



All Theses and Dissertations

2011-03-16

Narcissism, Facebook Use and Self Disclosure

Bonnie Anne Boyd Huling
Brigham Young University - Provo

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>



Part of the [Communication Commons](#)

BYU ScholarsArchive Citation

Huling, Bonnie Anne Boyd, "Narcissism, Facebook Use and Self Disclosure" (2011). *All Theses and Dissertations*. 2475.
<https://scholarsarchive.byu.edu/etd/2475>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

Narcissism, Facebook Use and Self-Disclosure

Bonnie Anne Boyd Huling

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Arts

Quint Randle, Chair
John Davies
Dale Cressman

Department of Communications

Brigham Young University

April 2011

Copyright © 2011 Bonnie Anne Boyd Huling
All Rights Reserved

ABSTRACT

Narcissism, Facebook Use and Self-Disclosure

Bonnie Anne Boyd Huling
Department of Communications, BYU
Master of Arts

This study examines the relationship between online self-disclosure, grandiose narcissism, vulnerable narcissism, Facebook use and frequency of status updates in existing self-report measures among 381 college students. Positive correlations were found between: vulnerable narcissism and Facebook status updates, and Facebook use and online self-disclosure. Following the equalization of the two different narcissism scales, college students scored higher on grandiose narcissism as opposed to vulnerable narcissism, the opposite to what was hypothesized. No correlations were found between: grandiose narcissism and Facebook status updates; grandiose narcissism and self-disclosure; and vulnerable narcissism and self-disclosure. Additionally, college women did not score higher in self-disclosure than men on Facebook. Through additional testing a correlation between vulnerable narcissism and Facebook use was also found. Results were negatively affected by the established grandiose narcissism scale failing reliability testing, thus, in the future, the Narcissistic Personality Inventory (NPI) should be used. High religiosity is also known to positively correlate to positive mental health, therefore, in the future using less religiously orientated college students might yield different narcissism level results.

Keywords: narcissism, Facebook use, self-disclosure, vulnerable narcissism, grandiose narcissism, deficient self-regulation, religiosity and mental health, narcissistic personality inventory, computer-mediated communication, social media, generation next.

ACKNOWLEDGEMENTS

I would like to thank my husband, parents, and sisters for their never-ending love and support. The compilation of this work is as much a success for them as it is for me. I am grateful to my committee members, especially Dr. Randle, for helping in the midst of their busy schedules, and for all the professors who have made my time in the program a wonderful learning experience.

TABLE OF CONTENTS

ABSTRACT.....	ii
LIST OF TABLES.....	v
1. INTRODUCTION	1
A Metaphor	4
2. REVIEW OF LITERATURE	6
Computer-Mediated Communication	6
Social Media	12
“Generation Next”	15
Self-Disclosure.....	17
Narcissism.....	30
3. RESEARCH QUESTIONS	42
4. METHODS	45
Sample.....	45
Variables	45
5. RESULTS	50
6. DISCUSSION.....	52
Religiosity.....	53
7. LIMITATIONS.....	66
The Future of Narcissism.....	67
8. SUGGESTIONS FOR FURTHER RESEARCH.....	69
10. CONCLUSIONS.....	71
APPENDIX: FACEBOOK USE SURVEY.....	72
REFERENCES	76

LIST OF TABLES

Table 1: Reliability of Variable Test: Vulnerable Narcissism.....	46
Table 2: Reliability of Variable Test: Grandiose Narcissism	47
Table 3: Reliability of Variable Test: Self-Disclosure	48
Table 4: Reliability of Variable Test: Facebook Use.....	49

Narcissism, Facebook Use and Self-Disclosure

INTRODUCTION

In 1992, Neil Postman's book *Technopoly* called American society a culture where the scientific method was the only true and authoritative way in which to reach truth. He said calculations and statistics were used so frequently that the society had already reached an information overload and he claimed technology was readily adapted by the masses, but detrimentally without stopping to contemplate the consequences of its use. In short, America, he said, is a Technopoly and the consequences are a surrender of past culture to an unknown one.

The study of how technology affects social and political society is not new to the field of communications. Innis (1950) wrote a historical account of how communication media, such as stone, clay, papyrus and paper, influenced the empires it came into contact with. More recently, Bimber (2003) evaluated how the Internet has effected American democracy. Cell phones, the personal computer, the Internet and all the software, computer programs and other devices that have been spawned off the back of those technologies have and continue to effect every society with which their microchips come in contact. Perhaps one of the most often looked at consequences is associated with the term "global village" (McLuhan, 1964). With the Internet acting as an information highway, breaking down past boundaries such as nationalities, race and language, (Postmes, Spears & Lea, 1998) cultures are bound to evolve. Therefore, this study's purpose is to examine how one type of technology, more specifically social media, might have affected society psychologically.

One of the most influential technological advances in recent decades is that of the availability of the personal computer. Personal computers with access to the Internet have allowed even the most housebound person to communicate quickly with others from all over the globe. One of the technologies the personal computer and the Internet have allowed to take root is that of social media. Social media is defined by Boyd & Ellison (2007), as, “Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (p. 2).

Self-disclosure is a key element for persons using social media since it is the outward expression of the personal-self online. Self-disclosure “may be defined as disclosing intimate information about the self” (Derlega, Metts, Petronio, & Margulis, 1993; Schouten, Valkenburg & Peter, 2007, p.293). Schouten et al. (2007) stated the lack of nonverbal cues in Computer Mediated Communication (CMC) when compared to Face to Face (FtF) interactions might “be central in explaining the enhanced online self-disclosure” (p. 293). Individuals working to make up for nonverbal cues in CMC and social medias use many technological bells and whistles to facilitate CMC over plain text, therefore, it is not surprising to find a high tendency to self-disclose online. Some individuals who use social media online even report that they prefer CMC to FtF communication: “That you can’t see or hear other people makes it easier to reveal yourself in a way that you might not be comfortable with” otherwise (Wintour, 2009)

There are many branches that fall under the sub-heading of social media. Using Scoble’s (2007) social media model the Social Media Starfish, every facet is a form of

communication by way of either: microblogs, personal social networks, events, photos, videos, blogs, and so on. Facebook is the most widely used social networking sites today, especially among college ages (Lampe, Ellison & Steinfield, 2008). While its trumpeted purpose is often the fact that it allows the individual to keep in touch with others, just like Postman suggests, one may question if this is the only use of this technology in today's society. What might be originally called a forum of communication between persons might have a much greater impact on society than currently understood. Lady Greenfield, a professor of synaptic pharmacology at Lincoln College, Oxford, spoke to the House of Lords on concerns social networking site use and the effects they have on children (Wintour, 2009). Greenfield said the consequence of children using social networking sites might include thrill seeking, a loss of empathy, attention-deficit hyperactivity disorder, and identity erosion. "Perhaps the next generation will define themselves by the responses of others" as social networking sites provide, "constant reassurance – that you are listened to, recognized and important" (Wintour, 2009). The observation of the modern cultural shift of the individual being artificially inflated into great importance is not new.

The New York Times columnist David Brooks (2009) wrote the following:

When you look from today back to 1945, you are looking into a different cultural epoch, across a sort of narcissism line.... Humility, the sense that nobody is that different from anybody else, was a large part of the culture then. A different ethos came to the fore, which the sociologists call 'expressive individualism.' Instead of being humble before God and history, moral salvation could be found through intimate contact with

oneself and by exposing the beauty, the power and the divinity within....

This isn't the death of civilization. It's just the culture in which we live.

A Metaphor

For centuries the mirror has been the symbol and the device to which men and women look for the most accurate depiction of the self. In 1688 the technology for producing plate glass was invented, whereby it could be manufactured inexpensively and therefore mass-produced (Stockholder, 1987). The architect Brunelleschi experimented with high-quality glass and produced the famous painting in the baptistery of the main cathedral in Florence, and brought about a new technique to painting – that of perspective. Stockholder (1987) believed the technological advance of the mirror's effect on society was unknown at that time and more people were using them, as it was no longer necessary to be wealthy to own a mirror. "That machine, the mirror, which made this (the baptistery painting) possible, was not then understood as an instrument of narcissism. It was a means for perceiving reality" (Stockholder, 1987, p.110).

Looking back, it seems obvious that the tool that brought art the value of perspective in defining reality would in turn serve to reflect and define mankind's reality. "The early development of the mirror and the associated art is a major chapter in the development of modern individualism. That early individualism had a technology with its own ideological underpinnings and is important as a source of the shapes which individualism takes today" (Stockholder, 1987, p. 110). According to Sennett (1977), the focus of inner-directional as apposed to other-directed is an integral part of change in Western society. Researchers have found the search for individualism to naturally lead to an increase of narcissism. "The "culture of narcissism" is manifested by the excessive search for meaning within one's self, the obsession with individual lifestyle, and the

individual's estrangement from the cultural environment" (Soyer, Rovenpor, Kopelman, Mullins & Watson, 2001, p. 721).

It would be difficult to pinpoint the exact time when narcissism became an outward mark of modern society, but perhaps the most notable and recent display was when Time magazine, in December 2006, displayed a picture of a reflexive computer screen with a metallic mirror and told the world "You," the individual, was the person of the year.

A meaning that could be like that of the mirror in centuries past; a medium, which helps the individual understand the self by way of reflecting the image, life and likeness to one's self and life, as never before seen on such a wide scale. Has the personal computer, and more specifically the use of social media, become the modern technological glass to which an individual looks when questioning who they are and what they look like to others? The number of members and the ever-increasing times people are reported to use the sites daily acknowledges the popularity of these sites. If this were true, then it would appear some members of society could be labeled as obsessed with gazing into this mirror and a possible consequence of such behavior could produce an increase of narcissism. Reversely, people with narcissistic tendencies could also be more likely to engage in social media use. Since labeled narcissists spend an abundant amount of time and energy analyzing the self, a possible societal evolution pointing to an increase of narcissism would undoubtedly be worthy of study.

Therefore, the purpose of this study will be to examine various relationships between narcissism, Facebook use, and online self-disclosure. By testing the extent of

these variables correlation relationships, this study will be able to begin to answer whether or not social media use and narcissism are connected.

LITERATURE REVIEW

The following chapter will define and expound in detail the variables and important components necessary to understanding the empirical and theoretical basis for this study. A description of computer-mediated communication will begin the chapter since its components and research are precursors to the creation of social media and how it functions today. A section on the history and past research of social media and Facebook will then follow. A smaller section defining the parameters of “Generation Next” will proceed in order to expound on the technological generational divide present in society today. The following section will define the variable of online self-disclosure and past research will be organized similarly to that of Derlega and Berg’s (1987) literature review on disclosure. Ending this chapter is an extensive historical and theoretical report of narcissism, including both grandiose and vulnerable narcissistic definitions.

Computer-Mediated Communication

Before discussing social media sites, one must understand computer-mediated-communication (CMC), since embedded within the use of social media are the more broad principles of CMC (Boyd & Ellison, 2008). CMC is written communication that takes place between two network computers. Several elements of CMC have been studied in-depth, to include: how nonverbal cues’ play into the effects and purposes of CMC, why individuals with reportedly high social anxiety use CMC, gender differences in usage and how interpersonal relationship form.

Nonverbal cues

The conclusion of many research articles concerning CMC has been the observation that CMC does not allow for the same nonverbal cues that are available in communication carried out FtF. “The absence of the characteristics associated with face-to-face communication can result in a loss of fidelity and an increase in the psychological distance between interactants” (McQuillen & Jeffrey, 2003, p. 617). Quasi-nonverbal cues utilized in CMC is forcing a language change in society (Collins & Miller, 1994; Carter, 2003). Carter (2003) stated that most nonverbal communication in a FtF setting is spontaneous. “In verbal and text-based communication, we cognitively form our messages before speaking or writing, whether we are aware of it or not” (p. 34).

Therefore, there is time to adjust responses in a spontaneous reaction to a message. In FtF communication, participants must also take cues in deciphering messages from elements such as the environment, time, space and state of mind (Carter, 2003). “In the CMC environment, however, both the sender and the receiver have time to stop and interpret the message, and to think about the response message he or she wants to send” (Carter, 2003, p. 34).

Thus, unlike FtF, CMC allows for plenty of time and opportunity to devise specific reactions, which are nonverbal cues used in a FtF setting.

Emoticons

In order to bridge the gap between FtF nonverbal cues and CMC, new computer-key created symbols have been adopted to represent emotional states so that nonverbal communication used on a computer might be richer (Carter, 2003). “A steady stream of new words, ideas, and representations are added to the CMC language base everyday. For example, emoticons, typewritten symbols placed in message, help writers to express

themselves and also assist readers to better interpret the intended emotion” (Carter, 2003, p.35). McQuillen also notes that there are instances in research that show CMC surpasses relational communication used in FtF (Walther & Tidwell, 1996; McQuillen & Jeffrey, 2003). Since CMC loses a substantial amount of verbal cues to its counterpart FtF interaction, emoticons help “serve as nonverbal surrogates, suggestive of facial express, and may thus enhance the exchange of emotional information by providing additional social cues beyond what is found in the verbal text of a message” (Derks, Bos & Grumbkow, 2008, p. 99).

However, while emoticons and computer-created key symbols have been integrated into CMC, researchers also have studied how reduced nonverbal cues might benefit individuals who are shy, anxious and/or feel less comfortable in social situations. Since CMC has been linked to decreased anxiety in social interactions, Sheeks and Zachary (2007) stated that shy-sociable individuals might have different motives for using CMC compared to unshy-sociable or unshy-unsociable individuals.

CMC offers its users a reduced-cues environment, a choices degree of identifiably to other, and a forum to express facets of one’s self. ... Gating features include physical unattractiveness, stuttering or tone of voice, visible shyness or social anxiety, facial expression or eye aversion. ... Thus CMC allows individuals to clearly get their point across without the interference of many stigmatizing features (Sheeks & Zachary, 2007, p. 64).

Individuals often feel more comfort and perceive more control in a reduced-cues environment, enough to disclose personal and intimate details of one’s self that they

normally would not in a FtF setting (McKenna & Bargh, 2000; Sheeks & Zachary, 2007). Therefore, people who struggle with insecurities and anxiousness in social situations can build and base a relationship with more true-self qualities, such as interests shared, rather than physical attractiveness and proximity (Sheeks & Zachary, 2007).

Self-awareness

Despite existing or nonexistent levels of shyness, social anxiety or insecurity, Joinson (2001) stated that present research results confirm individuals disclose more information about themselves during CMC when compared to FtF communication (p.188). Mader and Mader (1993) termed self-disclosure as an occurrence when an individual accepts some amount of risk in order to share significant information in an honest and intentional manner with someone else. “Parks and Floyd (1996) found high levels of self-disclosure in on-line relationships (e.g. high scores on item “I usually tell this person exactly how I feel’ and low scores on ‘I would never tell this person anything intimate or personal about myself’)” (Joinson, 2001, p. 178).

“Matheson and Zanna (1988) found that users of CMC reported greater private self-awareness and marginally lower public self-awareness than subjects communicating FtF” (Joinson, 2001, p. 228). Most CMC is undertaken in a quiet room, alone, which may encourage the development of an introspective and/or reflective state of mind” (Joinson, p.189). Joinson (2001) concluded that self-disclosure is not as high in FtF as in CMC, and stems from both the visual anonymity and heightened private/reduced public self-awareness found in CMC.

