person who is 20 years old may differ significantly from a 40-year old in terms of SNSs use and the effects of SNSs use on intra and interpersonal outcomes. Little research exists regarding the influence of SNSs on personality. As mentioned previously, researchers find that SNSs use affects self-esteem and well-being, but have not examined whether personality is affected or changed. Does the use of SNSs over long periods of time change a person? Is personality affected by the reinforcement and feedback obtained through SNSs?

As noted, little research exists on the association between narcissism and self-actualization. Without direct comparison, it may appear as though narcissism and self-actualization are more similar than different. However, based on characteristics defined earlier, this similarity is apparently superficial. One of the few investigations comparing the two traits was conducted with a sample of highly religious versus humanistic individuals and found that the two traits do not necessarily coexist (Watson, Hood & Morris, 1984). A focused investigation of narcissism and self-actualization with a broader sample is needed in order to examine their conceptual overlap.

Similarly, research has not yet examined these two traits in connection with SNSs but prior work suggests such a study would be meaningful. For example, narcissists may seek many SNSs friends in order to inflate their egos whereas self-actualizing individuals may have friends in order to enrich the lives of others. Both scenarios involve striving for online friends (i.e., an increase in SNSs activity) but with different motivations. Given that prior research has identified a positive association between narcissism and SNSs use, the question remaining is whether some of the association can be explained by self-actualization. Possibly, those who are highly self-actualized are more active on SNSs than those who are low on this trait – something that prior research had failed to examine. By this same logic, those seeking self-actualization may use SNSs, whether consciously or not, to facilitate their connections with others and work toward the ultimate level of Maslow's (1943) hierarchy. Shao (2009) suggested that, like narcissists, self-actualizers use SNSs as a means to produce content with the intent of receiving both recognition and feedback from others. He argued that for self-actualizers, content production promotes identity development. This idea is similar to the argument made by Morf and Rhodewalt (2001) in their research on narcissists' self-presentation. They discussed a process of "self-construction" in which narcissists cautiously present a suitable (even embellished) version of themselves to others. By this logic, both narcissists and self-actualizers use SNSs for identity construction. Elevated SNSs activity would therefore be explained at least partly by self-actualization

and the SNSs/narcissism association may be weaker than suggested by the prior research (Buffardi & Campbell, 2008).

## CHAPTER THREE

### THEORETICAL FRAMEWORK

#### Symbolic Interaction Theory

Symbolic interaction theory can be used to help explain the associations among SNSs activities, narcissism, and self-actualization. According to the theory, humans develop meanings about their identities, relationships, and the world through their interactions with others (Aksan, Kisac, Aydin, & Demirbuken, 2009; Berger & Kellner, 1984; LaRossa & Reitzes, 1993). Two of the theory's assumptions pertain to the current study (LaRossa & Reitzes, 1993). First, individuals are not born with a self-concept; rather, they develop a self-concept through socialization and interactions with others and their environments. Second, an individual's self-concept guides their behavior. That is, people act according to their beliefs and avoid actions that are not in line with those beliefs. In terms of application, self-concepts are expressed through SNSs use. Individuals use their profiles to reflect who they are by posting pictures from their lives, sharing their daily events, and communicating their tastes in music, movies, and other hobbies (Back et al., 2010).

Self-concept can also be used to explain narcissism and self-actualization. As mentioned previously, narcissists perceive their own beauty, intelligence, and accomplishments as better than others (i.e., they have delusions of grandeur). Their SNSs activity could potentially re-enforce this self-concept through picture-

posting, bragging about accomplishments, and embellishing their positive attributes. In other words, narcissists may use SNSs activity to create an idealized self (Buffardi & Campbell, 2008; Mehdizadeh, 2010). Similarly, self-concept can be used to understand the process of self-actualization. The self-concept of a self-actualizing individual centers on reaching one's full potential. This process involves contributing to the world and the lives of others (Leclerc et al., 1998). It is proposed that the use of SNSs helps facilitate this goal because the self-actualizing individual is able to share information that is intended to improve the lives of the people in their network. Shared information tends not to highlight the self-actualizer, but instead focuses on topics of broader significance such as global issues and human rights.

Symbolic interaction theory can help explain the associations between SNSs use, narcissism, and self-actualization. Both narcissists and self-actualizing individuals use SNSs to facilitate social interactions (Morf & Rhodewalt, 2001; Shao, 2009). One of the tenets of symbolic interaction theory is that identity formation develops through socialization and interactions with other people. Goffman (1959) described that individuals often exaggerate personal characteristics when given a stage and audience in order to present their identity to others, a phenomenon that he termed "expressive bias of performance" (p. 124). This phenomenon can play out in the SNSs arena because of a user's ability to interact with their audience. Those who are narcissistic or who are in the process of self-actualizing may use SNSs to

advertise their selves to others as they attempt to develop and reinforce an ideal self. Given that SNSs are beginning to provide a substitution for face-to-face interactions, their contribution to identity formation is becoming increasingly salient.

Goffman argued that humans have a dualistic image of self: Self-as-performer and self-as-character. He described the self-as-performer as the outer self (i.e., the one an individual outwardly shows the world) and the self-as-character as the inner self (i.e., how an individual sees oneself without the presence of outside judgment). He argued that people have a need to present themselves in a manner that will elicit acceptance from others and that they are strategic in creating their presentation. Therefore, people tend to portray an image of themselves that they want others to see. Although this image may align with their self-concept, it also influenced by social norms and the desire to avoid rejection. SNSs provide a means for individuals to cultivate their image of self-as-performer.

The assumptions of symbolic interaction and Goffman's propositions can be applied to the presentation of self on the Internet. People use online platforms as a means for displaying their self-concept. Individuals who use online dating sites, for example, are strategic in how they present themselves in order to attract the most mates (Whitty, 2007). Those who use SNSs engage in similar self-presentation strategies to attract and maintain followers or friends. People also use SNSs to implicitly demonstrate their identities: A strategy that is

perceived as subtler than directly announcing their intrinsic qualities to others (Zhao et al., 2008). Researchers have similarly shown that people use SNSs for identity exploration and as a means for showing off ideal aspects of themselves (Manago, Graham, Greenfield, & Salimkhan, 2008). Yet other researchers have argued that SNSs (specifically, Facebook) profiles reflect individuals' actual versus idealized personalities (Back et al., 2010).

### Current Study

Taken as a whole, the research reviewed indicates that people use SNSs for different reasons and that personality helps explain their motivations for and consequences of SNS use (Amichai-Hamburger & Vinitzky, 2010; Back et al., 2010; Correa et al., 2010; Ellison et al., 2007; Ryan & Xenos, 2011; Siedman, 2013; Skues et al., 2012; Tosun & Lajunen, 2010). Narcissism is positively associated with Facebook characteristics including number of friends, number of wall posts, self-promotion, and having a sexual profile image (Buffardi & Campbell, 2008). Although one study found that SNSs use may contribute to greater narcissism, this finding was not replicated. To our knowledge, researchers have yet to compare narcissism and self-actualization simultaneously with SNSs use. The current study will help fill this gap. The purpose of this research is to uncover what effect, if any, popular SNSs are having on narcissism and to determine whether self-actualization may help explain part of the association between these two variables. Given that the



variables of narcissism and self-actualization have yet to be examined in the same study, we will also investigate their conceptual overlap. Finally, the current study will attempt to determine the direction of associations among our three variables of interest: SNSs usage, narcissism, and self-actualization.