Gender differences

Studies have also been conducted to observe communication differences/ similarities between male and female usage of CMC. Communicative differences found

in males were: assertiveness, disagreement and presence of social elements. While females agreed with males and built upon earlier messages more often than males (Prinsen, Volmann & Terwel, 2007).

However, most current studies have focused on male and female roles in computer-supported collaborative learning (CSCL) environments. CSCL's accomplished tasks and goals are substantially different than that of CMC. While CMC's main goal is often times relationship building, CSCL's main goal is the focus of collaboration to successfully accomplishing a task of some kind.

In a review of CMC and CSCL environment studies, Prinsen, et al., (2007), found a positive attractiveness in females to use CMC, as many reported it to be a better alternative than FtF interaction. Males tend to dominate, be more assertive to some degree in CMC, but not to the extent found in CSCL.

Interpersonal relationships

Another element frequently studied by communication scholars is in regards to how interpersonal relationships are built and maintained using CMC. "The world has witnessed a steady increase in the advent, adoption, and widespread use of new and varied technologies. With this proliferation of technology, scholars and lay people alike are beginning to ask the question, "How does advancing technologies impact interpersonal relationships?" (McQuillen & Jeffrey, 2003, p.616).

Machines, tools and technological advances have helped bring about McLuhan's term the "Global Village," as the world has become continually smaller, yet technology is, in part, responsible for an increase in social/interpersonal distance (McLuhan, 1964; McQuillen & Jeffrey, 2003). "As the distance between cultures and countries shrink, the

distance between interpersonal interactants appears to be expanding. Paradoxically, the closer we get, the further apart we appear to be” (McQuillen & Jeffrey, 2003, p.617).

Technologies over the past decades have shrunk the world, making it possible to communicate more quickly and efficiently. However, researchers predicted that without the essential nonverbal cues in place, the development of relationship building on a CMC global level would slow down even though it would be used prolifically. “Walther and Tidwell’s (1996) interpretation of the social information–processing model suggests, that the rate of social information exchanged will be slower, but that the amount, over time, will not differ from FtF,” (McQuillen & Jeffrey, 2003, pp. 619-620). Because in 1996 the CMC nonverbal cues were still at minimum, social information was at a slowed pace. However, now in 2011 where social information is enhanced by many forms of nonverbal cues, the rate of social information exchanged has speed up exponentially.

Social anxiety and CMC

Although, as discussed above, CMC does include aspects which might be beneficial to individuals who struggle with social anxiety, those who do not struggle with social anxiety use CMC more specifically as a form of social media. In a study conducted by Stevens and Morris (2007), researchers found higher levels of social anxiety in dating were not a predictive factor in the use of social media to facilitate relationships. In fact, individuals who reported low levels of social/dating anxiety used the Internet to facilitate relationships more frequently. These findings support the argument that, with regards to using social media, individuals experience the rich-get-richer hypothesis. The rich-get-richer hypothesis states that those who are extroverts primarily benefit from the Internet, and the introverts use the computer less often to communicate (Sheldon, 2008).

Therefore, it is apparent that those who are comfortable and enjoy disclosing information

about the self use the Internet to facilitate relationships and personal desires. More specifically, social media use would be ideal for these types of personalities.

Social Media

In 1997 a website called “sixdegrees.com” (Boyd & Ellison, 2008) was created for users to connect with friends and family, with applications including the sending and posting of messages. Since 1997, more successful social media sites have attracted millions of users worldwide. Friendster, MySpace, LinkedIn, and Facebook are just a few examples. Many new social networking site services were launched in 2003, and the “user-generated content phenomena grew” (Boyd & Ellison, 2008).

A social network site is defined as a “web-based service that allows individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2008, p.211).

There are many branches that fall under the sub-heading of social media. Based on Scoble’s (2007) social media starfish, every facet is a form of communication by way of either microblogs, personal social networks, events, photos, videos, blogs, etc.. Thus, all global phenomenon’s-- Sixdegrees, Friendster, Mixi, LiveJournal, Orkut, Cyworld, Skyblog, LinkedIn, Bebo, Flickr, Last.FM, Syrock, MySpace, YouTube, and many more are examples of social media communications.

MySpace

One of the early social media sites to gain widespread attention of the United States was MySpace. MySpace was launched in 2003 in Santa Monica, California, with the goal of attracting estranged Friendster users at a time when it was rumored a usage fee for Friendster was soon to begin (Boyd & Ellison, 2008). MySpace capitalized on this

opportunity, allowing users to personalize their page for the first time and allowing minors to participate. In 2005, News Corporation bought MySpace for \$580 million and media attention grew before safety and privacy issues plagued MySpace (BBC, 2005).

Facebook

At the end of 2008, Facebook overtook the MySpace and became the number one social media giant (Bains, 2009). Since then, Facebook is the most widely used social networking sites today, especially among college ages (Lampe, et al., 2008). According to Hitwise, Facebook is the number one website in the United States, second to Google (Wilhelm, 2010). In every hundred U.S web hits, seven are to Facebook. In 2008, college students reported to spend, on average, 47 minutes a day on the popular social media site (Sheldon, 2008). In June 2010, the Nielsen report found social networking sites took up 23 percent of total time people spent on the computer (Rubin, 2010).

Besides using social media for building and maintaining relationships, individuals reported using Facebook for reasons more similar to FtF communication than traditional CMC (Sheldon 2008). Sheldon found the largest population of students used Facebook to maintain relationships. The next largest population of students reportedly used it to pass time when bored, and lastly others reported using it for entertainment purposes.

Sheldon's (2008) research concluded, people who were willing to communicate FtF were reportedly more involved in facilitating online relationships and reported having more friends online than their counterparts who generally prefer to use CMC.

Mark Zuckerberg created Facebook in 2004 with the initial goal of keeping Harvard University students in touch with one another in an online forum that would assist communication despite geographic distances (Facebook, n.d). However, it quickly became recognized as a medium that combined creativity and technology into a new way

of communicating more efficiently with friends, family and coworkers from anywhere in the world (Facebook, n.d). It has developed over the past five years in technological advances, offering individuals the ability to share personal information by way of text, images, and video, which has affected and closed in geographical boundaries that once beset relationships. Its' success is apparent, as statistics show over 200 million active Facebook users worldwide; more than 100 million users reportedly log on at least once a day (Facebook, n.d). It reportedly accumulates 1.6 billion page views each day, with 93 percent of college students holding an account with the social network (Sheldon, 2008).

This third of Facebook users who are college aged (Facebook, n.d), are comprised of young men and women who are considered members of "Generation Next" (The Pew Research, 2007). This new generation (ages 18-25) spends more time on the Internet than they do watching television (Clark, Lee, & Boyer, 2007). Findings in the Pew Research (2007) reported "Generation Nexters" use and see technology, i.e. the Internet, as the best way people can connect with and build relationships. Using Facebook they "showcase their photos, favorite movies, hobbies, and personal diaries as a way to stay in touch with old friends and advertise themselves to people they have not met yet" (Clark, et al., 2007, p.1).

College-aged Facebook use research

Although computers have been used in universities since the 1940s and 1950s (Quint, 2001), very few studies have been conducted regarding social media sites and universities and university students (Boyd & Ellison, 2008). A study looking at how Facebook and university libraries interact with one another found most librarians view Facebook as a tool to promote library services and events (Charnigo & Barnett-Ellis, 2007). Following the survey of 126 academic librarians, researchers found most

librarians “considered Facebook outside the purview of professional librarianship” (Charnigo & Barnett-Ellis, 2007, p.23), although this view might not be as popularly held now as it once was.

Another study focused on the correlations between teacher self-disclosure levels on Facebook and aspects of college student motivation (Mazer, Murphy & Simonds, 2007). Those teachers who scored high in self-disclosure on their Facebook pages positively correlated with students whom experienced higher levels of motivation, and classrooms were more likely to be a positive experience (Mazer, et al., 2007, p.1).

Lastly, a third study looked at how social capital was strongly correlated with Facebook use, specifically bridging social capital, and students’ “Facebook usage was found to interact with measures of psychological well-being” (Ellison, Steinfield, & Lampe, 2007, p.1143). Thus, it is apparent that little has been researched looking at college-aged students and Facebook.

While there are additional studies on social media using college students as participants, they are not testing variable correlations between the specific college demographic and social media. Thus, little is known of the empirical or theoretical parameters between college-aged students and social media use.

“Generation Next”

Over the years, a new divide in generations has begun to be thought of, as those who grew up with CMC and using social media sites are reportedly holding significantly different normative beliefs and behaviors than their more aged counterparts. This generation, often termed “Generation Next”, includes those between 18 and 25 (Pew Research, 2007). Up until now, the vast majority of researchers state that social media is

a medium functioning as a tool to serve the individual's needs, falling under uses and gratification theory. As time has gone on, people have noticed the significant difference between the generations and their usage of CMC and, using social media as a technological mirror, have started to make accusations that the use of social media, such as Facebook, MySpace and Twitter, is more than just satisfying young people's goals of socializing: it is creating an increase of narcissism in society.

As stated earlier, The Pew Research Center (2007), conducted an in-depth study on "Generation Next," or "Nexters," in order to gauge how behaviors, beliefs and goals are differentiated from earlier generations. The report conducted in 2006 included 579 people ages 18-25. To keep data in perspective, the report also drew from Pew Research Center surveys over the past 20 years. "The majority of those ages 18-25 (68%) see their generation as unique and distinct from other generations" (p. 9).

Findings included that "Nexters" use and see technology and the Internet as the best way people can connect with and build relationships. Researchers also have termed another name for this generation, the "Look at Me" generation, in response to the success of social networking; since social networking sites, like Facebook, My Space and My Yearbook, allow a space for individuals to create a personal profile describing their life and interests with accompanying photos. More than half of the individuals reported using at least one, if not more, social networking site, and 76% reported using them once a day to once a week. However, 72% of respondents said they knew they spent too much time on their social networking sites.

The Pew Research Center (2007) found most people in this generation said their top goals include fortune and fame (p. 4). "One-in-ten (Generation Nexters) say their

generation's most important goal is to be famous, another 41 percent say this is their next important goal" (p.12). In past studies, Generation Xers (26-40 years of age) reported less emphasis on being famous compared with Generation Next.

Self-Disclosure

The act of self-disclosing – revealing personal past thoughts, feelings or experiences to another – is oftentimes a daily occurrence for many people, thus being of great interest in many disciplines including: personality and social psychologist, clinical and counseling psychologist, sociologist and communication researchers (Derlega & Berg, 1987). There are many questions concerning how, why and what people self – disclose; questions that easily cross into various areas of research. “Since Jourard’s (1959, 1961) pioneering work, self-disclosure has been the focus of theoretical discussion and research inquiry in a number of disciplines” (Collins & Miller, 1994, p. 457).

While some earlier theoretical work mentions self-disclosure, Jourard is acknowledged as the first seminal theorist (Derlega & Berg, 1987). He created the first successful measurements of self-disclosure in questionnaire form along with Jourard and Lasakow (1958), demonstrating that self-disclosure was in fact measurable. The 60-question self-survey covers six areas: money, personality, attitudes and opinions, taste and interests, work or studies and body (Jourard, 1959). Jourard (1961) stated that each society “produces a model personality with differing self-disclosure habits” (p.320), and each has a division between “private” and “public” information. For example, while British people might seem to be more reserved in their conversation than Americans, it might be more of a distinction of their societal model personality (Jourard, 1961). While the instrument of measurement was found to be valid, there were critics. “Claims for the importance of self-disclosing communication generally refer to what is here identified as

honesty, but techniques for measuring self-disclosure are too crude to distinguish honesty from several other forms of encoding behavior” (Pearce & Sharp, 1973, p. 415). Magno, Cuason and Figueroa (2008) more recently created a self-disclosure questionnaire, which is also multi-faced with factors of self-disclosure including: emotional state, interpersonal relationships, personal matters, problems, religion, taste, thoughts, and work/study/accomplishments.

Although there is a considerable amount of research on self-disclosure, according to Pearce & Sharp (1973) the literature is confusing for various reasons. First, psychologists tried to measure it by way of personality trait while others have tried to measure it by way of behavior. Many studies have treated “self-disclosure as a personality trait, rather than a process of communication,” (Pearce & Sharp, 1973, p.409). Second, some studies, such as Gilbert (1976), call self-disclosure a linear model of communication stating satisfaction and self-disclosure go up as so does risk, growth, commitment and intimacy. However, other theorists, including Cozby (1973), state self-disclosure is more correctly depicted in a curvilinear model, and have discredited the theory of a linear model. “There exists a point at which increased disclosure actually reduces satisfaction with the relationship” (Gilbert, 1976, p. 223). Lastly, there have been many different conceptualizations of self-disclosure and questionable methodologies. Therefore, the variable’s inconsistent conceptualization has made it difficult to compare findings.

Many literature reviews have tried to organize and categorize this medley of past research. Derlega and Berg (1987) compiled a literature review in which they categorized seminal research under three headings. The first is self-disclosure as a personality factor

and the role of individual differences in self-disclosure. The second is the role of relationships, and third, the role of self-disclosure in the etiology and treatment of psychological distress. This section of the literature review will follow Derlega and Berg's (1987) three headings.

Defining self-disclosure

Jourard & Lasakow (1958) first called self-disclosure the process of making the self known to others. It is an act that creates bonds between people (Cozby, 1972) and "it is possible to assume that disclosure is an intimacy variable, much like personal space or eye-contact" (Cozby, 1972, p. 158). Initial self-disclosure observations came from therapists who noticed patients disclose more freely when they perceive the therapist with warmth and trust. Empirical evidence also came from Jourard and Lasakow's (1958) research on the correlations between parent's and children's levels of self-disclosure. "The amount of personal information that one person is willing to disclose to another appears to be an index of the "closeness" of the relationship, and the affection, love, or trust that prevails between the two people" (Jourard, 1959, p.428). This type of definition acknowledges the communicative and relationship role self-disclosure portrays.

Additionally, self-disclosure has been called the act of verbally sharing intimate, or "private" level information with another (Cozby, 1972, p. 73). "The basic parameters of self-disclosure are (a) breadth or amount of information disclosed, (b) depth or intimacy of information disclosed, and (c) duration or time spent describing each item of information," (Cozby, 1972, p. 74). Pearce and Sharp (1973) defined self-disclosure as a deliberate *act* in order to make him or herself known to another. The word "deliberate" was used because it is voluntary information shared "about himself which the other is

unlikely to know or to discover from other sources” (Pearce & Sharp, 1973, p. 414). This type of definition acknowledges self-disclosure in more of a behaviorist sphere.

Personality Factor and Individual differences in self-disclosure

Self-disclosure and liking. Self-disclosure is a complicated phenomenon with many situational variables to take into account before conclusions can be made. In most communication very little self-disclosure occurs. Instead, high levels of self-disclosure transpire in specific transactions, therefore, individuals are highly selective in choosing with whom to disclose (Pearce & Sharp, 1973).

For example, co-workers liked least were those who self-disclosed the most or the least (Jourard, 1959). Jourard’s (1959) data showed “that liking, self-disclosure, disclosure-intake, knowing and being known are interrelated” (p. 430).

Cozby (1972) found a curvilinear relationship between self-disclosure and liking. The more the parent is liked, the more disclosure is made toward them (Jourard & Lasakow, 1958). Collins and Miller (1994) found positive correlations exist between disclosure and liking relations, especially in women. “The importance of social norms in judging the appropriateness of disclosure has led some researchers to suggest that the disclosure-liking link should be stronger for female than for male disclosers,” (Chelune, 1976; Collins & Millers, 1994, p. 459). They found the strongest association existed between how much a person was liked to how much information was disclosed to that same person. Similarly, Jourard (1959) found a positive association between disclosure and liking for another in a sample of nursing students and faculty. Consequently, social exchange and information processing models also “provide a theoretical basis for

predicting that individuals will be more attracted to others who are willing to share information about themselves,” (Collins & Miller, 1994, p. 459).

The act of self-disclosure is carried out consciously in order to enhance and strengthen the relationship. “Self-disclosure serves an important symbolic function in interpersonal relating” (Collins & Miller, 1994, p. 417). It is done in a hope that the behavior will be reciprocated which will in turn produce social validation, since the discloser often times looks for validation from those entrusted with personal information. Self-disclosure also facilitates understanding between two individuals since the more one knows about the other the better equipped they are to create accurate meanings of messages given to them (Pearce & Sharp, 1973). “Thus, self-disclosure is one way that we can communicate to others about our personal vulnerabilities, thereby reducing the risk that our interactions will be fraught with misunderstandings and failed expectations” (Collin & Miller, 1994, p. 468).

A situational variable in the act of self-disclosure is the recipients’ belief of the driving reason behind the action (Collins & Miller, 1994).

There are at least three attributions one can make when a person discloses intimate information. A *dispositional* attribution is made when the behavior is seen as the result of a person’s normal tendency to disclose at a particular level [e.g., She’s a friendly person]. A *situational* attribution is made when the behavior is viewed as the result of an environmental cue specifying what is expected [e.g., She’s doing what the experimenter asked her to do]. Finally, a *personality* attribution is made when the

disclosure is seen as the result of some special quality of oneself, the recipient [e.g. She trusts me] (Collin & Miller, 1994, p. 459).

The association between liking and self-disclosure is one of the most researched topics in self-disclosure literature. However, like self-disclosure research as a whole, literature on self-disclosure and liking is also incoherent, as there is difficulty in defining “liking.” The research over the past years has fluxuated concerning whether the relationship between self-disclosure and liking is a positive or negative one. “As a result, the disclosure-liking literature has been described as disorganized, confused, and somewhat ‘huddled,’” (Derlega & Berg, 1987; Collins & Miller, 1994, p. 457).

Rate and type of information in self-disclosure. Research shows it is not merely the act or behavior of self-disclosing, but the type and rate of information that affects the relationship. At the end of the curvilinear relationship between liking and self-disclosure, “Most researchers in this area acknowledge that, under some conditions, self-disclosure may not lead to a favorable impression of a discloser. A number of situational and contextual variables have been suggested to moderate the link between disclosure and liking,” (Collins & Miller, 1994, p. 459).

One of the most frequent situational variables is when intimate information is disclosed too early on in the relationship, thus viewed as inappropriate. “As a result, the disclosing person may be viewed as maladjusted and less likable,” (Collins & Miller, 1994, p. 459). Self-disclosure is also often used as an index of social distance, because self-disclosure reflects social distance (Fitzgerald, 1963). Fitzgerald (1963) found the rate of the information being exposed vitally important to the health of the relationship.

Information revealed at too quick a rate hinders the relationship, just as information given at too slow a rate can impede the relationship.

The nature of the information being disclosed also affects the person's willingness to disclose to another. Jourard and Lasakow (1958) labeled specific topics of self-disclosure, which were categorized as either "private" or "public" communication. Topics of high disclosure and labeled as public communication include: tastes, work, interests, attitudes and opinion. While "private" topics that require more careful selection in order to not be thought of as inappropriate include: money, personality and body (Jourard & Lasakow, 1958). Therefore, when persons self-disclose "private" topics too quickly the relationship is negatively affected. While people do need to self-disclose at some precise rate, "there seem to be some fairly uniform restrictions as to what, how much, and to whom one gives information about the self" (Fitzgerald, 1963, p.412).

The type of information being disclosed is also found to be a predictor in marital satisfaction (Gilbert, 1976). "Higher disclosure levels are more characteristic of happily married couples, but unhappily married couples are higher in disclosures of a *negative* valence. Thus, *what* is said is critical in determining disclosure outcomes" (Gilbert, 1976, p. 227). Jourard and Lasakow (1958) found no difference between married and unmarried subjects in total amount of self-disclosure with the exception that married people self-disclose less to parents than unmarried. Thus, marriage does not influence self-disclosure levels but simply the extent to whom they self-disclose. Studies in the past also show, when individuals are being honest they disclose more positive aspects than negative (Cozby, 1973).

Role of Relationships in Self-Disclosure

Taylor & Hinds (1985) stated that relationships experience great impact when persons are willing to self-disclose. Those who are willing to self-disclose do so purposefully primarily for themselves following for the sake of the relationship.

This is not surprising given that self-disclosure is primarily an interpersonal maintenance process. Self-disclosure is not only a function of the relationship between two persons; it can also be seen as a dynamic in the process of relationship formation. The idea of relationship maintenance is implicit in both these views (Taylor & Belgrave, 1986, p.1150).

Reciprocity. Reciprocity is a phenomenon which accompanies the behavior or act of self-disclosing. The person who receives the initial disclosure often times reciprocates by self-disclosing back to the person who first divulged intimate or private information. This action is important to the health of the relationship. “A fundamental premise in interpersonal relations is that people need to receive from, and to give to,” (Fitzgerald, 1963, p. 405). Therefore, reciprocity is a result and explanation of self-disclosure behavior (Taylor & Belgrave, 1986, p. 1138). “Relying on the phenomenon of disclosure reciprocity – the tendency of persons in a disclosure exchange is to match each other in intimacy and amount of disclosure” (Derlega, Winstead, Wong, & Hunter, 1985, p. 27). Usually self-disclosure occurs slowly and incrementally strengthening the relationship, helping it to be more stable and permanent (Pearce & Sharp, 1973).

It is unusual to find a continuing relationship in which one person has disclosed considerably more than the other, and erroneous perceptions of the extent to which both have disclosed consistently exaggerate symmetry.

The best documented characteristic of self-disclosing communication is that as disclosure by one person increases, so does that by the other (Pearce & Sharp, 1973, p. 418).

Therefore, reciprocating on equal levels concerning private information is important to the health of interpersonal relationships.

However, reciprocity is similar to self-disclosure in that reciprocity has a curvilinear relationship. Thus, too much reciprocity can actually do more harm than good for a relationship. At high levels of disclosure, when the increasing intimacy creates anxiety about excessive intimacy, relationships seem to break down (Cozy, 1972).

Reciprocity and self-disclosure theorists frequently find distinctions between gender and reciprocity. For women, the type of information being conveyed affects their disclosure reciprocity (Taylor & Belgrave, 1986). When the subject of the disclosure is positive, reciprocation is greater for both high and low levels of intimacy. However, negative information diminished reciprocation (Taylor & Belgrave, 1986).

Past studies have found, while men might not stereotypically seem like the gender that would reciprocate self-disclosure when given the opportunity, “males who are attracted to an opposite-sex partner might exceed women in their self-disclosure of personal information” (Derlega et al., 1985, p. 27).

Self-disclosure and gender. Many theorists have accredited the association of self-disclosure behavior and gender to the product of socialization. Jourard and Lasakow (1958) stated that women were *socialized* to self-disclose much more than men ever are. Their evidence came from findings that women not only self-disclosed more but children self-disclosed more to their mother than to their father, or male/female friend (Jourard &

Lasakow, 1958; Gilbert, 1976). This means women who self-disclose more are generally more quickly to be liked socially by both women and men, thus becoming an important part of women's socialization (Chelune, 1976). "The importance of social norms in judging the appropriateness of disclosure has led some researchers to suggest that the disclosure-liking link should be stronger for female than for male disclosers," (Chelune, 1976; Derlega & Chaikin, 1976; Collins & Miller, 1994, p. 459).

Significant differences in likeability between male and female speakers were observed as a function of their disclosure level. The male speaker was most liked when he was a low discloser, whereas the female speaker was least liked when she was a low discloser. Female observers were found to be more discriminating between these conditions than were the male observers (Chelune, 1976, Abstract, p. 1000).

Low male disclosure is generally accepted as more socially appropriate than female low disclosure. "Males are liked more when they adhere to the 'strong silent' role than when they are personally open" (Chelune, 1976, p. 1002). Therefore, while women are socialized to be open, the "traditional male role discourages men from revealing their feelings and inner experiences because it might indicate weakness," (Jourard, 1971; Derlega et al., 1985, p. 25).

However, the relationship between gender and self-disclosure is extremely complex and the simple conclusion that females self-disclose more frequently is inaccurate (Taylor & Belgrave, 1986). While research often points to women as the gender that self-discloses more readily, many situational variables must be accounted for before judgments can be made.

A study by Derelga, et al., (1985), found that men self-disclosed more intimately than women in situations where they had just met. In the study, males self-disclosed to women even more than females paired with females or males paired with males. “Men seemed to derive considerable enjoyment from getting their female partner to increase her level of disclosure” (Derlega, et al., 1985, p. 27). While the majority of research shows women self-disclose more, in an initial encounter, men may disclose more than women to an opposite-sex partner in whom they wish to develop a relationship. “Males may selectively self-disclose as a tool to cultivate a relationship with their female partner, reflecting a cultural prescription that males are supposed to make the first direct move in developing a relationship” (Derlega, et al., 1985, p. 40-41). While males displayed a low level of self-disclosure to other males, it was found that if the males believed the female liked or trusted them, they were more likely to self-disclose.

Women have been found to self-disclose more on the basis of liking, while men disclose more frequently on the basis of trust (Gilbert, 1976). Women were quick to disclose “public” information, such as preferences, ideas and opinions, but were unwilling to disclose attitudes about their own body. Yet, no real conclusions can be made since Rubin, Hill, Peplau and Dunkel-Schetter (1980) found no real difference between female and male amounts of self-disclosure, and Hacker (1981) found little or no difference between men and women self-disclosure in cross-sex friendships. All that can be safely stated is that there are many situational variables affecting gender and self-disclosure levels.

Psychological Distress and Self-Disclosure

Mental health. The ability to accurately portray the self to at least one significant other is indicative and an identifying criterion of a healthy personality (Jourard, 1959;

Fitzgerald, 1963). Jourard (1959) argued a curvilinear relationship exists between mental health and self-disclosure (Jourard, 1959; Cozby, 1972). Cozby (1972) also found partial support for Jourard's (1964) theory of relationships existing between self-disclosure and mental health. "It is conceivable that, although low disclosure is seen as normal behavior in first encounters, the person who never develops beyond the low intimacy stage will be seen by others as maladjusted" (p. 157). Those who never open up and disclose information after some time in a relationship are perceived as maladjusted socially and mentally.

On the other hand, those who convey too high a level of self-disclosure, especially when too early in the relationship, are also sometimes seen as socially maladjusted. Chelune (1976) found individuals who frequently self-disclosed to strangers were believed to be less emotionally stable. "There was also a tendency to see high disclosure to a stranger as less emotionally healthy than low disclosure" (Chelune, 1976, p. 1000). Thus the usage of correct situational timing in a relationship is vitally important to the correlation between self-disclosure and mental health.

This interpretation of the maladjustment ratings is somewhat supported by the ratings on the dimension of "discreet-indiscreet." The discreet person is one who shows good judgment in conduct and speech and the high disclosing [maladjusted] other was the only stimulus person rated as indiscreet (Cozby, 1972, p. 157-158).

Pearce and Sharp (1973) stated that since self-disclosure "facilitates organizational effectiveness, mutual understanding and helping relations and personal satisfaction" it would be in everyone's interest to learn the proper usage of self-disclosure to improve in

“professional competence” (p.422).

Self-esteem. Although Gilbert’s (1976) research found high amounts of self-disclosure associated with higher levels of self-esteem, most researchers agree that the level of self-esteem does not directly predict the level of self-disclosure in a person; due, again, to situational variables. A person with high self-esteem could disclose because they feel their opinions are wanted, while the person with low self-esteem could avoid self-disclosing their opinions due to feelings of unworthiness (Fitzgerald, 1963).

However, individuals with low self-esteem and having the desire to attract attention might self-disclose more frequently “Those with high self-esteem feeling more secure about their attitudes and finding less need to gain approval or support from others, would find it less necessary to volunteer information about themselves” (Fitzgerald, 1963, p.405-406).

Online Self-Disclosure

The act of self-disclosing online is a bit different from self-disclosure done FtF. “Reduced nonverbal cues and controllability may be central in explaining the enhanced online self-disclosure,” (Schouten, Valkenburg & Peter, 2007, p. 293). Scholars acknowledge that while the non-verbal cues are limited online, self-disclosure on the Internet often times allows the individual disclosing personal information a sense of safety and freedom (Joinson, 2001; Wilkins, 1999). Joinson (2001) found computer-mediated communication (CMC) to be partially characterized by the behavior of high self-disclosure. “Studies have found that self-disclosures is higher in CMC than FtF, and that both visual anonymity and heightened private/reduced public self-awareness can be implicated in this effect” (Joinson, 2001, p. 190). He argued that “when the Internet becomes a ubiquitous part of people’s lives,” psychologists have to take account of the

medium when studying social behavior (Joinson, 2001, p. 190). Parks and Floyd (1996) found high levels of self-disclosure in on-line relationships. In Wilkins (1999) study with novice computer users who did not previously know each other, members of an on-line community said, “I know some of these people better than some of my oldest and best friends” (Wilkins, 1999, p.56), showing what Wilkins (1991) called a boundary shift between the spoken and written conversation. McKenna and Bargh (1998) found the principles that apply to FtF also apply to CMC. They found that among their study of online newsgroups, people were more prone to disclosing secrets. “The tendency to disclosure more about the self during on-line interaction also extends to the completion of psychological measure” (Joinson, 2001, p. 179). Kiesler and Sproull (1986) found that when compared to traditional paper and pencil surveys, participants self-disclosed more “socially undesirable responses” when completing a survey on a computer screen (p. 411).

As in the past, gender studies have also shown a difference in self-disclosure online. “Female adolescents generally self-disclose more than male adolescents,” (Schouten, et al., 2007, p. 299), and adolescents self-disclose less on-line than they do offline. Parks and Floyd (1996) also found women to form personal relationships online significantly more than males. Age and marital status also did not relate to the likelihood of online development of personal relationships (Parks & Floyd, 1996).

Narcissism

The term narcissism derives from the Greek myth of Narcissus, who was known for his beauty, but cursed, that if he gazed at his image for too long he would die (Stone, 1998). In all versions of the myth he dies because he cannot help but keep from looking or listening to himself for too long a period of time. “The behavior of narcissus has been

interpreted as extreme example of objectlessness and self-admiration” (Herron, 1999, p. 2). Depending on the version, Narcissus dies one of several ways, each depicting a narcissistic trait. In one story he listened to himself too much from the nymph Echo who repeated whatever Narcissus said – representing the love and need for attention. A second story claims he looked in the water reflecting his image too long – representing the obsession with self-admiration. Thirdly, he spent too much time fixated on his twin sister who projects his own image – representing the love for another if transformed into an image of self (Herron, 1999). He then is transformed into the white narcissus flower, known for its beauty and ability to relieve pain. Thus, the numbing pathology of narcissism is acknowledged for whoever looks upon it and the obsession with gaining love from outside objects, which in turn reflect the self.