### Hypotheses

Based on the literature reviewed, the researcher will first test the conceptual overlap between narcissism and self-actualization. Thereafter, several hypotheses are proposed. It is hypothesized that there will be a significant and positive correlation between Narcissism and SNSs Activity, Narcissism and SNSs Friends, Self-Actualization and SNSs Activity, and Self-Actualization and SNSs Friends. Additionally, it is hypothesized that Self-Actualization will have an indirect effect on the association between Narcissism and SNSs Activities as well as between Narcissism and SNSs Friends. Figure 2 provides a picture of the model for these hypothesized associations. Finally, it is hypothesized that Narcissism scores after using SNSs will be larger than Narcissism scores prior to using SNSs.

## CHAPTER FOUR

### METHODOLOGY

#### Data Collection Procedure

One thousand nine hundred forty-eight ethnically diverse participants from across the U.S. agreed to complete an online survey. They were recruited through a university participant management system (i.e., SONA), various SNSs (e.g., Facebook), and other websites (e.g., Craigslist.org). Those who were recruited through SONA were offered two extra credit points that could be used in their undergraduate Psychology classes. After viewing the study announcement online, participants clicked on a link that directed them to the informed consent page. Upon providing their consent to participate in the study, they were presented with an online survey. The survey contained demographic questions and measures to assess SNSs activity, SNSs friends, narcissism (current and retrospective), and self-actualization. Before exiting the survey, participants were directed to a page thanking them for their time and research contribution.

The data file was cleaned prior to conducting analyses. All participants who incorrectly responded to a question that was designed to assess whether they were paying attention to the survey were removed from the dataset. Next, participants who did not complete a majority of the survey or who responded to less than 20% of the narcissism, self-actualization, and SNSs questions were

removed. Participants who incorrectly entered numerical values for questions pertaining to dates were eliminated from the dataset. The data were screened for univariate outliers. The measures were standardized and converted to z-scores in SPSS, and all values 3.5 standard deviations or more from the mean were removed. Three scores were removed from the analyses for the Self-Actualization variable, 17 were removed for SNSs Activity, and 18 were removed for SNS Friends. No items were removed for the pre and post SNSs use Narcissism scores.

### Participants

The final, cleaned dataset consisted of 1,604 participants (86.5% were female and 13.5% male). Their average age was 23.10 years old ( $SD = 6.2$  years, Range = 18-70). The participants were 59.5% Latino, 18.8% European/White, 6.9% Asian, 6.1% African American, 1.2% Middle Eastern, .2% Native American, and 5% "other." With regards to sexual orientation, 93% self-identified as heterosexual and 7% identified as non-heterosexual (e.g., bisexual, gay, lesbian).

### Measures

#### Social Networking Sites Usage

SNSs use was assessed with 29 questions that were written by the researchers. The goal of the questions was to identify common types of SNSs

activities and the frequency of those activities. From these 29 items, the researcher created two subscales: One to assess SNSs Activity (i.e., amount of time spent using SNSs) and one to assess SNSs Friends (i.e., number of followers). The activity subscale included six items (items 6, 8, 9, 10, 11, and 16 in Appendix D, pp. 55-56) from the original 29. For each activity question, participants recorded the number of hours spent on SNSs engaging in particular activities. They reported on the number of hours per day, per week, and per month, but only the items regarding hours per day were used in our composite measure for SNSs activity. The friends subscale contained one item (from item 12 in Appendix D, p. 56) that pertained to their current number of followers. The remaining 21 items were not used for analyses in the current study. After testing our hypothesized model, the items for SNSs Activity did not hold together. Therefore, we made post hoc modifications. For SNSs Activity, items 8, 9, and 16 were removed, leaving three items in this subscale. This adjustment is depicted in Figure 2.

### Narcissism

Narcissism was assessed using the Pathological Narcissism Inventory (PNI; Pincus et al., 2009). The PNI is a 52-item scale that can be administered in approximately 10-15 minutes. Items are scored on a 6-point scale ranging from 0 (*not at all like me*) to 5 (*very much like me*). Sample items include, “I often fantasize about being admired and respected,” “My self-esteem fluctuates a lot,” and “I can make anyone believe anything I want them to.” Pincus et al. (2009)

reported on the psychometric properties of the PNI. These researchers examined correlations between the PNI and measures of self-esteem, empathy, shame, and personality. Results indicated that as expected, the PNI correlated negatively and significantly with self-esteem ( $r = -.37$ ) and empathy ( $r = -.14$ ) and correlated positively and significantly with shame ( $r = .55$ ), aggression ( $r = .36$ ), and borderline personality organization. Borderline personality organization included four items: primitive defenses ( $r = .60$ ), identity diffusion ( $r = .62$ ), impaired reality testing ( $r = .47$ ), and low moral values ( $r = .45$ ). The scale also demonstrated predictive validity in its ability to forecast outcomes such as vindictive, domineering, intrusive, and overly-nurturant personality characteristics. The clinical diagnosis of pathological narcissism includes both grandiose and vulnerable components and the PNI addresses each of these components. The PNI demonstrated good reliability with a Cronbach's alpha coefficient of .95 (Pincus et al., 2009). In the present study, the Cronbach's alpha coefficient was .96. The entire PNI is included in Appendix E.

### Retrospective Narcissism

In an attempt to assess the temporal influence of SNSs activity on narcissism, the researchers created a modified version of the PNI. Ten statements from the PNI that were most pertinent to the use of SNSs were selected and their wording was changed to the past tense. For example, the original PNI statement, "When people don't notice me, I start to feel bad about myself" was changed to "Before using social networking sites, when people didn't

notice me, I started to feel bad about myself.” Similarly, the original PNI statement “I get angry when criticized” became “Before using social networking sites, I got angry when criticized.” Prior to including these retrospective items in the study, and in an effort to establish face validity, the researcher asked laypeople to comment on their clarity and readability. Based on the feedback, modifications were made and the revised items were included in the survey. The Cronbach’s alpha coefficient for retrospective narcissism was .88. All questions for retrospective narcissism are included in Appendix F.

### Self-Actualization

The Measure of Actualization of Potential (MAP) is a 27-item scale designed to assess self-actualization (Leclerc et al., 1998). The measure is typically completed in 15 to 20 minutes. Items are scored on a 5-point scale with response options ranging from 1 (*very rarely or hardly at all*) to 5 (*very often or very easily*). Sample items include, “I am a person who values him/herself [Very little / a little / somewhat / very much / enormously],” “I can predict my reactions [Very rarely / rarely / somewhat / often / very often],” and “Whatever happens to me, I trust my feelings [Very little / a little / somewhat / very much / enormously].” Higher scores denote a higher degree of self-actualization. Factorial validity was examined using principle components factor analysis based on Kaiser’s eigenvalue rule (Nunally, 1978), Cattell’s (1966) scree plot, and the interpretability of factors. The factor analysis produced a 5-factor solution: Openness to others, autonomy, openness to life, openness to self, and

adaptation (Lefrancois, Leclerc, Dube, Hebert, & Gaulin, 1997). The MAP correlated positively and significantly with openness to others ( $r = .81$ ), autonomy ( $r = .70$ ), openness to life ( $r = .77$ ), openness to self ( $r = .81$ ), and adaptation ( $r = .75$ ). Reliability of the MAP was demonstrated using a test-retest method with results from the initial pilot study (Lefrancois et al., 1997) and a different sample (Lefrancois, Leclerc, Dube, Hebert, & Gaulin, 1998). Intraclass coefficients ranged from .74 to .88 and a Cronbach's alpha of .90 was computed for the overall scale (Lefrancois et al., 1998). In the present study, the Cronbach's alpha coefficient was .82. The full MAP is included in Appendix G.

## CHAPTER FIVE

### RESULTS

#### Conceptual Overlap: Narcissism and Self-Actualization

A correlation matrix was used to examine the conceptual overlap between narcissism and self-actualization. First, the data were screened for univariate outliers. The data were converted to z-scores, and values that were 3.5 standard deviations or more from the mean were removed. A sample size of 1604 participants remained and was used in the analyses.