The myth, for Freud, was not the explanation so much as it was the “starting point for broader ideas which he then viewed as grounded in clinical/theoretical evidence” (Herron, 1999, p. 2). Freud (1911, 1914) is credited primarily for introducing narcissism into the psychoanalysis discussion in his developmental pathway (Giovacchini, 2000) although, the term “narcissism” and “narcissus-like” does appear in some earlier social science writings (Millon, 2004). Overall, Freud believed narcissism was extreme self-involvement and could have normal or detrimental pathology displays. He found that self-esteem was at the mercy of projected object love and “the self would either have to withdraw love from objects or get object love without giving it, or give it in such a way that it was experienced as self love whenever the self needed attritional psychic energy to maintain self-esteem” (Heron, 1999, p.2-3).

From beginning writings, Kohut (1971), another seminal theorist, agreed with Freud's description of the "narcissist as a person whose pathology is a means of dealing with incomplete personality development. The narcissist, therefore ... may be suffering the pain of his condition, but he is not a diminished moral agent. "On the contrary, the narcissist is continuously engaged in construction and reconstruction of his incomplete inner structures" (Stockholder, 1987, p. 108). The pattern of constant construction of boosting self-esteem might at first give the appearance of positive self-esteem, however, it is highly suspicious when a narcissist expresses positive self-views, as the disorder is characterized as a pathological form of self-love (Zeigler-Hill, Clark, & Pickard, 2008). Other characteristics and behaviors frequently found in narcissism (American Psychiatric Association, 1994) are: a concern for social dominance, an excessive need for admiration, arrogant, haughty, exploitativeness, arrogance, envy, preoccupation with fantasies of unlimited success, sense of entitlement, and lack of empathy, to name a few. Therefore, the Greek myth might have helped bring to light the personality disorder in question, but research has expanded a great deal from its small beginnings.

The Case for Narcissism

Although narcissism is traditionally thought of as an unhealthy pathology, there is a specific time of adolescent development where some narcissistic attitudes and behaviors are common and even crucial. Freud was the first psychologist to attempt an explanation of the reason behind normal narcissistic development. He theorized narcissism was a result of sexual awakening, characterized by taking himself/herself as a love object or sexual object as a child (Freud, 1911, 1914; Flynn & Skogstad, 2006). The awakening of becoming an object meant a need to relate and socialize with others in a way that creates a development "of impressions and attitudes about their own selves. This

self-development can likewise proceed in a harmonious and realistic way or in a distorted way” (Kernberg, 1998; Stone, 1998, p.8). When healthy self-development occurs it falls under developmental needs of self-preservation, knowing abilities and understanding personal limits, a realistic sense of how pleasing he/she is physically and in personality to others (Stone, 1998).

The cause of narcissism also is linked theoretically to a common developmental transition between the loss of childhood and early adulthood (Lapsley & Aalsma, 2006). It is believed the loss of omnipotence in childhood creates idealization in adolescent development, a narcissistic characteristic, and if adaptation is healthy the child has a more secure sense of self in early adulthood (Kernberg, 1991; Winnicott, 1965; Flynn & Skogstad, 2006). Narcissist behavior occurs in normative development because “separation-individuation requires the adolescent to shed parental dependencies, exercise autonomous agency and become an individuated self but within the context of enduring relational commitments.” (Blos, 1962; Lapsley& Aalsma, 2006, p. 54).

It is during the stage of adolescence, when narcissistic development will either adapt into healthy self-esteem, or continue on into adulthood. Therefore, there is a purpose and function found in the characteristic of narcissism in the adolescent mind (Waddell, 2006). As they move into early adult life the are:

Temporarily stranded, as if perched on some kind of raft in the tempestuous waters of unfulfilled need, unfamiliar sexual desire, unwarranted aggression and felt deprivation, in a sea of what seems like unrealizable aspirations and, most significantly, all too real relinquishments and losses – losses, for example, of the known childhood-

self with its known family structures. Yet in most, too, there remains, underneath all this, a striving towards independence, growth and development, towards intimacy and the potential satisfactions of maturity (Waddell, 2006, p. 22).

Thus what might be deemed detrimental behavior is actually an important time of development (Waddell, 2006). As adolescence is a time of development where feelings of self-interest and over-valued views of oneself are prominent, consequently, in early adulthood, persons can easily fall into despair and a loss of hope or self-esteem. It is a crucial time when insensitivity by parents has been shown to result in narcissistic pathology later on in life (Kout, 1971; Kernberg, 1989).

Research shows narcissistic behaviors come about due to defensive responses to ward off feelings of dependency on persons or experiences, which have proven to be disappointing and frustrating (Aalsma & Lapsley, 1999). Therefore, by way of compensation, the grandiose self is expressed as complete and self-sustaining. There is an illusion of self-sufficiency and perfection. Deprecation of others, contempt for dependency, and disdain for relationships accompany self-admiration. Kernberg (1989) found persons who's parents lacked empathy and failed at fulfilling needs during even just the first year of life were at risk for latter traits of narcissism. Adopted children and abused children are also at high risk for narcissism personality disorder, because of problems of developing attachment and the need to protect oneself (Kernberg, 1998). A fourth group of persons at risk are the wealthy children who are overindulged and therefore exhibit a prolongation of infantile narcissism (Kernberg, 1998). Lastly, those whose parents are divorced have been found to be at high risk, since they often times

attempt to replace the other parent and gratify the custodial parent, producing unhealthy amounts of omnipotence (Kernberg, 1998). Narcissistic behavior also lends itself to young adulthood over middle age (Wink, 1992).

Types of Narcissism

Recently, the multidimensionality of narcissism has been a focus in studies (Fossati, et al., 2010). Narcissism is traditionally broken down into two types: covert or vulnerable narcissism, and overt or grandiose narcissism (Cooper 1998; Hendin & Cheek, 1997; Kohut, 1971; Wink, 1991, 1996; Zeigler-Hill, et al., 2008). Although Wink (1992) described the third sub-type of narcissism, called autonomous, this type, he said, was the result of positive adjustment and mental health (Lapsley & Aalsma, 2006).

Grandiose, or overt narcissists are also referred to as oblivious narcissists (Gabbard, 1989, 1998; Zeigler-Hill, Clark & Pickard, 2008), whereas the vulnerable, or covert narcissists have been called the closet narcissists (Masterson, 1993; Zeigler-Hill, Clark & Pickard, 2008), hyper vigilant narcissists (Gabbard, 1989; Zeigler-Hill, et al., 2008) or hypersensitive narcissists (Hendin & Cheek, 1997; Zeigler-Hill, et al., 2008). Vulnerable narcissism and grandiose narcissism behaviors are similar in that both hold fantasies about high expectations of self, have strong feelings of entitlement, display a willingness to exploit others for their own gain, and seek approval and validation from others to maintain self-esteem (Cooper, 1998; Zeigler-Hill, et al., 2008).

Although two types of dysfunctional narcissism exist, it is possible for the same individual to suffer from both types. Overt displays of grandiosity and entitlement might be at the for-front, but inside could reside covert feelings of anxiety and worthlessness (Wink, 1996; Lapsley & Aalsma, 2006).

Grandiose Narcissism

Grandiose narcissism in this study uses the latest definition of narcissistic personality disorder defined by the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) as:

A pervasive pattern of grandiosity (in fantasy or behavior), need for admiration, and lack of empathy beginning by early adulthood and present in a variety of contexts, as indicated by at least five of the following: 1) a grandiose sense of self-importance, 2) preoccupied with fantasies of unlimited success, power, etc., 3) a feeling of their specialty, 4) need for admiration, 5) a sense of entitlement, 6) interpersonally exploitative, 7) a lack of empathy, 8) preoccupied with feelings of envy, and 9) arrogant and haughty attitudes with reactions of rage, shame or humiliation (p. 746).

Vulnerable Narcissism

Vulnerable narcissists are very concerned with seeking approval and validation from others in order to maintain what they perceive as self-esteem. However, the constant reliance on external validation creates less stable self-esteem and instability, resulting in stronger feelings of inadequacy and inferiority (Zeigler-Hill, et al., 2008). “Individuals appear to be (excessively sensitive), anxious and insecure, but with personal relationships characterized by self-indulgence, conceit, and arrogance (p.21). ...also includes the propensity to respond with irritation, hostility and affect-laden defensive behavior when provoked” (Fossati, Borroni, Eisenberg & Maffei, 2010, p. 26). Therefore, the vulnerable narcissist could seem shy and timid with empathic capacities at times, but still have the same defects in the structures of self-representation, self-esteem and fantasies of

grandiosity, just as the loud, ostentatious, self-centered braggart version of the overt narcissist.

Wink (1992) found women who scored high on the vulnerable narcissist test lacked the motivation to pursue the goal of raising a family or the goal of a career. Throughout the years, women who scored high on vulnerable narcissism early on in college life only became more vulnerable and felt more alienated in their relationships as time went by.

It is also possible for an individual to possess both grandiose and vulnerable behaviors at one time since “both the covert and the overt narcissists share: exploitativeness, a sense of entitlement, excessive envy, a diminished capacity for empathy, and a lack of sustained enthusiasm for their activities or their relationships” (Cooper, 1998; Wink, 1991).

Differences between Grandiose and Vulnerable narcissism

An important difference between grandiose and vulnerable narcissism is that, “vulnerable narcissists conceal these feelings and behavioral tendencies beneath a façade of inhibition, modesty, and concern for others, whereas grandiose narcissists do not bother to do so” (Zeigler-Hill, et al., 2008, p.756). Grandiose narcissists use blatant strategies, such as self-aggrandizement, to attract attention in order to increase their preserved self-esteem (Zeigler-Hill, et al., 2008). While vulnerable narcissists rely much more on gaining the approval of others.

From studying these differences researchers have predicted that although both types of narcissism display behaviors associated with low self-esteem, the characteristics of low self-esteem are different from one another. “The differences in association between the narcissistic subtypes and domain-specific self-esteem contingencies also

suggest the possibility that these forms of narcissism may differ in their relationships with other models of fragile self-esteem” (Zeigler-Hill, et al., 2008, pp. 767-768).

Healthy Narcissism Research

Although much research is focused on the detrimental aspects of narcissism, theorists have found evidence of narcissism adaptation into positive mental health. Some studies have shown a moderate degree of narcissism associated with mental health, where some narcissistic tendencies actively enhance psychological well-being (Davis, Claridge & Brewer, 1996; Lapsley & Aalsma, 2006). One reason for the amount of little evidence on healthy narcissism would result from the type of measurements used in such research. Since scales designed to gauge clinical defects in the self are used to research narcissistic tendencies, invariably, it would be difficult to find much evidence on adaptive functioning (Lapsley & Aalsma, 2006).

The possibility of healthy narcissistic development is acknowledged in Winnicott’s (1965) object relational theory and in Kohut’s (1977) self-psychology. Winnicott (1965) believed that some characteristics of narcissism could foster greater ambition, creativity and growth. Kohut (1977) found that narcissistic characteristics could lead to either the “grandiose” line of exhibition, or an “idealizing” line of goals. Both believed narcissistic “illusions” could be “used to creatively sustain psychological growth and self-development” (Lapsley & Aalsma, 2006, p.54), and that the development taking place in the adolescent time period would foster the greatest chance of narcissistic behavior and thinking. “This form of narcissism was associated with the self-investment that supports creative achievement, inner-directedness, self-reliance and empathy” (Lapsley & Aalsma, 2006, p. 55). They also theorized that some level of narcissistic

tendencies could enhance psychological well-being, especially those narcissistic characteristics of vulnerability or immaturity found in late adolescence.

Wink (1992), created the term “autonomous” narcissist to describe the phenomenon of one who adjusts from adolescent narcissism into positive mental health. Wink (1992) found women who proved to be autonomous were “consistently more resourceful, ambitious, and individualistic” than other women (p. 26).

However, many theorists believe the narcissistic “cycle of self-admiration and devaluation of others to protect against dependency and disappointment,” (Lapsley & Aalsma, 2006, p.54) more often than not will end in dysfunction than healthy adaptation (Rhodewlat & Morf, 1995; Lapsley & Aalsma, 2006).

Self-Esteem

Although narcissists hold the appearance of high self-esteem, perhaps the opposite could not be more true. Secure high self-esteem is linked with psychological health, but fragile high self-esteem, the kind found with narcissism, is associated with poor mental health (Zeigler-Hill, 2006). Most theorists acknowledge that the condition of self-esteem found in narcissism is fragile, and accounts for some narcissistic behaviors (Morf & Rhodewalt, 2001; Zeigler-Hill, et al., 2008). Often times narcissistic behaviors, especially those found in grandiose narcissism “serves as a façade to disguise their underlying feelings of insecurity and inferiority” (Kohut, 1966, 1977; Zeigler-Hill, et al., 2008, p. 754).

Narcissism Scale Development

By the beginning of the 1990’s three self-report measures of narcissism existed (Wink, 1991). First, the widely researched Narcissistic Personality Inventory (NPI), scale was created (Raskin & Hall, 1979, 1981; Wink, 1991). A second scale of

measurement was created by Morey, Waugh, and Blashfield (1985), and Wink and Gough (1990), as the Minnesota Multiphasic Personality Inventory (MMPI). Finally, a third, and also widely used scale created, is the Narcissistic Personality Disorder Scale (NPDS; Ashby, Lee & Duke, 1979; Wink, 1991). All three of these measurements derive from the third edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980; Wink, 1991)* standard narcissism scales emphasizing “characteristics of openly displayed grandeur and exhibitionism” (Wink, 1991, p.590).

Although each scale has high correlations for the characteristic of narcissism, NPI and NPDS have a well-documented lack of correlation (Wink & Gough, 1990; Wink, 1991). While NPDS and MMPI “reflect the themes of vulnerability and sensitivity” (Wink, 1991, p. 590), NPI draws on themes of exploitativeness and entitlement, which are narcissistic characteristics related to suspicion, anxiety and neuroticism (Wink, 1991).

Wink (1991) found the three DSM-III narcissism scales developed by Raskin and Novacek (1989), Morey et al. (1985), and by Wink and Gough (1990), loaded on two separate factors: Grandiosity-Exhibitionism and Vulnerability-Sensitivity, and shared factors such as conceit, arrogance and disregard for others (Wink, 1991).

While the two share considerable similarities, overt narcissism correlates with “openly expressed power orientation, manipulativeness, self-dramatization, independence, and broad interests” (Wink, 1991, p. 596). Covert narcissism correlated more strongly with defensiveness, hostility, sensitivity to slight, and concern with one’s own adequacy” (Wink, 1991, p. 596). Vulnerability-Sensitivity scored high on covert narcissism characteristics including: defensive, hypersensitive, anxious, and insistence on

having their way (Wink, 1991). Grandiosity-Exhibitionism scored high on overt narcissism characteristics including: self-assuredness, aggressiveness, exhibitionism, self-indulgence, and disrespect for others' needs (Wink, 1991).

RESEARCH QUESTIONS

As formerly stated, the purpose of this study is to examine various relationships of correlations between the four previously defined variables: grandiose narcissism, vulnerable narcissism, Facebook use, and online self-disclosure. Five hypotheses have been formed in order to examine important variations of how these variables associate one with another.

H1: There is a positive correlation between frequency of Facebook status updates and narcissism.

This hypothesis purpose is to examine the relationship between how the two types of narcissism might lend themselves to Facebook status update behavior. It would seem both grandiose and vulnerable narcissism would have behavioral reasoning behind the constant updating and changing of their status updates; more specifically, based on their shared behavior of exploitativeness (Wink, 1991). Additionally, the grandiose narcissist, partially defined by their need for admiration (American Psychiatric Association, 1994) would seem a likely candidate for one who frequently updates his/her status. While the vulnerable narcissists, who display great concern in seeking approval of others (Zeigler-Hill, et al., 2008), would also seem likely to post their updates in the hopes for positive responses in an effort to boost their self-esteem.

H2: College-aged students will score higher on vulnerable narcissism than grandiose narcissism.

The reasoning behind this hypothesis comes from the behavior difference between grandiose and vulnerable narcissism. Vulnerable narcissists are known for the obsessive worry of how others are thinking of them. This constant concern of seeking approval

from others (Zeigler-Hill, et al., 2008) has been found to be more common among young adults (Wink, 1992).

H3: There is a positive correlation between Facebook use and online self-disclosure.

This hypothesis derives from the multifaceted applications found on Facebook. There are several forums of communication found on Facebook in which online self-disclosure might be exhibited: wall posts, messaging, placement of photos or video, “like” applications, joining groups etc. Therefore, it would seem those who use, take advantage of, the many applications in order to display a picture of who they are will score highly on an online self-disclosure scale.

H4: There is a positive correlation between self-disclosure and both the grandiose and vulnerable narcissist.

This hypothesis is based on the knowledge that narcissists are known for their feelings of self-importance, exploitation and/or constant need for admiration and approval (American Psychiatric Association, 1994; Zeigler-Hill, et al., 2008; Wink, 1992). Since the definition of self-disclosure includes making the self-known to others (Jourard & Lasakow, 1958), it would seem the correlation between these two variables would be positive.

H5: College-aged women will have higher self-disclosure scores than college-aged men on Facebook.

This hypothesis derives from the popular self-disclosure socialization theory that women are socialized to self-disclose at a higher rate than males (Jourard & Lasakow, 1958; Gilbert, 1976; Chelune, 1976; Collins & Millers, 1994). Thus, it would seem

college-aged women would display higher behaviors of online self-disclosure based on previously taught traditional socialization roles.

METHODS

The survey used in this quantitative study comprises several pre-existing scales, with a few additional questions created by the researcher in order to help define the amount of time spent on Facebook, and demographics of the participants. Question topics regarding Facebook were taken from Bumgarner (2007). The survey includes two separate tests accounting for the two different types of narcissism: grandiose (Ames, Rose, & Anderson, 2006) and vulnerable narcissism (Hendin & Cheek, 1997). Lastly, a test accounting for online self-disclosure is taken from Magno, Cuason and Figueroa (2008).

Sample

The subjects used in this study were compiled from classes at a large private Western university (n= 381). Participants ranged from 18 to 25-years-old, with the average age being 19. This range of age has been called the “Generation Next” in which this study’s purpose is to examine levels of narcissism and self-disclosure among those most proficient at social networking sites (The Pew Research, 2007). More females completed the survey (n=218, 57%) than males (n= 160, 42%). Before the survey was used for the study, a pre-test of 25 subjects was completed in order to ensure a concise and focused questionnaire with 72 questions. No compensation was given to subjects for taking the survey.

Variables

Narcissism

As explained in literature review, there are two types of narcissism: grandiose and vulnerable. The fundamental difference between grandiose and vulnerable narcissism is that someone who is labeled a vulnerable narcissist worries obsessively about how and

what others are thinking of him or her. A grandiose narcissist is someone who is so obsessed with him/herself that they hardly notice anyone or anything else.

The vulnerable narcissism test comes from a study, HSNS, by Hendin and Cheek (1997) in which they re-evaluated Murray's Narcissism Scale (1938) and narrowed the scale to 10 questions significantly correlating to vulnerable narcissism. As shown in Table 1, the vulnerable narcissism reliability test scored low although it was an established scale with a reported alpha .52 and alpha .61 in Hendin and Cheek's (1997) study.

Table 1

<i>Reliability of Variable Test: Vulnerable Narcissism</i>	
Statement	
I can become entirely absorbed in thinking about my personal affairs, health, cares or relations to others.	
My feelings are easily hurt by ridicule or the slighting remarks of others	
When I enter a room I often become self-conscious and feel that the eyes of others are upon me.	
I dislike sharing the credit for an achievement with others	
I feel that I am temperamentally different from most people	
I often interpret the remarks of others in a personal way	
I easily become wrapped up in my own interest and forget the existence of others	
I dislike being with a group unless I know that I am appreciated by at least one of those present.	
I am secretly "put out" or annoyed when other people come to me with their troubles, asking me for my time and sympathy.	
<i>Cronbach's Alpha</i>	0.461

The grandiose narcissism scale comes from a study conducted by Ames, et al., (2006), in which they created the NPI-16 as a short measure of narcissism deriving from the NPI-40.

By adding appropriate additional weight to the vulnerable narcissism test questions in order to equal the grandiose narcissism test, narcissism scales were equalized

so that they might be compared. As shown in Table 2, the grandiose narcissism reliability test had no problems.

Table 2

<i>Reliability of Variable Test: Grandiose Narcissism</i>	
Statement	
Center of attention	
I am special	
My stories are great	
I want authority	
I am a going to be a success	
I can make people believe anything	
I expect a great deal from others	
I am extraordinary	
I always know what I'm doing	
I manipulate others easily	
People recognize my authority	
I love compliments	
I show off when I can	
I am more capable than others	
<i>Cronbach's Alpha</i>	0.863

Self-Disclosure

Self-disclosure is defined in this research as the voluntary act of being transparent in communication, revealing not only surface or public layers of information but also the private, sensitive feelings, thoughts, and portrayals of actions.

Self-disclosure scale items were taken and modified from Magno, et al., (2008) in their study on the development of the self-disclosure scale with multiple factors of self-disclosure, including: emotional state, interpersonal relationships, personal matters, problems, religion, taste, thoughts, and work/study/accomplishments. This scale was selected because of its multifaceted nature, which in turn will be used in this study to test hypothesis questions regarding correlations between types of self-disclosure and narcissism. As shown in Table 3, the self-disclosure reliability test scored high.

Table 3

<i>Reliability of Variable Test: Self-Disclosure</i>	
<i>Statement</i>	
Whenever I have a problem, I don't want anybody to know about it so I just keep it to myself.	
I talk about my failures	
I am quick to allow much about myself to be known by others	
I talk in great detail about my successes	
I share my goals	
I talk about my troubles in a particular subject/course in school	
I share my views about God	
I share what types of movies and TV shows I like to see	
I make sure people know what my interests are	
I tell others about my happy experiences	
I let others know when I am angry	
I share my sad moments	
I share my ideas or thought whenever I feel it is necessary	
I feel comfortable revealing many secrets about myself	
I talk about my weaknesses	
I tell the truth when asked about any matters concerning me	
I share information about myself willingly to people who are interested	
I share when my feelings have been hurt	
I share the things that make me proud of myself or give me self-esteem or self-respect.	
I am willing to share my life story	
I talk about the things in the past or present that I feel guilty about	
<i>Cronbach's Alpha</i>	0.937

Facebook

Facebook is the social medium created by Mark Zuckerberg in 2004 and used prolifically among college-aged individuals, with over 500 million active users (Facebook, n.d.). Facebook was chosen because of the interest of how this social forum might be affecting those involved in its' use. Questions covering Facebook use were taken largely from Bumgarner's (2007) study on the uses and gratifications of Facebook. Topics regarding Facebook use include: how the subject describes Facebook use, how much they self-disclose on Facebook, and the amount of their Facebook use. Questions taken from this study also directly correlated to questions of personal expression. As

shown in Table 4, the Facebook use reliability test of variables from the survey scored high.

Table 4

<i>Reliability of Variable Test: Facebook Use</i>	
<i>Statement</i>	
I take time choosing which photos I post	
I join the groups on Facebook that represent who I am or what I believe	
Facebook is an accurate picture of my life	
I want people to think of me well on Facebook	
If someone were to see my Facebook profile they would know me very well	
If I don't update my profile for a while I feel like I am letting people down	
Others can accurately gauge who I am on Facebook	
I can monitor my life against others on Facebook	
I spend time editing photos that I place on Facebook	
I use Facebook because I'm curious about what others are up to	
Facebook lets me craft my identity	
Facebook allows other people to understand who I am	
I put a lot of effort into my profile	
I try to make my profile represent what kind of person I am	
I'm less lonely with Facebook	
I like to see how other people react to my profile	
I adjust my profile based on how other people react to it	
I browse through other's photos	
I read walls	
I write on Facebook walls	
I frequently update my Facebook information	
<i>Cronbach's Alpha</i>	0.931

Additional variables

Variables such as age, the length of Facebook use, and gender are also included in the questionnaire in order to define the sample taken.

RESULTS

H1 predicted that there would be a positive correlation between Facebook status updates and narcissism. Narcissism was split into the two measures of vulnerable and grandiose.

H1a) Vulnerable narcissism and Facebook use correlations were very, very weak, $r(372) = -.01, p = .05$.

H1b) Grandiose narcissism and Facebook use correlations were not significant $r(370) = -.006, p = .40$.

H2 predicted that college students would score higher on vulnerable narcissism than grandiose narcissism test. However, the opposite was found to be true. College students scored significantly higher, $t(369) = 44.36, p = .001$, on grandiose narcissism, ($M = 26.18, SD = 5.21$), versus vulnerable narcissism ($M = 12.60, SD = 2.84$).

H3 stated there would be a positive correlation between Facebook use and online self-disclosure. Correlations between Facebook use and self-disclosure were moderately strong, $r(358) = .46, p = .01$.

H4 predicted a positive correlation between self-disclosure and both grandiose and vulnerable narcissism. The correlation between grandiose narcissism and self-disclosure was not significant, $r(367) = -.02, p = .35$, and neither was the correlation between vulnerable narcissism and self-disclosure, $r(369) = .05, p = .15$.

H5 stated that college-aged women would have higher self-disclosure scores than college-aged men on Facebook. Results were not significant $t(370) = 1.10, p = .28$.

Post Hoc

H1 examined the variables of Facebook status updates and narcissism, but the more broad correlation between Facebook use and narcissism was not included in the

hypotheses. Therefore, after initial hypothesis testing was completed, a post hoc test was run examining the correlation between Facebook use and narcissism. A significant correlation was found between vulnerable narcissism and Facebook use $r(357) = .18, p = .01$. No significance was found between grandiose narcissism and Facebook use $r(355) = -.04, p = .22$.

DISCUSSION

This study did not yield all the expected results. Out of the five hypotheses, three of the hypothesis results were not significant, one hypothesis found the opposite of the predicted correlation direction to be true, with only one resulting in a correlation in the predicted direction. Three of the four questionnaire measurements passed reliability tests. The test for vulnerable narcissism, which came from a study conducted by Hendin and Cheek (1997) in which they re-evaluated Murray's Narcissism Scale (1938) and narrowed the scale to 10 questions significantly correlating to vulnerable narcissism, however, did not score high on the reliability test. Thus, results were impacted due to the low reliability of the instrument since supportive hypotheses results may be suspect due to low reliability. Therefore, a more valid instrument for vulnerable narcissism should be used when measuring the correlations between narcissisms, Facebook use and self-disclosure.

It was predicted in H1 there would be an association between the frequency of Facebook updates and narcissism. Results showed vulnerable narcissism to approach a weak significant level while there was no association to grandiose narcissism. It is less surprising for vulnerable narcissism to result in approaching significance because of the unique characteristics associated with the disorder. It seems to be expected that someone who desires validation and attention would post their status updates in Facebook more frequently, as opposed to someone who prefers more grandiose displays of gaining attention. However, as stated before, if another instrument of measurement had been used for grandiose narcissism there is a possibility that results might have been different.

In order to correlate the variables in H2, the narcissism scales were equalized. Once that was completed, results showed grandiose narcissism having a much higher

mean than vulnerable narcissism. In fact, the combined grandiose narcissism mean scores were a little more than double that of the vulnerable narcissism mean scores. While this resulted in opposite correlations to those previously hypothesized, this seems likely due to two factors. The first is the low reliability score in which the vulnerable narcissism scale resulted. The second is a very probable confounding variable in the sample taken. Participants were drawn from Brigham Young University, which is known for actively religious students. Out of 34,000 enrolled, 98.5% are reportedly members of The Church of Jesus Christ of Latter-day Saints (Brigham Young University, 2010). Research has shown religiosity to greatly affect levels of narcissism.

Religiosity

While topics of mental health and religion have always been topics for research discussion it wasn't until the 1980's when a "renaissance of psychological interest occurred," and a real interest in the relationship between religiosity and mental health transpired (Bergin, Stinchfield, Gaskin, Masters & Sullivan, 1983; Judd, 1986, p.71). For many, the difficulty of studying such a relationship began with attempting to define the term *religiosity* (Strommen, 1971). Religiosity can mean attending a specific service regularly; affiliating with a religion, participating in religious acts, mystical experiences, or simply holding synonymous expressed beliefs (Strommen, 1971; Judd, 1986). Hoult (1958), described religion as: "the belief in, and the attempt to relate favorably to (a) values thought to have some transcendental importance, and/or (b) ultimate powers thought responsible for all, or some significant aspect of the fundamental order of the universe" (Hoult, 1958; cited in Judd, 1986 p. 72).

While perhaps not quite as difficult, the term *mental health* is also a complex variable, difficult to define. Judd (1986) even called the term *mental health* one of the

most ambiguous and evasive terms in psychology. However, Jahoda (1958; cited in Judd, 1986), outlined six aspects to a positive definition of mental health:

1. Accurate perception of reality, which includes seeing what is really there, in spite of pressures from the environment to distort;
2. Mastery of the situation, which includes a sense of control and success in love, work, and play;
3. Autonomy, which includes a sense of independence, self-determination, acceptance or rejection of influence, and the ability to surrender or commit oneself if one so desires;
4. Having a positive attitude towards oneself, which includes acceptance, awareness, identity, and lack of self-consciousness;
5. Personal integration, which includes an adequate balance of inner forces and a philosophy of life;
6. Self-actualization, which includes a sense that one is growing and developing toward self-realization and long-range goals which one has set for himself (p. 72).

Positive Mental Health and Religiosity

While not all religious orientations are equal in their effects on mental health, past research shows positive mental health is consistently associated with religiosity and that narcissism can even effectively aid in the psychological and spiritual development in adolescents (Aalsma, Lapsley & Daniel, 1999). In some case, researchers even believe narcissism to be a sign of religious or spiritual immaturity, since narcissistic attitudes counter the traditional Christian ideology of self-transcendence (Aslsma et al., 1999).

Wink, Dillon and Fay (2005), using longitudinal data, found spirituality to be related to a type of healthy narcissism. They found a positive correlation between autonomy and spirituality, “a type of healthy narcissism or self-investment that is characterized by personal independence, high self-aspirations, and resistance to social pressure” (Wink, et al., 2005, p. 155). However, since there are many forms of religiosity, it is important to specifically note that spirituality was operationalized as “intentional sacred practices” in the study conducted by Wink, et al., (2005).