The seven PNI subscale items (Contingent self-esteem; Exploitativeness; Self-sacrificing, Self-enhancement; Hiding the self; Grandiose fantasy; Devaluing; and Entitlement rage) and five MAP subscale items (Adaptation, Autonomy, Openness to self, Openness to me, and Openness to others) were used to examine the potential overlap between narcissism and self-actualization. A correlation matrix was used for this analysis. We used Cohen's (1988) effect size guidelines to determine the magnitude of each correlation: .10 = small; .30 = moderate; .50 = large. The results indicated that some degree of overlap existed between the traits. First, each of the 5 MAP subscales was positively and significantly associated with the PNI subscale of Exploitativeness: Adaptation ( $r = .142, p < .01$ , small effect size), Autonomy ( $r = .138, p < .01$ , small effect size), Openness to self ( $r = .100, p < .01$ , small effect size), Openness to me ( $r = .053, p < .05$ , small effect size), and Openness to others ( $r = .082, p < .01$ , small effect



size). Additionally, the MAP subscale of Openness to others was positively and significantly associated with the PNI subscales of Self-sacrificing, Self-enhancement ( $r = .094, p < .01$ , small effect size), and Grandiose fantasy ( $r = .065, p < .01$ , small effect size). The correlation coefficients are presented in Table 1.

### The Hypothesized Model (Structure Equation Model)

We investigated the proposed model of correlations and indirect effects using Structure Equation Modeling (SEM). The hypothesized model is shown in Figure 1. Circles represent latent variables and rectangles represent measured variables. The absence of a line connecting variables implies no hypothesized direct effect.

The hypothesized model examined the associations among four latent variables. The first, SNS Activity, had six measured variables: Time spent on SNSs per day, number of daily uploaded profile pictures, number of daily posts, number of daily comments, time spent daily to prepare for SNSs activity, and number of daily uploaded 'selfies'. The second latent variable, SNS Friends, had one measured variable: Number of SNSs followers. The third latent variable, Self-Actualization, had five measured variables: Adaptation, autonomy, openness to self, openness to me, and openness to others. The fourth latent variable, Narcissism, had seven measured variables: Contingent self-esteem;

exploitativensness; self-sacrificing, self-enhancement; hiding the self; grandiose fantasy; devaluing; and entitlement rage.

We hypothesized that there would be significant and positive associations between Narcissism and SNSs Activity, Narcissism and SNSs Friends, Self-Actualization and SNSs Activity, and Self-Actualization and SNSs Friends. The results demonstrated preliminary support for this hypothesis. We used a simple correlational analysis to determine the strength of the association among the latent variables prior to their analysis with SEM. There was a significant positive association between Narcissism and SNS Activity (standard coefficient = .123;  $p < .05$ ; small effect size), a significant positive association between Narcissism and SNS Friends (standard coefficient = .084;  $p < .05$ ; small effect size), no significant association between Self-Actualization and SNS Activity (standard coefficient = .008,  $p > .05$ ), and a significant positive association between Self-Actualization and SNS Friends (standard coefficient = .088;  $p < .05$ ; small effect size). We also found a significant negative association between Narcissism and Self-Actualization (standard coefficient = -.219;  $p < .05$ ; medium effect size). These results are shown in Table 2. We additionally hypothesized that Self-Actualization would have an indirect effect on the association between Narcissism and SNSs Activity as well as between Narcissism and SNSs Friends.

### Assumptions

The SEM assumptions were evaluated using EQS. The dataset contained responses from 1604 men and women. However, there were complete data for

only 1363 participants on the 21 variables of interest (241 participants had at least one variable missing). The SEM analysis used complete cases only ( $N = 1363$ ). Additionally, prior to analysis, outliers (3.5 standard deviations or greater) were removed from each variable. Three outliers were removed from Self-Actualization; 17 were removed from SNS Activity; and 18 were removed from SNS Friends.

There was evidence that multivariate normality was violated. Mardia's normalized coefficient = 613.23,  $p < .05$ , indicated violation of multivariate normality, resulting in multivariate kurtosis. Therefore, the models were examined with maximum likelihood estimation and tested with Satorra-Bentler scaled chi-square (Satorra & Bentler, 1988). The standard errors were also adjusted to the extent of non-normality (Bentler & Dijkstra, 1985).

The hypothesized model, shown in Figure 1, was not statistically supported. Post hoc modifications were used to develop a better fitting model based on the data, the Lagrange multiplier test (to add paths not in hypothesized model), and the Wald test (to drop hypothesized parameters). The first adjustment involved removing three of the six measured variables for the latent variable of SNSs Activity. Three variables remained: Time spent on SNSs per day, number of daily comments, and time spent daily to prepare for SNSs activity. The next adjustment involved removing the curved covariance line between the latent variables Self-Actualization and Narcissism and replacing it with a direct path from Self-Actualization to Narcissism. A third adjustment

involved removing the direct path lines between SNSs Activity and Self-Actualization, and between SNSs Friends and Narcissism. The final adjustment was made because several measured variables cross-loaded onto more than one latent variable. The measured variables contingent self-esteem, exploitativeness, and devaluing cross-loaded onto both Self-Actualization and Narcissism. Therefore, direct path lines were drawn from the latent variables to the measured variables. After these adjustments, the final model provided a good fit for the data, Satorra-Bentler  $\chi^2$  (106,  $N = 1363$ ) = 440.21,  $p < .05$ , Robust CFI = .95, RMSEA = .05. The adjustments additionally allowed for seven error covariances to be included. The final model is shown in Figure 2.

### Direct Effects

A statistically significant and positive association was demonstrated between Narcissism and SNSs Activity (standard coefficient = .209;  $p < .05$ ; medium effect size). We had also predicted a significant and positive correlation between Narcissism and SNSs Friends. However, in order to accommodate the modifications for the adjusted model, this test was dropped. The test was similarly dropped for our predicted correlation between Self-Actualization and SNSs Activity. Therefore, no tests were used to examine these associations. Finally, the association between Self-Actualization and SNSs Friends (standard coefficient = .113,  $p > .05$ ) was not statistically significant. An overview of these associations is shown in Figure 2.

After modifications were made to the model, new associations emerged, which provided useful information. SNSs Activity demonstrated a significant and positive association with SNSs Friends (standard coefficient = .478;  $p < .05$ ; strong effect size). Additionally, Self-Actualization was negatively associated with Narcissism (standard coefficient = -.291;  $p < .05$ ; medium effect size). These associations are depicted in Figure 2.

We obtained an unexpected and informative result from our analyses. As previously mentioned, the latent variable SNS Friends contained the measured variable followers. Our analysis demonstrated that the association between the latent SNSs Friends and the measured followers was statistically significant and positive (standard coefficient = .143;  $p < .05$ ; small effect size).

### Indirect Effects

The significance of the intervening variables was evaluated using tests of indirect effects through EQS. We had predicted that Self-Actualization would indirectly affect the associations between Narcissism and SNSs Activity as well as Narcissism and SNSs Friends. Our analyses indicated that Self-Actualization did not intervene between Narcissism and SNSs Activity (standard coefficient = .023,  $p > .05$ ) or between Narcissism and SNSs Friends (standard coefficient = -.029,  $p > .05$ ). With regards to the associations between Narcissism and SNSs Activity, and Narcissism and SNSs Friends, no significant amount of variance was explained by Self-Actualization. Figure 2 demonstrates these new relationships.