There are two variables used to describe the effects of religiosity on mental health: hard variables and soft variables (Gartner, Larson, & Allen, 1991). Hard variables are demonstrating life events (such as drug use) that can be reliably observed and quantified (Aalsma et al., 1999). For example, Luhtanen and Crocker (2005) found college students who were more religious tended to have higher levels of resistant self-esteem, which in turn lessens the motivations of alcohol consumption. Also, “Jews have been consistently found to have the lowest rate of alcoholism and Catholics the highest. Protestants are in the middle” (Gartner et al., 1991, p.191). “Soft variables” are described as personological dispositions and are less often observed; therefore the effects of religiosity on these variables are not as well known (Aalsma et al. 1999). “Soft variables are defined as paper and pencil personality tests” endeavoring to discover underlying characteristics of mental health (Gartner et al., 1991, p.200).

Bergin (1983) also found 47% of his participants who reported a religious commitment had a positive association with mental health. Only 23% of participants' correlations with religious commitment alluded to negative mental health and 30% of the correlations were completely neutral. Larson et al. (1992), found a positive association

between religious commitment and mental health. “Dimensions of ceremony, social support, prayer, and relationship with God ... were all found to have positive association with mental health” (Larson et al., 1992, p. 558). However, the only variable associated with a greater potential for negative mental health was: meaning. “Meaning” was operationalized as personal purpose, values, beliefs and ethics (Larson et al., 1992). It is important to note that the degree of religious commitment, such as church attendance, seems to effect mental health more powerfully in a positive way.

It may be that religion, especially in its more traditional forms, provides a socially reinforced structure that paradoxically provides protection from many psychiatric ills and temptations to act out impulse but at the same time limits the development of more autonomous forms of higher personality development. In that sense, religion is a structure that provides both a floor, which prevents its adherents from falling too low, and a ceiling, which prevents them from riding too high (Gartner et al., 1991, p. 202).

Mental Health and Religiosity Critiques

Although most studies have found a positive association between religiosity and mental health, a few studies have reported a negative correlation and even argue that greater emotional health is found among those who are less religious (Ellis, 1980). “Probabilistic atheists, who may well constitute the majority of modern psychotherapists, also tend to believe that human disturbance is largely (though not entirely) associated with, and springs from, absolutistic thinking—from dogmatism, inflexibility, and devout shoulds, oughts, and musts” (Ellis, 1980, p. 635). However, Judd (1986) conducted a study of 6,270 subjects among five different types of religions and using 13 measures of

mental health found “no extreme differences as to the presence or absence of mental pathology” (Judd, 1986, p. 87). Therefore, data from Judd (1986) “contradict the notion set forth by Albert Ellis that religiosity is facilitative of mental illness” (Judd, 1986, p.87).

Gartner’s et al., (1991) review of research found, when using nonclinical populations, or college students, religiosity seemed to have either a neutral or more harmful correlation on mental health. However, when looking at clinical population, religiousness was associated with mental health. Gartner et al., (1991) found high mental health to have a stronger correlation between religious practices than those reporting only religious attitudes.

There are those in the past who have not found any relationship existing between mental health and religiosity (Gartner et al., 1991). Although other studies have found at least a tentative correlation between grandiose narcissism and certain aspects of religiosity, Zeigler-Hill et al., (2008) found neither grandiose nor vulnerable narcissism positively correlated with the variable of God’s love. But to some “it seems more likely that the inconsistencies testify to methodological complexities” (Gartner et al., 1991, p. 187). While Ellis (1980) has “called true believerism ... essentially emotional disturbance” (p. 635), and has disagreed with Allport and Ross (1967) religiosity classifications, research has shown that at least intrinsic religiosity (Watson et al., 1988) and other variables of religious commitment result in healthier psychological characteristics.

Degrees of Religiosity

There are many facets and varying degrees of religiosity which researchers have compartmentalize into quantifiable measures. Allport and Ross (1967) classified

religiosity into four subscales: intrinsically religious, extrinsically religious, indiscriminately proreligious and indiscriminately antireligious. However, for this study's purpose, two types of religious orientations will be further discussed: intrinsic and extrinsic.

Intrinsic

Those who fall under the heading of the intrinsic religious orientations are motivated to live the religion and “are committed to principle conduct and the search for truth” (Aalsma et al. 1999). “Persons with this orientation find their master motive in religion. Having embraced a creed, the individual endeavors to internalize it and follow it fully” (Allport & Ross, 1967, p. 434).

Persons labeled as religiously intrinsic have been found to have many psychological advantages. And perhaps most notable for this study, intrinsic religiosity has been found to have a negative correlation with the Narcissistic Personality Inventory (Watson, Ralph, Hood, Foster and Morris, 1988; Watson et al., 1984). “The intrinsic person may differ from those in other religious or antireligious orientations in that this belief system may inhibit development of narcissistic attitudes” (Watson et al., 1984, p. 260).

Intrinsic religious orientations were inversely related to maladaptive, exploitive aspects of narcissism, and that perhaps the sometimes-criticized belief of sin, actually resulted in lower explosiveness levels (Watson et al., 1988). “The present data offered no support for the idea that sin-related beliefs are *necessarily* maladaptive, and the partial correlations produced some limited evidence for the notion that the specific contents of such beliefs exert differential influences. Sin beliefs within the context of grace, but not

those emphasizing guilt were associated with lower explosiveness” (Watson et al, 1988, p.302).

Extrinsic

While intrinsic religious persons are deeply committed to living their beliefs, extrinsic religious orientation, “serves as a mean to acquire status, security, self-justification and other personal goals” (Aalsma et al., 1999). “The extrinsically motivated person *uses* his religion. ... Persons with this orientation are disposed to use religion for their own ends. In theological terms the extrinsic type turns to God, but without turning away from self,” (Allport & Ross, 1967, p. 434), which follows Gartner et al. (1991) findings and the variable of “meaning.” Not surprisingly then, extrinsic religious orientations were not significantly correlated to narcissism levels (Watson et al., 1984).

Religiosity Among Latter-day Saints

In a study conducted in order to create an empirical test using dimensions of religiosity, Cornwall & Albrecht (1986), found religious components: belief, commitment and behavior, to be strongly associated with one another among those who were LDS. BYU students have also been found to score “high on measures of religious devoutness and orthodoxy” (Bergin et al., 1987; Richards & Davison, 1992, p.473), especially in church attendance, high levels of participation in church service positions and adhering to church values and norms (Bergin et al. 1988). Scholars using BYU students have found them to be among the most “homogenous in terms of religious affiliation” (Kristensen, Pedersen, & Williams, 2001, p.77). Additionally, studies conducted on LDS youth have found that they tend to internalize their religious values and practices in such a way that they participate less frequently in delinquent activities (Chadwick & Top, 1993). While LDS youth who live in a predominantly LDS community have their beliefs reinforced by

society, Albrecht & Chadwick (1977) found LDS youth who don't live in an LDS-reinforced society still show a significant relationship between their religiosity and delinquency.

Mental health, substance abuse and delinquency are known to be strong correlating factors. There is a prevalence of mental health disorders among the youth in today's correctional facilities, where it is as high as 20% (Cocozza & Skowyra, 2000). A little over half of the general population with mental health disorders has a substance abuse disorder (Cocozza & Skowyra, 2000).

Therefore, it seems likely that the confounding variable affecting the results in this study's hypothesis is the levels of religiosity found among those sampled. For several years the Princeton Review has ranked BYU students as most religious among the nation's top universities (Merriman, 2008; Goldberg, 2010). BYU also has been listed as the number one stone-cold sober university in the United States by the Princeton Review list for 11 straight years (Merriman, 2008). The behavior and the high level of commitment found in BYU students to their religious beliefs significantly affect their levels of narcissism. In this survey when asked about how often they share their view about God, 178 out of 381 participants answered "sometimes."

It would seem a large portion of college-students attending BYU, who were participants in this study, would score high on mental health test due to the association of their high degree of religiosity, thus affecting hypothesis results. As stated previously, Aalsma, et al., (1999) found narcissistic traits to be signs of spiritual immaturity, and Wink et al., (2005) found spirituality to be correlated to healthy narcissism. Gartner's et al., (1991) hard and soft variables, affects of religiosity on mental health, when used to

describe research on LDS youth seem to point to positive mental health. The LDS religious orientation could also be described as falling under the Allport and Ross's (1967) definition of intrinsic, which as stated before, is negatively correlated with the Narcissistic Personality Inventory (Wastson, et al., 1988; Watson et al., 1984).

Hypothesis three was both predicted and found to display a positive correlation between Facebook use and online self-disclosure. Literature would agree with these findings since Facebook uses many technological tools in order to facilitate the sharing of ones-self despite the lack of non-verbal cues. By way of photo placement, text, video, the act in joining of causes or groups, each play a role in self-disclosing about oneself. Therefore, those who use Facebook in its entirety are prone to self-disclose at a higher level than those whose use of Facebook is minimal. Thus it seems individuals who are more guarded in communicating their ideas, preferences, values and events going on in their life are not likely to use Facebook, or social media, as the forum for their personal expression.

Hypothesis four predicted a positive correlation between self-disclosure and both grandiose and vulnerable narcissism in which results were not significant. However in retrospect, an association between self-disclosure and deficient self-regulation might have been the more correct variables to use as opposed to that of narcissism. Deficient self-regulation, under the heading of social-cognitive theory, might effectively give off the appearance of narcissism, (Ornstein & Kay, 1990, p.315) since individuals would spend significant time looking at and updating personal information to gratify needs. Therefore, while persons would perhaps conduct similar behaviors to those found in narcissism, persons would score low on narcissism scales.

Social-Cognitive Theory

In social-cognitive theory, when an individual chooses to use a medium, expected outcomes and likely consequences of behavior both provide incentives or disincentives in enacting the behavior. This can include external incentives, such as: social incentives, and status incentives, or, incentives can be internal, such as self-reactive and self-efficacy outcomes (LaRose, Mastro, & Eastin, 2001). “In the social-cognitive view, interactions with the environment (the media environment, in this case) influence media exposure by continually reforming expectations about the likely outcomes of future media consumption behavior (after Bandura, 1986)” (LaRose et al., 2001, p. 397).

In applying social-cognitive theory to social media use, the amount of valued social contacts should increase and possible incentives (sensory, monetary, social, status, activity and self-reactive) make a substantial contribution to the positive outcome of Internet use (La Rose et al., 2001). This could create positive emotions in an individual so that it becomes a medium wherein behavior is goal oriented to create positive emotions.

There might be “a direct ‘hot’ link between emotion and repetitive behavior (Metcalfe & Mishel, 1999), a classical conditioning mechanism that short circuits conscious choice of media alternative. In that case, habits could build through direct stimulus-response associations between media stimuli and the emotional responses they produce, without the formulation or execution of conscious consumption decisions” (LaRose, Lin, & Eastin, 2003, p.224).

Wherein, individuals develop a habit, which in turn turns into an addiction, as classical conditioning limits conscious alternatives.

Deficient Self-Regulation

A behavior associated in deficient self-regulation is habit and addiction. LaRose et al., (2001) argues habit could very well be seen in prior research but termed, or operationalized, as a symptom of Internet addiction, giving a more truthful indicator of deficient self-regulation. “Habit is a predictor of behavior, it does not appear to be gratification and is an indicator of deficient self-regulation within social-cognitive theory” (LaRose et al., 2001, p.402). This theory is not an “all-or-nothing phenomena that distinguished addicts from non-addicts but as a continuous variable that was systematically related to consumption even among those who fell short of the threshold for ‘diagnosis’ of Internet addiction” (LaRose, et al., 2003, p.243). Addiction is the next level of dysfunctional behavioral form of self-regulation following habit. “Addictions mark the failure of self-regulatory functions (Bandura, 1999), and deficient self-regulation has been conceptualized as the mechanism of so-called Internet addictions” (LaRose, et al., 2001, p. 398).

Therefore, addiction found on the Internet, especially addiction to social media, are only behavioral representations of deficient self-regulation. This would help explain why 72% of individuals reported to The Pew Research they felt they spent too much time on social media sites since “the self-described ‘addicts’ are aware that their usage is excessive but fail to apply standards that could supply the self-incentive to modify the behavior.” (LaRose et al., 2001, p. 411).

Deficient self-regulation seems to be a more plausible and more widely supported explanation of the effect seen in “Generation Next” usage of social media online. While individuals in this generation do report higher value in becoming famous and well known when compared to past generations, a link, if there is one, to social media is unknown. It

would seem the inability to self-regulate or cognitively choose alternative means of gratification to needs would give off the appearance of being self-absorbed if the media one is addicted to is social media. However, more research is needed in this area to prove correlations in one direction or the other.

In the final hypothesis, college-aged women were predicted to score higher on self-disclosure tests than college-aged men in correlation to their use of Facebook. The hypothesis was based on the theory of traditional socialization roles of self-disclosure carrying over into online social etiquette (Jourard & Lasakow, 1958; Gilbert, 1976; Chelune, 1976; Collins & Millers, 1994). Yet, test results were not significant. Therefore, tests results show that males and females reported self-disclose at similar levels online in social medias. Perhaps this is due to the fact that college-aged men feel more comfortable in self-disclosing online than they do in person. A reason for this could be that males are self-disclosing online to their females counterparts more frequently as opposed to other males. Thus, results would align with Derelga et al., (1985) gender self-disclosure theory that men self-disclose more intimately than females when they have just met someone, in an effort to further develop a relationship. Facebook is a social medium where new friends can be added all the time; therefore college is a prime time in life when meeting and associating with new people is important to their academic and personal life. Respectively, women might feel less inclined to self-disclose online when so many new people are constantly being added to their contact list, and a large majority of them are male, again similar to Derelga's et al., (1985) findings. Overall, test results were similar to Rubin et al., (1980) and Hacker (1981) who found little to no significant difference

between female and male amounts of self-disclosure. Therefore, it would seem from this study that this also carries over into online self-disclosure.

LIMITATIONS

The most prominent limitation existing within this study was the vulnerable narcissism scale failing reliability testing. The established vulnerable narcissism questionnaire by Hendin and Cheek (1997) correlates to Murray's Narcissism Scale (1938) on narcissism with shy tendencies. In order to minimize the amount of questions in the survey, Hendin and Cheek (1997) was chosen. However, in retrospect among this variable, it seems it would have been better to use Murray's Narcissism Scale (1938), which is the scale Hendin and Cheek reevaluated to create the vulnerable narcissism scale. The Murray's Narcissism Scale (1938) might result in a more accurate evaluation of variable characteristics associated with vulnerable narcissism.

Secondly the participants in this study might very likely be highly religious and this might have skewed levels of narcissism results as discussed previously. In the future a sample taken from a more secular population might produce different results.

A third limitation in this study that might have affected results is possible demand characteristics. No precautions were taken in the questionnaire to make it difficult for participants to know what variables they were being tested on. Therefore, with the simplicity of the questionnaire, participants may have figured out the purposes behind the survey. Research shows, especially in psychological testing, that participants are never neutral toward an experiment (Orne, 1962; Orne, 2009). "Insofar as the subject cares about the outcome, his perception of his role and of the hypothesis being tested will become a significant determinant of his behavior" (Orne, 2009, p.112). Additionally, the order in which the questions investigated each variable may have also influenced participants to answer less accurately than if there had been a difference in question orders.

The Future of Narcissism

This study comes on the cusp of the groundbreaking decision by the panel of DSM authors, who announced on Nov. 29, 2010, that narcissistic personality disorder does not exist in today's society and will not be included in the upcoming edition. "For 30 years the DSM has been the undisputed standard that clinicians consult when diagnosing mental disorders" (Zanor, The New York Times, 2010). However, this decision is one that has left many experts displeased and who are currently fighting the pronouncement (Zanor, The New York Times, 2010). A scientific division between researchers and clinicians is said to be a prominent reason why this battle has commenced.

Jonathan Shedler, a psychologist at the University of Colorado Medical School, said: 'Clinicians are accustomed to thinking in terms of syndromes, not deconstructed trait ratings. Researchers think in terms of variables, and there's just a huge schism.' He said the committee was stacked 'with a lot of academic researchers who really don't do a lot of clinical work. We're seeing yet another manifestation of what's called in psychology the science-practice schism' (Zanor, The New York Times, 2010).

The inconsistency of results in this study might be a result of this psychology "science-practice schism." From a clinical sense the symptoms of narcissism might be more present in the sample taken than the academic "deconstructed trait ratings" might have shown. For example, there were no reliability problems with the grandiose narcissism test and participants scored higher on the grandiose narcissism test than the vulnerable narcissism. Post hoc test also found Facebook use and vulnerable narcissism

variables correlations to be significant, although results may be suspect. However, no significance was found between self-disclosure, a “deconstructed trait,” and either type of narcissism.

Future research of the narcissistic personality disorder would seem eminent. While some might claim narcissistic personality disorder to non-existent, many clinicians and 40-plus years of previous research of the disorder cannot be invalidated easily.

SUGGESTIONS FOR FUTURE RESEARCH

Although about half of the hypothesis correlations did not yield the predicted results, this study can be effectively utilized as a building block for future research. Future research could fine-tune variables and test specific aspects of Facebook use and online self-disclosure to explain more in-depth why these correlations are present. However, a more reliable vulnerable narcissism scale should be used when further explaining a positive relationship with Facebook status updates since some hypothesis results may be suspect.

Secondly, it was found in this study that gender was not a determining factor in levels of online self-disclosure when using Facebook. This is particularly interesting since the majority of previous research concerning self-disclosure usually finds the factor of gender to be unequal. Future researchers should test different ages, excluding 18-25, to find if gender is only a null factor for this specific range of age. Undoubtedly Facebook, and the phenomena of social media, will also continue to be a topic of future research and these findings can be an aid in the coupling variables of social media, online self-disclosure and deficient self-regulation. Future studies might also test for a positive correlation between vulnerable narcissism and Facebook use as a whole, which was found to be significant post hoc.

Studies are also needed to test Hendin and Cheek's (1997) vulnerable narcissism questionnaire for reliability. Perhaps a different demographic would yield different results since the level of religiosity tended to be high in this study.

However, future narcissism studies will all be affected with the recent announcement of the 2013 DSM-V edition, said not to include narcissistic personality disorder. Future researchers will need to study why the time tested grandiose narcissism

scale failed. Questioning if it is today's society that has changed in that it has eliminated narcissism, or if a new instrument is needed to test for narcissism in today's society.

CONCLUSIONS

The inconsistencies of results in this study and an established scale failing reliability might be supportive of the DSM panel's decision. Perhaps narcissism personality disorder has fractured off into different forms over time. In the case of Internet use, deficient self-regulation might be a key in understanding habitual Internet behaviors that are similar to those of past narcissistic behaviors.

In a world and society that quickly changes with the advent of new and improved technology is it any wonder that society changes with it. The parameters of narcissistic personality disorder have possibly been affected by the prevalence of technology. Perhaps, just as Neil Postman has written, this is one of the many cultural consequences of its use. Obviously, some research show the academic scientific method failing to describe narcissistic personality disorder, and researchers are calling for it to be defined differently. It will be interesting to see what the symptoms that have been termed "narcissistic personality disorder" for several decades will be called in the future.

APPENDIX

- 1) What is your age? _____
- 2) What is your gender? Male Female
- 3) How long have you been a Facebook user?
 - a. 0-3 months
 - b. 3-12 months
 - c. Over a year
 - d. Over two years
 - e. Over three years
 - f. Over four years
- 4) I check Facebook almost:
 - a. Less than once a week
 - b. A couple times a week
 - c. Once a day
 - d. Multiple times a day
- 5) On a typical day, how many times do you update your status on Facebook?
 - a. Multiple times a day
 - b. Once a day
 - c. Once a week
 - d. Several times a week
 - e. A few times a month
 - f. Hardly ever

Please answer the following questions on the following scale:¹

1 = never, 2 = sometimes, 3 = frequently, 4 = always.

- 1) I take my time in choosing which photos I post. ____
- 2) I join the groups on Facebook that represent who I am or what I believe. ____
- 3) Facebook is an accurate picture of my life. ____
- 4) I want people to think of me well on Facebook. ____
- 5) If someone were to see my Facebook profile they would still not know me very well. ____
- 6) If I don't update my profile for a while I feel like I am letting people down. ____
- 7) Others can accurately gauge who I am on Facebook. ____
- 8) I can monitor my life against others on Facebook. ____
- 9) I spend time editing photos that I place on Facebook. ____
- 10) I use Facebook because I'm curious about what others are up to. ____
- 11) Facebook lets me craft my identity. ____

¹ Taken from Bumgarner 2007.

- 12) Facebook allows other people to understand who I am. ____
- 13) I put a lot of effort into my profile. ____
- 14) I try to make my profile represent what kind of person I am. ____
- 15) I'm less lonely with Facebook. ____
- 16) I like to see how other people react to my profile. ____
- 17) I adjust my profile based on how other people react to it. ____
- 18) I browse through other's photos. ____
- 19) I read walls. ____
- 20) I write on walls. ____
- 21) I update my information. ____

Read each pair of statements below and place an "X" by the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well, but pick the one that comes closest. **Please complete all pairs.**²

1. ____ I really like to be the center of attention
____ It makes me uncomfortable to be the center of attention
2. ____ I am no better or no worse than most people
____ I think I am a special person
3. ____ Everybody likes to hear my stories
____ Sometimes I tell good stories
4. ____ I usually get the respect that I deserve
____ I insist upon getting the respect that is due me
5. ____ I don't mind following orders
____ I like having authority over people
6. ____ I am going to be a great person
____ I hope I am going to be successful
7. ____ People sometimes believe what I tell them
____ I can make anybody believe anything I want them to
8. ____ I expect a great deal from other people
____ I like to do things for other people
9. ____ I am much like everybody else
____ I am an extraordinary person
10. ____ I always know what I am doing
____ Sometimes I am not sure of what I am doing

² Taken from Hendin and Cheek 1997.

11. ___ I don't like it when I find myself manipulating people
___ I find it easy to manipulate people
12. ___ Being an authority doesn't mean that much to me
___ People always seem to recognize my authority
13. ___ I know that I am good because everybody keeps telling me so
___ When people compliment me I sometimes get embarrassed
14. ___ I try not to be a show off
___ I am apt to show off if I get the chance
15. ___ I am more capable than other people
___ There is a lot that I can learn from other people

Please answer the following questions by deciding to what extent each item is characteristic of your feelings and behavior. Fill in the blank next to each item by choosing a number from the scale printed below.³

- 1 = untrue or strongly disagree
- 2 = uncharacteristic
- 3 = neutral
- 4 = characteristic
- 5 = true or strongly agree

- 1) I can become entirely absorbed in thinking about my personal affairs, my health, my cares or my relations to others. ___
- 2) My feelings are easily hurt by ridicule or the slighting remarks of others. ___
- 3) When I enter a room I often become self-conscious and feel that the eyes of others are upon me. ___
- 4) I dislike sharing the credit for an achievement with others. ___
- 5) I feel that I have enough on my hands without worrying about other people's troubles. ___
- 6) I feel that I am temperamentally different from most people. ___
- 7) I often interpret the remarks of others in a personal way. ___
- 8) I easily become wrapped up in my own interests and forget the existence of others. ___
- 9) I dislike being with a group unless I know that I am appreciated by at least one of those present. ___
- 10) I am secretly "put out" or annoyed when other people come to me with their troubles, asking me for my time and sympathy. ___

³ Taken from Ames, Rose and Anderson 2006.

Please answer the following questions by deciding how strongly the statement is true **when communicating on Facebook** by status updates, walls or any other forum or function found on Facebook based on this scale:⁴

- 1 = not true at all
- 2 = sometimes true
- 3 = frequently true
- 4 = always true

1. Whenever I have a problem, I don't want anybody to know about it so I just keep it to myself. ____
2. I talk about my failures. ____
3. I am quick to allow much about myself to be known by others. ____
4. I talk in great detail about my successes. ____
5. I share my goals. ____
6. I talk about my troubles in a particular subject/course in school. ____
7. I share my views about God. ____
8. I share what types of movies and TV shows I like to see. ____
9. I make sure people know what my interests are. ____
10. I tell others about my happy experiences. ____
11. I let others know when I am angry. ____
12. I share my sad moments. ____
13. I share my ideas or thoughts whenever I feel it is necessary. ____
14. I feel comfortable revealing many secrets about myself. ____
15. I talk about my weaknesses. ____
16. I tell the truth when asked about any matters concerning me. ____
17. I share information about myself willingly to people who are interested. ____
18. I share when my feelings have been hurt. ____
19. I share the things that make me proud of myself or give me self-esteem or self-respect. ____
20. I am willing to share my life story. ____
21. I talk about the things in the past or present that I feel guilty about. ____

⁴ Taken from Mango, Cuason and Figueroa 2008.

REFERENCES

- Aalsma, M.C., & Lapsley, D. K. (1999). Religiosity and adolescent narcissism: Implications for values counseling. *Counseling and Values, 44*(1), 17-29.
- Allport, G.W., & Ross, J.M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5*(4), 432-443.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Ames, D., Rose, P., & Anderson, C. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality, 40*(4), 440-449.
- Ashby, H.U., Lee, R.R., & Duke, E.H. (1979, September). *A narcissistic personality disorder MMPI scale*. Paper presented at the 87th Annual Convention of the American Psychological Association, New York, NY.
- Bains, L. (2009, January 27). Facebook overtakes MySpace as most popular social networking site. Retrieved January 11, 2011, from <http://www.switched.com/2009/01/27/facebook-overtakes-myspace-as-most-popular-social-networking-sit/>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1999). A sociocognitive analysis of substance abuse: An agentic perspective. *Psychological Science, 10*, 214-217.
- BBC. (2005, July 19). News Corp in \$580m internet buy. *BBC*. Retrieved January 11, 2011, from <http://news.bbc.co.uk/2/hi/business/4695495.stm>

- Bergin, A.E. (1983). Religiosity and mental health: A critical reevaluation and meta-analysis. *Professional Psychology: Research and Practice, 14*(2), 170-183.
- Bergin, A. E., Masters, K.S., & Richards, P.S. (1987). Religiousness and mental health reconsidered: A study of an intrinsically religious sample. *Journal of Counseling Psychology, 34*(2), 197-204.
- Bergin, A. E., Stinchfield, R.D., Gaskin, T.A., Masters, K.S., & Sullivan C.E. (1988). Religious lifestyles and mental health: An exploratory study. *Journal of Counseling Psychology, 35*(1), 91-98.
- Bimber, B. A. (2003). *Information and American democracy: Technology in the evolution of political power*. New York: Cambridge University Press.
- Brooks, D. (2009, September 15). High-Five nation. *The New York Times*. Retrieved February 17, 2010, from <http://www.nytimes.com/2009/09/15/opinion/15brooks.html>
- Blos, P. (1962). *On adolescence: A psychoanalytic interpretation*. New York: The Free Press.
- Boyd, D., & Ellison, N. (2007). Social networking sites: Definition, history and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230.
- Bumgarner, B. (2007). You have been poked: Exploring the uses and gratifications of Facebook among emerging adults. *First Monday, 12*, 11-15.
- Carter, K. (2003). Type me how you feel: Quasi-nonverbal cues in computer mediated communication. *ETC: A Review of General Semantics, 60*(1), 29-39.
- Chadwick, B.A., & Top, B.L. (1993). Religiosity and delinquency among LDS adolescents. *Journal for the Scientific Study of Religion, 32*(1), 51-67.

- Charnigo, L., & Barnett-Ellis, P. (2007). Checking out facebook.com: The impact of a digital trend on academic libraries. *Information Technology and Libraries*, 26, 23-24.
- Chelune, G.J. (1976). Reactions to male and female disclosure at two levels. *Journal of Personality and Social Psychology*, 34(5), 1000-1003.
- Clark, N., Lee, S., & Boyer, L. (2007). A place of their own: An exploratory study of college students' use of Facebook. Paper presented at the meeting of the International Communication Association, San Francisco, CA.
- Cocozz, J. & Skowrya, K. (2000). Youth with mental health disorders: Issues and emerging responses. Retrieved September 18, 2010 from www.ojjdp.ncjrs.org
- Collins, N.L., & Miller, C.L. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, 116(3), 457-475.
- Cooper, A. (1998). Further developments in the clinical diagnosis of narcissistic personality disorder. In E. Ronningstam (Ed.), *Disorders of narcissism: Diagnostic, clinical, and empirical implications* (pp. 53-74). Washington, DC: American Psychiatric Press, Inc.
- Cornwall, M., & Albrecht, S.L. (1986). The dimensions of religiosity: A conceptual model with an empirical test. *Review of Religious Research*, 27(3), 226-244.
- Cozby, P.C. (1972). Self-disclosure, reciprocity and liking. *Sociometry*, 35(1), 151-160.
- Cozby, P.C. (1973). Self-disclosure: A literature review. *Psychological Bulletin*, 79(2), 73-91.
- David, B. (2009, September 15). High-five nation. *New York Times*. Retrieved September 22, 2010, from

- <http://www.nytimes.com/2009/09/15/opinion/15brooks.html?scp=1&sq=David%20Brooks,%20September%2015,%202009&st=cse>
- Davis, C., Claridge, G., & Brewer, H. (1996). The two faces of narcissism: Personality dynamics of body esteem. *Journal of Social and Clinical Psychology, 15*(2), 153-166.
- Derlega, V.J., Metts, S., Petronio, S., & Margulis, S.T. (1993). *Self-disclosure*. Newbury Park, CA: Sage.
- Derks, D., Bos, A., & Grumbkow, J. (2008). Emoticons in computer-mediated communication: Social motive and social context. *CyberPsychology & Behavior, 11*(1), 99-101.
- Derlega, V.J., & Berg, J.H. (1987). Themes in the study of self-disclosure. In V.J. Derlega, & J.H. Berg (Eds.), *Self-disclosure: Theory, Research, and Therapy* (pp. 1-8). New York: Plenum Press.
- Derlega, V.J., Winstead, B.A., Wong, P.T.P., & Hunter, S. (1985). Gender effects in an initial encounter: A case where men exceed women in disclosure. *Journal of Social and Personal Relationships, 2*(1), 25-44.
- Ellis, A. (1980). Psychotherapy and atheistic values: A response to A.E. Bergins "Psychotherapy and religious values." *Journal of Consulting and Clinical Psychology, 48*(5), 635-639.
- Ellison, N.B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168.