### Pre vs. Post Social Networking Sites Narcissism

Our final hypothesis pertained to whether Narcissism scores would increase as a result of using SNSs. As previously mentioned, participants' pre-SNSs scores were assessed using self-reported retrospective accounts of narcissism. In order to test this hypothesis, a paired-sample *t*-test was used in SPSS. The assumptions for the test were met because the independent variable was dichotomous and its levels were paired. Additionally, the dependent variable was normally distributed in the two conditions. The mean score for Narcissism after using SNSs was 2.239 and the mean score prior to using SNSs was 1.826. The analysis demonstrated a statistically significant difference between the mean scores [ $t(1561) = 19.47, p < .001$ ]. With regards to effect size, Cohen's *d* (Cohen, 1988) was calculated and indicated a value of .42, which is a small to medium effect. The result of this analysis is summarized in Figure 3.

## CHAPTER SIX

### DISCUSSION

#### Interpretation of Results

The purpose of this study was to investigate the associations among SNSs activities, narcissism, and self-actualization. First, we sought to examine the conceptual overlap of narcissism and self-actualization. Shao (2009) indicated that similar to narcissists, self-actualizers use SNSs as a means to produce content with the intent of receiving both recognition and feedback from others. For self-actualizers, content production promotes identity development. Morf and Rhodewalt (2001) described that narcissists engage in a parallel process called “self-construction,” which involves presenting an ideal version of themselves to others. Based on this prior work suggesting that narcissists and self-actualizers engage in similar behaviors, we expected some degree of overlap between the constructs. Our prediction was not supported. Though there were some PNI subscale items that were positively associated with MAP subscale items (see Table 1), the medium (effect) negative association between Narcissism and Self-Actualization indicated that they are distinct constructs. One overlap of note, however, is that PNI: Exploitativeness was associated with all 5 of the MAP subscales. The exploitation of others seems contradictory to the tenets of self-actualization. Possibly, the focus on oneself during the process of self-actualization helps explain the overlap of these items. As previously

mentioned, self-actualization refers to an individual's attempt to become the best version of themselves or to reach their full potential (Goldstein, 1934). This process can cause a self-actualizer to spend a great deal of time and attention on her or himself and devote less attention to others.

Next, we proposed an SEM model that specified significant and positive associations between Narcissism and SNSs Activity, Narcissism and SNSs Friends, Self-Actualization and SNSs Activity, and Self-Actualization and SNSs Friends. Our hypothesized model was not supported and an adjusted model was constructed that included several modifications. Three of the measured variables for SNSs Activity were removed: Number of daily uploaded profile pictures, number of daily posts, and number of daily uploaded selfies. The remaining measured variables in the adjusted model were, time spent on SNSs per day, number of daily comments, and time spent daily to prepare for SNSs activity. We suspect that these measured variables were removed because the SNSs Activity subscale was created by the researchers and was not psychometrically evaluated prior to the study. Although the items were based on published empirical work, they did not result in a reliable assessment of SNSs activity.

The second modification involved replacing the curved covariance line between the latent variables of Narcissism and Self-Actualization with a direct path line. This adjustment represented that narcissism and self-actualization are unique traits and therefore, a direct comparison was necessary. The third modification involved removing the direct path lines between the latent variables



of SNSs Activity and Self-Actualization, and SNSs Friends and Narcissism. These adjustments are likely related to the model's first modification as well as the construction of our survey. The first modification, which involved removing three of six measured variables from SNSs Activity, most likely contributed to the removal of the path between SNSs Activity and Self-Actualization. Once the adjustment was made to SNSs Activity, the proposed associations were modified as well. The manner in which our survey was constructed may have also influenced the removal of this direct path. As previously stated, some of the subscales were created by the researchers and were not psychometrically evaluated prior to the study.

The final modification involved drawing direct path lines from the latent variables of Self-Actualization and Narcissism onto the measured variables of contingent self-esteem, exploitativeness, and devaluing. This modification was made because the measured variables cross-loaded onto both Self-Actualization and Narcissism. The results of our correlational analysis help explain these cross-loadings. Although the analysis demonstrated that self-actualization and narcissism are two distinct traits, some degree of overlap was also observed. Previous research helps explain why the measured exploitativeness variable, in particular, cross-loaded onto Self-Actualization. Oakland, Freed, Lovekin, and Camilleri (1978) found that self-actualizers tend to succeed at interpersonal manipulation, which is common among those with narcissistic tendencies as well.

Several direct effects were demonstrated in our analysis. In the new model, a statistically significant and positive association between Narcissism and SNS Activity was demonstrated. Researchers have previously reported a comparable association between Narcissism and SNSs use (Buffardi & Campbell, 2008; DeWall et al., 2011; Gentile et al., 2012). Next, the proposed association between Self-Actualization and SNSs Friends was not statistically significant. However, prior work indicates that self-actualization is positively associated with having friends (Knapp, 1965); therefore, future work should examine this association further. We also found that SNSs Activity was positively associated with SNSs Friends. A simple interpretation may be that the “social” component of social networking requires friends and/or followers in order to exist.

Next, Narcissism was negatively associated with Self-Actualization. This finding coincides with our previous characterizations of these traits. Specifically, narcissism is characterized by delusions of grandeur, an over-inflated sense of self, constant self-promotion, lack of empathy, and difficulty establishing meaningful relationships whereas self-actualizers tend to establish relationships based on mutual respect, are capable of empathy, have a realistic perception of self, and have a well-developed sense of ethics. Finally, the association between SNSs Friends and followers was statistically significant; the measured variable followers was intended to identify the total size of an individual’s network on their preferred site and constituted the total of the SNSs Friends variable.

With regard to indirect effects, neither hypothesis was supported. We predicted that Self-Actualization would mediate the associations between Narcissism and SNSs Activities as well as Narcissism and SNSs Friends. No significant association was found between Self-Actualization and SNSs Friends or between Self-Actualization and SNSs Activity. One possible explanation is that narcissism and self-actualization are distinct character traits with little structural overlap. As such, self-actualization is not accounting for the association between Narcissism and SNSs Activities or between Narcissism and SNSs Friends. Another, perhaps more logical explanation is that self-actualizers may be using SNSs for very different reasons than narcissists. Whereas narcissists use SNSs for self-promotion and increasing followership (creating virtual friendships), self-actualizers may use SNSs to foster or strengthen genuine connections. They may not be interested (as are the narcissists) in presenting an ideal image to manipulate the impressions of others. Rather, the self-actualizer may use SNSs platforms for self-expression. Future research might explore the motivations of SNSs users with different personality traits.

Finally, we predicted that Narcissism scores post SNSs use would be greater than Narcissism scores pre SNSs use. This hypothesis was supported. Our finding parallels the work of Gentile et al. (2012) who found that participants who spent 15 minutes on Myspace scored significantly higher on narcissism compared to participants who spent the same amount of time studying an online campus map. The researchers speculated that social networking elicited

narcissistic responses from their participants. Those who spent time on Myspace were more likely to believe they were good leaders, perceive themselves as having authority over others, and indicate a desire to be the center of attention. We suspect that SNSs may have had a similar effect on the participants in our study, causing them to focus on or develop narcissistic tendencies. This finding must be interpreted with caution, however, because participants provided retrospective accounts of their narcissism scores pre SNSs use. We also used a correlational rather than experimental or longitudinal design, which precludes our ability to make inferences about causation or the direction of effects. However, the current findings are revealing because they suggest that increased SNSs use may promote narcissistic behaviors. Our findings combined with Gentile et al.'s (2012) research demonstrate that an association between time spent on SNSs and increased narcissism does exist; however, we are unsure to what extent and/or what specific activities are driving the association. The next logical step in this research is to track individuals over time and examine whether SNSs use leads to greater narcissism.