- Facebook. (n.d) Facebook factsheet. *Facebook*. Retrieved July 12, 2010, from <http://www.facebook.com/press/info.php?factsheet>
- Fitzgerald, M.P. (1963). Self-disclosure and expressed self-esteem, social distance and areas of the self revealed. *The Journal of Psychology*, 56(2), 405-412.
- Flynn, D., & Skogstad, H. (2006). Facing towards or turning away from destructive narcissism. *Journal of Child Psychotherapy*, 32(1), 35-48.
- Fossati, A., Borroni, S., Eisenberg, N., & Maffei, C. (2010). Relations of proactive and reactive dimensions of aggression to overt and covert narcissism in nonclinical adolescents. *Aggressive Behavior*, 36(1), 21-27.
- Freud, S. (1911). 'Psychoanalytic notes on an autobiographical account of a case of paranoia (dementia paranoides)'. *S.E.* 12, 1-82.
- Freud, S. (1914). 'On narcissism; an introduction'. *S.E.* 18, 1-64.
- Gabbard, G. (1989). *Sexual exploration in professional relationships*. Washington, DC: American Psychiatric Press.
- Gartner, J., Larson, D., & Allen, G. (1991). Religious commitment and mental health: A review of the empirical literature. *Journal of Psychology and Theology*, 19(1), 6-25.
- Gilbert, S.J. (1976). Self-disclosure, intimacy and communication in families. *The Family Coordinator*, 25(3), 221-231.
- Giovacchini, P.L. (2000). *Impact of Narcissism The errant therapist on a chaotic quest*. Northvale, New Jersey: Jason Aronson Inc.
- Goldberg, J.A. (2010). Princeton review names colleges with 'most religious' students. *The Christian Post*. Retrieved on September 18, 2010, from

- <http://www.christianpost.com/article/20100806/princeton-review-names-colleges-with-most-religious-students/index.html>
- Gunderson, J., Ronningstam, E., & Smith, L.E. (1996). DSM-IV Sourcebook. In T.A. Widiger, A.J. Frances, H.A. Pincus, R. Ross, M. B. First, & W.W. Davis (Eds.), *DSM-IV Sourcebook* (pp. 745-756). Washington, D.C: American Psychiatric Association.
- Hacker, H.M. (1981). Blabbermouths and clams: Sex differences in self-disclosure in same-sex and cross-sex friendship dyads. *Psychology of Women Quarterly*, 5(3), 385-401.
- Hendin, H.M., & Cheek, J.M. (1997). Assessing hypersensitive narcissism: A reexamination of Murray's narcissism scale. *Journal of Research in Personality*, 31(4), 588-599.
- Herron, W. G. (1999). *Narcissism and the relational world*. Maryland, Oxford: University Press of America.
- Hoult, T.F. (1958). *The sociology of religion*. New York: Holt, Rinehart & Winston.
- Innis, H. (1950). *Empire and Communications* (4th ed.). Ontario, Canada: Dundurn Press Limited.
- Joinson, A.N. (2001). Self-disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*, 31(2), 177-192.
- Jourard, S. (1959). Self-disclosure and other-cathexis. *Journal of Abnormal and Social Psychology*, 59(3), 428-431.

- Jourard, S.M., & Lasakow, P. (1958). Some factors in self-disclosure. *Journal of Abnormal and Social Psychology, 56*(1), 91-98.
- Jourard, S.M. (1961). Self-disclosure patterns in British and American college females. *The Journal of Social Psychology, 54*(2), 315-320.
- Judd, D.K., (1986). Religious affiliation and mental health. *AMCAP, 12*(2), 71-108.
- Kernberg, P.F. (1989). *Psychodynamic psychotherapy of borderline patients*. New York: Basic Books.
- Kernberg, P.F. (1998). Developmental aspects of normal and pathological narcissism. In E.F. Ronningstam (Eds.), *Disorders of narcissism, diagnostic, clinical and empirical implications* (pp. 103 -122). Washington, DC: American Psychiatric Press.
- Kernberg, P.F. (1991). Transference regression and psychoanalytic technique with infantile personalities. *The International Journal of Psychoanalysis, 72*, 189-200.
- Kiesler, S., & Sproull, L.S. (1986). Response effects in the electronic survey. *Public Opinion Quarterly, 50*(3), 402-413.
- Kohut, H. K. (1971). *The analysis of the self*. Madison, WI: International Universities Press.
- Kohut, H.K. (1977). *The Restoration of the Self*. New York: International Universities Press.
- Kristensen, K.B., Pedersen, D.M., & Williams, R.N. (2001). Profiling religious maturity: The relationship of religious attitude components to religious orientations. *Journal for the Scientific Study of Religion, 40*(1), 75-86.

- Lampe, C., Ellison, N., & Steinfield, C. (2008). Changes in use and perception of Facebook. *Proceedings of the AMC conference on computer supported cooperative work table*, 721-730.
- Lapsley, D.K., & Aalsma, M.C. (2006). An empirical typology of narcissism and mental health in late adolescence. *Journal of Adolescence*, 29(1), 53-71.
- LaRose, R., Lin, C.A., & Eastin, M.S. (2003). Unregulated internet usage: Addiction, habit, or deficient self-regulation? *Media Psychology*, 5, 225-253.
- LaRose, R., Mastro, D., & Eastin, M.S. (2001). Understanding internet usage: A social-cognitive approach to uses and gratifications. *Social Science Computer Review*, 19, 395-413.
- Larson, D.B., Sherrill, K.A., Lyson, J.S., Craigie, F.C., Thielman, S.B., Greenwold, M.A., & Larson, S.S. (1992). Associations between dimensions of religious commitment and mental health. *American Journal of Psychiatry*, 149(4), 557-559.
- Luthanen, R.K., & Crocker, J. (2005). Alcohol use in college students: Effects of level of self-esteem, narcissism, and contingencies of self-worth. *Psychology of Addictive Behaviors*, 19(1), 99-103.
- Mader, T. F., & Mader, D. C. (1993). *Understanding one another* (2nd ed.). Madison, Wisconsin: Brown & Benchmark Publishers.
- Magno, C., Cuason, S., & Figueroa, C. (2008). The development of the self-disclosure scale. *Scribd*. Retrieved January 19, 2009, from <http://scribd.com/doc/7791609/The-Development-of-the-Selfdisclosure-Scale>

- Masterson, J. (1993). *The emerging self: A developmental self & object relations approach to the treatment of the closet narcissistic disorder of the self*. New York: Brunner/Mazel Publishers.
- Matheson, K., & Zanna, M.P. (1998). The impact of computer-mediated communication on self-awareness. *Computers in Human Behavior*, 4(3), 221-233.
- Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007). I'll see you on "Facebook:" The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1), 1-17.
- McKenna, K.Y.A., & Bargh, J. (1998). Coming out in the age of the internet: Identity 'demarginalization' through virtual group participation. *Journal of Personality and Social Psychology*, 75(3), 681-694.
- McKenna, K.Y.A., & Bargh, J.A. (2000). Plan 9 from cyberspace: The implications of the internet for personality and social psychology. *Personality and Social Psychology Review*, 4, 57-75.
- McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. McGraw Hill, NY: MIT Press.
- McQuillen, J., & Jeffrey, S. (2003). The influence of technology on the initiation of interpersonal relationships. *Education*, 123, 616-623.
- Merriman, R. (2008). BYU ranked no. 1 stone-cold sober university in U.S – again. *Daily Universe*. Retrieved September 18, 2010, from <http://newsnet.byu.edu/story.cfm/69123>
- Metcalf, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106, 3-19.

- Millon, T. (2004). *Personality disorders in modern life*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Morey, L.C., Waugh, M.H., & Blashfield, R.K. (1985). MMPI scales for DSM-III personality disorders: Their derivation and correlates. *Journal of Personality Assessment, 49*(3), 245-251.
- Morf, C.C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry, 12*(4), 177-196.
- Murray, H.A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Orne, M.T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist, 17*, 776-783.
- Orne, M.T. (2009) Demand characteristics and the concept of quasi-controls. In R. Rosenthal, & R. L. Rosnow (Eds.), *Artifacts in Behavioral Research* (pp. 110-137). Oxford, New York: Oxford University Press, Inc.
- Ornstein, P., & Kay, J. (1990). Development of psychoanalytic self-psychology: A historical-conceptual overview. In A. Tasman, S. Goldfinger, & C. Kaufmann (Eds.), *American Psychiatric Press Review of Psychiatry* (pp. 303-322). Washington, DC: American Psychiatric Press, Inc.
- Parks, M. R., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication, 46*, 80-97.
- Pearce, W.B., & Sharp, S.M. (1973). Self-disclosing communication. *Journal of Communication, 23*, 409-425.
- Postman, N. (1992). *Technopoly*. New York: Vintage Books.

- Postmes, T., Spears, R., & Lea, M. (1998). Breaching or building social boundaries? SIDE-effects of computer-mediated communication. *Communication Research*, 25(6), 689-715.
- Prinsen, F. R., Volmann, M.L.L., & Terwel, J. (2007). Gender-related differences in computer-mediated communication and computer-supported collaborative learning. *Journal of Computer Assisted Learning*, 23(5), 393-409.
- Randle, Q. (2001). A historical overview of the effects of new mass media: Introductions in magazine publishing during the twentieth century. *First Monday*, 6(9), Retrieved October 7, 2010, from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/885/794>
- Raskin, R., & Hall, T. (1988). A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54(5), 890–902.
- Raskin, R., & Novacek, J. (1989). An MMPI description of the narcissistic personality. *Journal of Personality Assessment*, 53(1), 66-80.
- Rhodewalt, F., & Morf, C.C. (1995). Self and interpersonal correlates of the narcissistic personality inventory: A review and new findings. *Journal of Research in Personality*, 29(1), 1-23.
- Richard, S. (1977). *The Psychology of Society*. Cambridge: Cambridge University Press.
- Richards, P.S., & Davison, M.L. (1992). Religious bias in moral development research: A psychometric investigation. *Journal for the Scientific Study of Religion*, 31(4), 467-485.

- Rubin, C. (2010, August 2). What privacy concerns? People spending more time on Facebook. Retrieved October 7, 2010, from <http://www.inc.com/news/articles/2010/08/nielsen-report-reveals-surge-in-time-spent-social-networking.html>
- Rubin, Z., Hill, C.F., Peplau, L.A., & Dunkel-Schetter, C. (1980). Self-disclosure in dating couples: Sex roles and the ethic of openness. *Journal of Marriage and the Family*, 42, 305-317.
- Schouten, A., Valkenburg, P., & Peter, J. (2007). Precursors and underlying processes of adolescents' online self-disclosure: Developing and testing an "internet-attribute-perception" model. *Media Psychology*, 10(2), 292-315.
- Scoble, R. (2007, November 1). Scoble's Social Media Starfish. Retrieved January 22, 2009, from <http://www.flickr.com/photos/dbarefoot/1814873464/>
- Sennet, R. (1977). *The fall of public man*. Cambridge, England: Cambridge University Press.
- Sheeks, M., & Zachary, B. (2007). Shyness, sociability, and the use of computer-mediated communication in relationship development. *CyberPsychology & Behavior*, 10(1), 64-70.
- Sheldon, P. (2008). The relationship between unwillingness-to-communicate and students' Facebook use. *Journal of Media Psychology*, 20(2), 67-75.
- Soyer, R., Rovenpor, J., Kopelman, E., Mullins, L., & Watson, J. (2001). Further assessment of the construct validity of four measures of narcissism: Replication and extension. *Journal of Psychology*, 135(3), 245-259.

- Stengel, R. (Ed.). (December 25, 2006/ January 1, 2007). Person of the year [Special issue] . *Time*, 26.
- Stevens, S., & Morris, T. (2007). College dating and social anxiety: Using the internet as a means of connecting to others. *CyberPsychology & Behavior*, 10(5), 680-688.
- Stockholder, F. (1987). Mirrors and narcissism. *Theory, Culture & Society*, 87(4), 107-123.
- Stone, M.H. (1998). Normal Narcissism, an etiological and ethological perspective. In E.F. Ronningstam (Eds.), *Disorders of Narcissism, Diagnostic, clinical, and empirical implications* (pp 7-28). Washington DC: American Psychiatric Press.
- Strommen, M.P. (1971). Introduction. In M.P. Strommen (Ed.), *Research on Religious Developments* (xv-xxiv). New York: Hawthorn Books Inc.
- Taylor, D.A., & Belgrave, F. Z. (1986). The effects of perceived intimacy and valence on self-disclosure reciprocity. *Personality and Social Psychology Bulletin*, 12(2), 247-255.
- Taylor, D.A., & Hinds, M. (1985). Disclosure reciprocity and liking as a function of gender and personalism. *Sex Roles*, 12(11/12), 1137-1153.
- The Pew Research Center For the People & The Press. (2007, January 9). How young people view their lives, futures and politics; A portrait of “generation next”. Retrieved January 7, 2009, from <http://people-press.org/report/300/a-portrait-of-generation-next>
- Waddell, M. (2006). Narcissism – an adolescent disorder? *Journal of Child Psychotherapy*, 32(1), 21-34.

- Walther, J. B., & Tidwell, L. C. (1996). When is mediated communication not interpersonal? In K. M. Galvin, & P. J. Cooper (Eds.), *Making connections: Readings in relational communication* (pp. 300-307). Los Angeles: Roxbury.
- Watson, P.J., Hood, R.W., & Morris, R.J. (1984). Religious orientation, humanistic values, and narcissism. *Review of Religious Research*, 25(3), 257-264.
- Watson, P.J., Hood, R.W., Foster, S.G., & Morris, R.J. (1988). Sin, depression, and narcissism. *Review of Religious Research*, 29(3), 295-305.
- Wilhelm, A. (2010, March 13). Facebook is now the number one US website – Poor Google is second. Retrieved January 22, 2011, from <http://thenextweb.com/us/2010/03/15/facebook-number-website-poor-google/>
- Wilkins H. (1991). Computer talk: Long distance conversations by computer. *Written Communication*, 8(1), 56-78.
- Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology*, 61(4), 590–597.
- Wink, P. (1992). Three types of narcissism in women from college to mid-life. *Journal of Personality*, 60(1), 7-30.
- Wink, P. (1996). Narcissism. In C. G. Costello (Eds.), *Personality characteristics of the personality disordered* (pp. 146–172). New York: Wiley.
- Wink, P., Dillon, M. & Fay, K. (2005). Spiritual seeking, narcissism, and psychotherapy: How are they related. *Journal for the Scientific Study of Religion*, 44(2), 143-158.
- Wink, P., & Gough, H.G. (1990). New narcissism scales for the California Psychological Inventory and MMPI. *Journal of Personality Assessment*, 54(3/4), 446-463.

- Winnicott, D.W. (1965). *The Family and Individual Development*. London: Tavistock Publications.
- Wintour, P. (2009, February 24). Facebook and Bebo risk 'infantilising' the human mind. *Guardian.co.uk*. Retrieved September 10, 2010, from <http://www.guardian.com/uk/2009/feb/24/social-networking-site-changing-childrens-brains>
- Brigham Young University. (2010). BYU demographics. Retrieved November 21, 2010, from <http://yfacts.byu.edu/viewarticle.aspx?id=135>
- Zanor, C. (2010, November 29). A fate that narcissistic will hate: Being ignored. *The New York Times*. Retrieved January 5, 2011, from http://www.nytimes.com/2010/11/30/health/views/30mind.html?_r=1
- Zeigler-Hill, V. (2006). Discrepancies between implicit and explicit self-esteem: Implications for narcissism and self-esteem instability. *Journal of Personality*, 74(1), 119-143.
- Zeigler-Hill, V., Clark, B., & Pickard, J.D. (2008). Narcissistic subtypes and contingent self-esteem: Do all narcissists base their self-esteem on the same domains? *Journal of Personality*, 76(4), 753-774.