#### Limitations and Strengths

As with any research, our study had limitations. The first is that the researchers created the SNSs measures instead of using previously established, psychometrically evaluated tools. We composed our own measures because, to the best of our knowledge, none had been previously created. However, this

decision resulted in measurement error that accounted for some of the modifications to the hypothesized model. As a result, we were unable to determine whether our predicted associations resulted from the actual SNSs behaviors of our participants or from the model modifications. A statistical evaluation and refinement of the measures prior to conducting the study would have been optimal.

Another limitation was that the data were collected using self-report surveys. Although valuable information can be gathered from surveys, the ability to determine causal relationships among our variables was not possible. Specifically, we were unable to determine whether SNSs use was influencing narcissism. The pre and post SNSs narcissism scores were also limited in that participants were providing retrospective accounts.

In addition to these limitations, there were a number of strengths associated with the study. First, we extended prior work by allowing participants to complete the survey with their most preferred SNS in mind rather than prompting them to report on a particular site. Prior work on SNSs has mainly focused on Facebook. Given the growing number of SNSs, we felt it important to allow participants the flexibility to respond according to their most preferred SNS. We also extended prior work by assessing various aspects of SNSs use including the participants' motivation and purpose for using SNSs. Previous research has often relied on a single item to measure overall SNSs use whereas this study examined a number of specific SNSs activities including how many

selfies an individual uploads, how often they post to their sites, and how much time they spend on SNSs each day.

### Future Research

In this study, we demonstrated that narcissism and self-actualization are distinct constructs with some overlapping characteristics. Although individuals high on each trait may exhibit similar SNSs behaviors, the research demonstrated that these individuals are likely motivated by distinct factors. In future work, it may be fruitful to continue this line of inquiry and examine how SNSs activity may be impacting narcissism and/or self-actualization. A strong association between narcissism and SNSs activities has already been demonstrated. However, researchers might examine whether other variables such as depression or the need for companionship may help explain SNSs activity. By investigating these associations, researchers can better understand the motivations for SNSs use. For example, are individuals using SNSs to replace face-to-face interactions and to what extent are such activities rewarding? This line of work might lead to the development of SNSs that are customized to meet people's unique needs. As new SNSs emerge and gain popularity, future research should also seek to determine which, if any, are encouraging narcissism. Researchers could also examine why users are leaving popular sites such as Facebook in favor of new sites such as Instagram. Could their motivation be related to narcissism or some other character trait? Possibly,

narcissistic individuals want to broaden their base of admirers and/or exploit an untapped network of people.

Another area for future work is to more closely examine the association between narcissism and self-actualization. Though our findings indicate that they are distinct personality traits, some overlap was observed. Shao (2009) suggested that self-actualizers may produce online content for recognition and fame. This proposition coincides with our belief that SNSs activities may be similar for people high on narcissism and self-actualization. Future work might elucidate whether narcissistic behaviors help people become their best selves (i.e., self-actualize) and/or whether the pathway to self-actualization is driven by or leads to narcissism.

### Conclusion

There are many reasons for using SNSs. Research to date has focused on self-promotion and identity creation. However, other reasons that are not self-focused are worthy of study, such as using SNSs to promote awareness of social causes. SNSs are changing the way people interact, communicate, and perceive themselves. One inevitable consequence is that SNSs will influence personality traits. The instant feedback received online via “likes,” comments, and shares likely encourage the user to produce more content and may affect characteristics such as self-esteem. Similarly, those who do not receive this type of affirmative feedback may experience adverse effects. Over time, the influence of SNSs will

likely continue to grow, which makes research on this topic more relevant than ever before.

The current study exposed an underlying connection between SNSs activities, narcissism, and self-actualization. Our findings demonstrated that these variables are interconnected and, thus, impact each other. The reciprocal association among the three variables suggests that as an individual's use of SNSs increases, so too do their scores on narcissism or vice versa. We were unable to ascertain if the same holds true for the effects of SNSs on self-actualization because this test was dropped from our analysis. Prior work indicates that narcissists and self-actualizers frequently use social media to communicate with others (Morf & Rhodewalt, 2001; Shao, 2009). It is likely therefore, that these individuals use SNSs more often than people who are low on narcissism and self-actualization. According to this logic, SNSs use may influence an otherwise narcissistic person to become more self-actualized (and vice versa). Future researchers might examine how SNSs usage indirectly impacts the association between narcissism and self-actualization – something we did not do in the current study. Possibly, the association among these variables is more prevalent than previously thought.



APPENDIX A

TABLES

Table 1

*Correlation matrix of the associations among the seven PNI and the five MAP sub items.*

	MAP: Adaptation	MAP: Autonomy	MAP: Openness to self	MAP: Openness to me	MAP: Openness to others
PNI: Contingent self esteem	-.397 **	-.394 **	-.334**	-.306**	-.181**
PNI: Exploitativeness	.142**	.138**	.100**	.053*	.082**
PNI: Self-sacrificing, Self-enhancement	-.092**	-.110**	-.040	.026	.094**
PNI: Hiding the self	-.213**	-.170**	-.341**	-.179**	-.043
PNI: Grandiose fantasy	-.142**	-.110**	-.085**	.013	.065**
PNI: Devaluing	-.321**	-.290**	-.318**	-.260**	-.156**
PNI: Entitlement rage	-.284**	-.227**	-.188**	-.207**	-.201**

Note. \*\* denotes  $p < .01$

\* denotes  $p < .05$

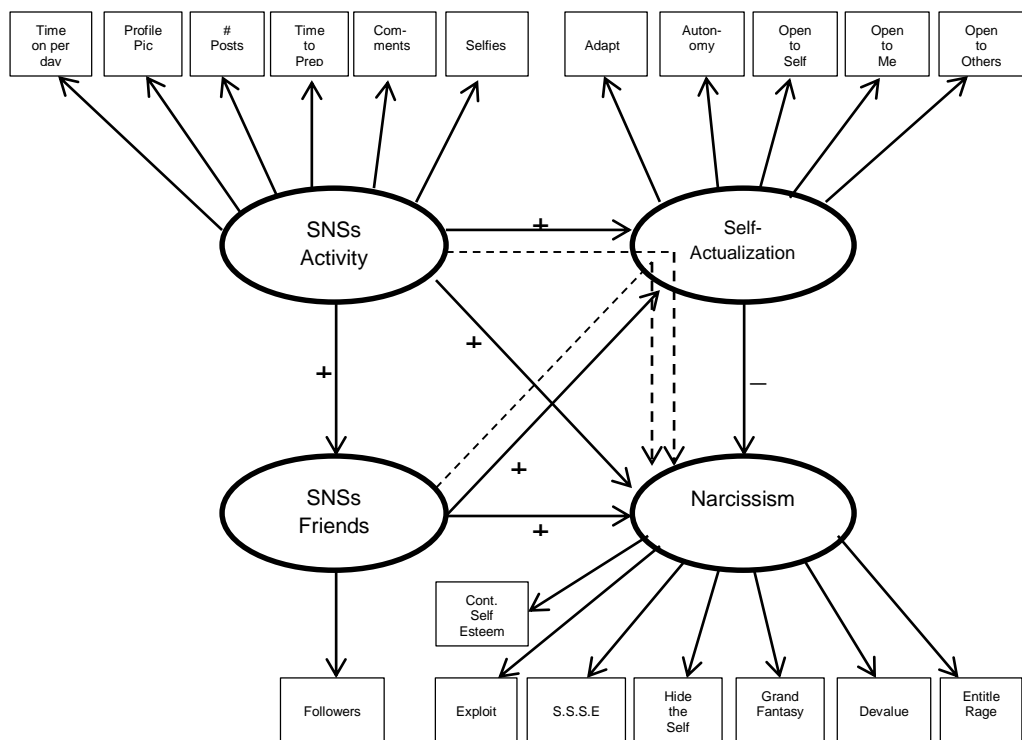
Table 2

*Correlation matrix of the associations among the four latent variables:  
Narcissism, Self-Actualization, SNS Activity, and SNS Friends.*

	Narcissism	Self- Actualization	SNS Activity	SNS Friends
Narcissism	1	-.219*	.123*	.840*
Self- Actualization	-.219*	1	.008	.088*
SNS Activity	.123*	.008	1	.171*
SNS Friends	.084*	.088*	.171*	1

*Note.* \* denotes  $p < .01$

APPENDIX B  
FIGURES



———— Direct effects

----- Indirect Effects

*Figure 1.* Hypothesized model of the relationships among latent and measured variables for SNSs Activity, SNSs Friends, Narcissism, and Self-Actualization.

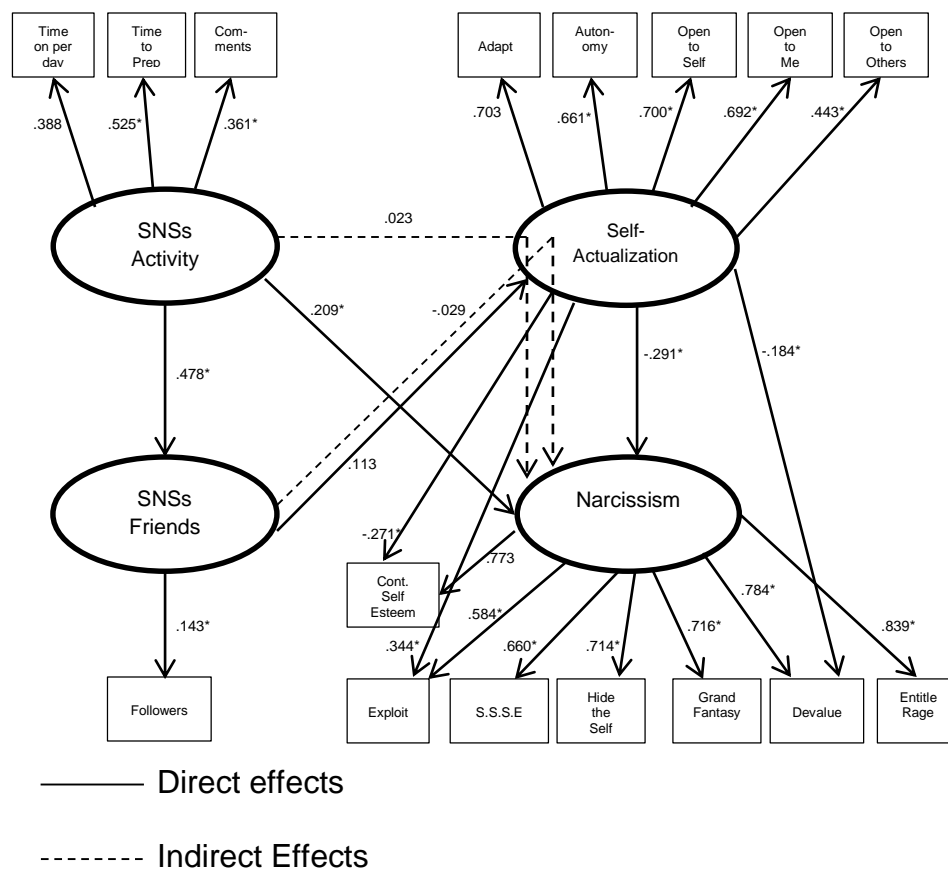
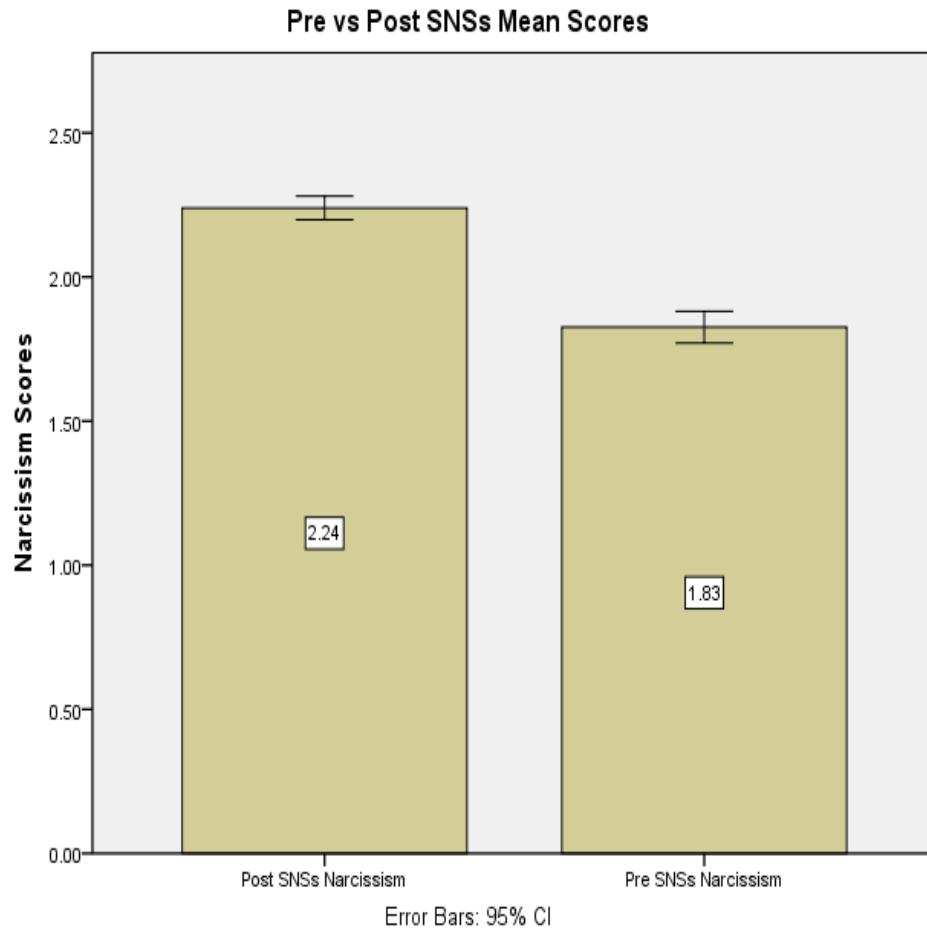


Figure 2. Adjusted model of the relationships among latent and measured variables for SNSs Activity, SNSs Friends, Narcissism, and Self-Actualization.

\* $p < .05$



*Figure 3.* Mean scores of Pre SNSs Narcissism compared to mean scores of Post SNSs Narcissism. There was a statistically significant difference between the Pre and Post SNSs scores at  $p < .001$ . Cohen's  $d = .42$ , indicating a small to medium effect size.

APPENDIX C  
CONSENT FORM



The following study is designed to assess the associations between social media usage and personality. This study is being conducted by Kris Munakash under the supervision of Dr. Kelly Campbell, Associate Professor at the California State University, San Bernardino (CSUSB). This study has been approved by the Psychology Department Institutional Review Board subcommittee of the California State University, San Bernardino. A copy of the official Psychology IRB Committee stamp of approval should appear somewhere on this consent form.

**PURPOSE:** The purpose of this study is to investigate personality and social media usage. Social media usage may include (but is not limited to) posting pictures or updates on social network(s); commenting or "liking" updates or pictures on other people's profiles; friend acquisitions; etc.

**DESCRIPTION:** In this study you will be asked to complete survey questions about yourself and your social media usage. For example, you will be asked to complete a series of demographic questions such as identifying your gender and age and comment on how often you use social media.

**PARTICIPATION:** Your participation in this study is entirely voluntary. You are free to withdraw your participation or choose to not answer a question at any time during the study without penalty.

**CONFIDENTIALITY OR ANONYMITY:** All of your responses will remain strictly anonymous. Presentation of the study results will be reported in a group format only and your name will not be identified in any publication.

**DURATION:** The survey should take no more than 30 minutes to complete, and is worth 1 unit of extra credit in a class of your choice, at your instructor's discretion.

**RISKS:** This study entails no risks beyond those routinely encountered in daily life.

**BENEFITS:** Participation in this study does not provide any direct benefits to individual participants other than provide some insight into personality and social media usage.

**VIDEO/AUDIO/PHOTOGRAPH:** There will be no video/audio/photographs used or taken during this study.

**CONTACT:** If you have any questions concerning this survey, the results, or your participation in this research please feel free to contact Dr. Kelly Campbell at

(909) 537-7687 or Kelly@csusb.edu. You may also contact the Human Subjects office at California State University, San Bernardino at (909) 537-7588.

RESULTS: Results of the study can be obtained by contacting the principle investigator at the number or email address listed above.

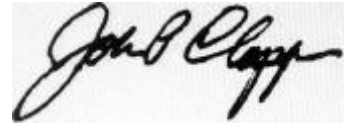
CONFIRMATION STATEMENT: I acknowledge that I have been informed of, and understand the nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

ONLINE AGREEMENT BY SELECTING THE 'I AGREE' OPTION ON THE WEBPAGE INDICATES CONSENT TO PARTICIPATE IN THE STUDY.

California State University  
Psychology Institutional Review Board Sub-Committee

Approved: 10/14/13      Void After: 10/14/14

IBB# H-13FA-07      Chair:



APPENDIX D  
MEASURE OF SOCIAL NETWORKING SITES USAGE

Please answer the following questions regarding your activities on Social Networking Sites.

1. Do you currently use social networking sites? (i.e. Facebook, Twitter, Instagram, Facetime, LinkedIn, YouTube, Pinterest, Snapchat, etc)
  - Yes
  - No (if no, please answer questions 2 & 3, then skip to the first personality questionnaire)
2. If no, did you ever use these sites?
3. If no, why are you not currently using these sites?
4. Has your use of social networking sites increased or decreased over time?  
1=declined a lot 3= stayed the same to 5= increased a lot
5. How long have you been actively using social networking sites (any an all)?
  - \_\_\_ Weeks
  - \_\_\_ Months?
  - \_\_\_ Years?
6. How much time do you spend on social networking sites:
  - per day? \_\_\_\_\_ hrs
  - per week? \_\_\_\_\_ hrs
  - per month? \_\_\_\_\_ hrs
7. What is your most used /favorite social networking site? (i.e. Facebook, Twitter, Instagram, Facetime, LinkedIn, YouTube, Pinterest, Snapchat, Other)

WHEN ANSWERING THE FOLLOWING QUESTIONS, PLEASE KEEP IN MIND YOUR USAGE AND/OR ACTIVITIES ON THE SOCIAL NETWORKING SITE YOU SELECTED IN THE PREVIOUS QUESTION.

8. How often do you update your profile picture on this site?
  - \_\_\_ times per day?
  - \_\_\_ times per week?
  - \_\_\_ times per month?
9. How often do you post new updates or share items of interest on your profile for this site?
  - \_\_\_ times per day?
  - \_\_\_ times per week?
  - \_\_\_ times per month?

10. How often do you comment on or acknowledge (i.e., "like") other users' posts or updates on this site?

\_\_\_ times per day?

\_\_\_ times per week?

\_\_\_ times per month?

11. On average, how much time do you spend preparing before you post or update your profile? (i.e. going through pictures, reading other feeds or news sources, reading/viewing other users' posts, etc.)

\_\_\_ times per day?

\_\_\_ times per week?

\_\_\_ times per month?

12. How many followers/friends do you currently have on your most used social networking site?

\_\_\_ followers/friends

13. How many followers/friends do you want to have on this site? In other words, what's the ideal number of followers/friends you want to have?

\_\_\_ followers/friends

14. Why do you have this number of followers/friends as your target?

15. What percentage of your profile pictures are "selfies"?

\_\_\_%

16. How often do you post "selfies" on your profile?

\_\_\_ times per day?

\_\_\_ times per week?

\_\_\_ times per month?

FOR THE QUESTIONS BELOW, PLEASE CHOOSE THE DEGREE TO WHICH YOU AGREE/DISAGREE WITH THE STATEMENT.

17. I post comments/pictures/updates on Social Networking Sites with the intent of people "liking" or commenting on them.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

18. I feel that Social Networking Sites give me a voice I would not otherwise have.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

19. My friends/followers benefit from my use of Social Networking Sites (e.g. with things I suggest, share, etc).

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

20. Social Networking Sites help me feel more connected to others.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

21. I would NOT post as many updates/images/comments if I did not receive "likes" or comments from my friends/followers?

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

22. Before I started using Social Networking Sites, I did not feel that people listened to me.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

23. When I post/update on Social Networking Sites, I expect a response from my friends/followers.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

24. Before using Social Networking Sites, I felt lonely and disconnected from others.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

25. Through the use of Social Networking Sites, I can tell that people listen to what I say or think.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

26. I feel that my posts/updates/comments are important to my friends/followers.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

27. Before I started using Social Networking Sites, I felt more connected with people.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

28. I benefit from Social Networking Sites because of the things my friends/people I follow suggest, share, etc.

- Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree

29. Once again, please consider your favorite social networking site. Why do you consider this one to be your favorite? In other words, what is it about your preferred social networking site that appeals to you over other sites?

APPENDIX E  
PATHOLOGICAL NARCISSISM INVENTORY



Below you will find 52 descriptive statements. Please consider each one and indicate how well that statement describes you. There are no right or wrong answers. Simply indicate how well each statement describes you as a person on the following 6-point scale:

0	1	2	3	4	5
Not at all Like me	Moderately Unlike me	A little Unlike me	A little Like me	Moderately Like me	Very much Like me

- \_\_\_ 1. I often fantasize about being admired and respected.
- \_\_\_ 2. My self-esteem fluctuates a lot.
- \_\_\_ 3. I sometimes feel ashamed about my expectations of others when they disappoint me.
- \_\_\_ 4. I can usually talk my way out of anything.
- \_\_\_ 5. It's hard for me to feel good about myself when I'm alone.
- \_\_\_ 6. I can make myself feel good by caring for others.
- \_\_\_ 7. I hate asking for help.
- \_\_\_ 8. When people don't notice me, I start to feel bad about myself.
- \_\_\_ 9. I often hide my needs for fear that others will see me as needy and dependent.
- \_\_\_ 10. I can make anyone believe anything I want them to.
- \_\_\_ 11. I get mad when people don't notice all that I do for them.
- \_\_\_ 12. I get annoyed by people who are not interested in what I say or do.
- \_\_\_ 13. I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.
- \_\_\_ 14. I often fantasize about having a huge impact on the world around me.
- \_\_\_ 15. I find it easy to manipulate people.

- \_\_\_ 16. When others don't notice me, I start to feel worthless.
- \_\_\_ 17. Sometimes I avoid people because I'm concerned that they'll disappoint me.
- \_\_\_ 18. I typically get very angry when I'm unable to get what I want from others.
- \_\_\_ 19. I sometimes need important others in my life to reassure me of my self-worth.
- \_\_\_ 20. When I do things for other people, I expect them to do things for me.
- \_\_\_ 21. When others don't meet my expectations, I often feel ashamed about what I wanted.
- \_\_\_ 22. I feel important when others rely on me.
- \_\_\_ 23. I can read people like a book.
- \_\_\_ 24. When others disappoint me, I often get angry at myself.
- \_\_\_ 25. Sacrificing for others makes me the better person.
- \_\_\_ 26. I often fantasize about accomplishing things that are probably beyond my means.
- \_\_\_ 27. Sometimes I avoid people because I'm afraid they won't do what I want them to do.
- \_\_\_ 28. It's hard to show others the weaknesses I feel inside.
- \_\_\_ 29. I get angry when criticized.
- \_\_\_ 30. It's hard to feel good about myself unless I know other people admire me.
- \_\_\_ 31. I often fantasize about being rewarded for my efforts.
- \_\_\_ 32. I am preoccupied with thoughts and concerns that most people are not interested in me.
- \_\_\_ 33. I like to have friends who rely on me because it makes me feel important.

- \_\_\_ 34. Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.
- \_\_\_ 35. Everybody likes to hear my stories.
- \_\_\_ 36. It's hard for me to feel good about myself unless I know other people like me.
- \_\_\_ 37. It irritates me when people don't notice how good a person I am.
- \_\_\_ 38. I will never be satisfied until I get all that I deserve.
- \_\_\_ 39. I try to show what a good person I am through my sacrifices.
- \_\_\_ 40. I am disappointed when people don't notice me.
- \_\_\_ 41. I often find myself envying others' accomplishments.
- \_\_\_ 42. I often fantasize about performing heroic deeds.
- \_\_\_ 43. I help others in order to prove I'm a good person.
- \_\_\_ 44. It's important to show people I can do it on my own even if I have some doubts inside.
- \_\_\_ 45. I often fantasize about being recognized for my accomplishments.
- \_\_\_ 46. I can't stand relying on other people because it makes me feel weak.
- \_\_\_ 47. When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself.
- \_\_\_ 48. I need others to acknowledge me.
- \_\_\_ 49. I want to amount to something in the eyes of the world.
- \_\_\_ 50. When others get a glimpse of my needs, I feel anxious and ashamed.
- \_\_\_ 51. Sometimes it's easier to be alone than to face not getting everything I want from other people.
- \_\_\_ 52. I can get pretty angry when others disagree with me.

APPENDIX F  
MEASURE OF RETROSPECTIVE NARCISSISM

FOR THE FOLLOWING 10 STATEMENTS, PLEASE THINK BACK TO THE TIME BEFORE YOU STARTED USING SOCIAL NETWORKING SITES.

Indicate how well that statement describes how you were before using social networking. There are no right or wrong answers. On the line beside the question, fill in only one answer. Simply indicate how well each statement describes you as a person on the following 6-point scale:

0	1	2	3	4	5
Not at all Like me	Moderately Unlike me	A little Unlike me	A little Like me	Moderately Like me	Very much Like me

1. \_\_\_ Before using social networking sites, if people didn't notice me, I felt bad about myself.
2. \_\_\_ Before using social networking sites, I got angry when criticized.
3. \_\_\_ Before using social networking sites, I fantasized about having a huge impact on the world around me.
4. \_\_\_ Before using social networking sites, I needed people in my life to reassure me of my self-worth.
5. \_\_\_ Before using social networking sites, I felt important when others relied on me.
6. \_\_\_ Before using social networking sites, it was hard to show others the weaknesses I felt inside.
7. \_\_\_ Before using social networking sites, I often fantasized about being recognized for my accomplishments.
8. \_\_\_ Before using social networking sites, I was preoccupied with thoughts and concerns that most people were not interested in me.
9. \_\_\_ Before using social networking sites, everybody liked to hear my stories.
10. \_\_\_ Before using social networking sites, I often found myself envying others' accomplishments.

APPENDIX G  
MEASURE OF ACTUALIZATION OF POTENTIAL

Choose the answer that best describes your response to each statement.

1. I am a person who values him/herself \_\_\_\_\_  
very little / a little / somewhat / very much / enormously
2. I can express my emotions in any circumstances \_\_\_\_\_  
with great difficulty / with difficulty / somewhat easily / easily / very easily
3. I can predict my reactions \_\_\_\_\_  
very rarely / rarely / sometimes / often / very often
4. I believe \_\_\_\_\_ that life is good for me.  
Very little / a little / somewhat / strongly / very strongly
5. I adapt to change \_\_\_\_\_  
With great difficulty / with difficulty / somewhat easily / easily / very easily
6. To know my worth, I base myself \_\_\_\_\_ on what other people think.  
Very little / a little / somewhat / very much / enormously
7. Whatever happens to me, I trust my feelings \_\_\_\_\_  
Very little / a little / somewhat / very much / enormously
8. I feel I am \_\_\_\_\_ responsible for my life  
Hardly at all / not very / somewhat / very / extremely
9. For me, the present moment counts \_\_\_\_\_  
Very little / a little / somewhat / very much / enormously
10. I know my strengths and limitations \_\_\_\_\_  
Very little / a little / somewhat / very much / enormously
11. I am inclined to follow other people's example \_\_\_\_\_  
Very rarely / rarely / sometimes / often / very often
12. I listen to my emotions \_\_\_\_\_  
Very little / a little / somewhat / very much / enormously
13. I \_\_\_\_\_ try to put myself in other people's shoes in order to understand them.  
Very rarely / rarely / sometimes / often / very often

14. I believe \_\_\_\_\_ that people are basically good.  
Very little / a little / somewhat / strongly / very strongly
15. I can act spontaneously without losing control \_\_\_\_\_  
With great difficulty / with difficulty / somewhat easily / easily / very easily
16. I insist on making my own decisions \_\_\_\_\_  
Very little / a little / somewhat / very much / enormously
17. I \_\_\_\_\_ share my joys and sorrows with a confidant.  
Very rarely / rarely / sometimes / often / very often
18. When thinking about my past life, I \_\_\_\_\_ suddenly understand why certain things happened.  
Very rarely / rarely / sometimes / often / very often
19. I \_\_\_\_\_ give my life meaning by the way I look at things.  
Very rarely / rarely / sometimes / often / very often
20. I usually get over major setback \_\_\_\_\_  
With great difficulty / with difficulty / somewhat easily / easily / very easily
21. Criticism \_\_\_\_\_ prevents me from doing what I feel like doing.  
Very rarely / rarely / sometimes / often / very often
22. When I am with other people, I \_\_\_\_\_ show the real me  
Very rarely / rarely / sometimes / often / very often
23. I am \_\_\_\_\_ inclined to get involved in important causes.  
Hardly at all / not very / somewhat / very / extremely
24. I succeed \_\_\_\_\_ at giving meaning to life.  
With great difficulty / with difficulty / somewhat easily / easily / very easily
25. In difficult situations, I \_\_\_\_\_ remain true to myself  
Very rarely / rarely / sometimes / often / very often
26. I express my opinions \_\_\_\_\_  
With great difficulty / with difficulty / somewhat easily / easily / very easily
27. I can be interested in other people's problems without thinking about my own \_\_\_\_\_  
With great difficulty / with difficulty / somewhat easily / easily / very easily



APPENDIX H  
INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

**Human Subjects Review  
Board Department of  
Psychology California State  
University, San Bernardino**

**PI:** Campbell, Kelly; Munakash, Kris  
**From:** John P. Clapper  
**Project Title:** Personality and Social Media Usage  
**Project ID:** H-13FA-07  
**Date:** 10/14/13

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**Disposition: Administrative Review**

Your IRB proposal is approved. This approval is valid until 10/14/2014.

**Good luck with your research!**



John P. Clapper, Co-Chair  
Psychology IRB Sub-Committee

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