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The purpose of Facebook: The value of Facebook friends in increasing self-perceived popularity

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THE PURPOSE OF FACEBOOK:
THE VALUE OF FACEBOOK FRIENDS IN INCREASING SELF-PERCEIVED
POPULARITY

A Thesis

Submitted

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of the Requirements for the Designation

University Honors with Distinction

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ABSTRACT

A survey of 407 students was conducted at a medium-sized Midwestern university to examine what motivates college students to have friends on Facebook. The goal of the study was to see if people interact with more Facebook friends than they do offline friends on a regular basis and to see if the primary reason students become friends with others on Facebook is to increase their popularity. The results suggest that students do not become Facebook friends with others to increase their popularity, which is in contrast to previous research. Results were inconclusive in determining if people regularly interact with more Facebook friends than they do offline friends.

INTRODUCTION

A social networking site (SNS) is defined as a "web-based system 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, 2007, p.2). Facebook is a social networking website where people can create an online profile with information about themselves, and its popularity has increased dramatically since its creation in 2004. An estimated 93% of college students have a Facebook account (Sheldon, 2008). Facebook had 200 million unique visitors to its website between January and November of 2008, and it follows Blogger as the second most visited SNS (Schonfeld, 2008).

Facebook CEO Mark Zuckenburg first made Facebook available on February 4, 2004 to fellow Harvard students. It was designed to be a digital version of Harvard's physical class directories that have a photograph of each student with some identifying facts. Facebook continued to expand to include other universities, and in 2006, Facebook changed its membership requirements so that anyone who is thirteen years or older can join the website if he or she has a valid email address.

Facebook users create their own profile where they can post information about themselves: contact information, hobbies, interests, and pictures. They can also view the profiles of others in their network. Members of a network may live in the same geographic area, attend the same school, or may be members of the same organization.

Users can become friends with people they know in their same network or in other networks. Once two people have become "Facebook friends," they may post messages on each other's profiles for public viewing and share pictures and videos. Users can also join interest

groups, use applications that have entertainment and social purposes, and invite their friends to attend events.

When looking at the functionality Facebook offers, Stern and Taylor (2007) found that college students indicated these were their primary uses of Facebook:

- **Common Uses-Used Several Times Per Day or Week**
  - Sending messages to friends
  - Viewing photos
  - Keeping in touch with old friends
  - Making plans
  - Checking out people to learn more about them
  - Entertainment
  - Procrastination
- **Somewhat Frequent Uses- Once a Week to Once A Month**
  - Asking other students course-related questions
  - Tracking people to see what they are doing
  - Posting photos to their Facebook profile
- **Not Utilized-Never Utilized**
  - Meeting new romantic partners
  - Online dating
  - Advertising social and academic events
  - Recruiting for social clubs and organizations
  - Avoiding socially uncomfortable situations

Facebook, SNS, and other forms of electronic communication (e.g. instant messaging, text messaging, email) play a significant role in the lives of college and high school students. Current technology allows students to be more connected to each other, even through time and geographic barriers, more than any other generation in history. For these reasons Facebook and other SNS have been researched to see how they influence college and high school students' social skills and social interactions.

The technological capabilities of Facebook have made it easy for users to connect to other people on Facebook. Users can search for people they know or browse for people with their similar interests and become friends with them at a click of a button. These electronic friendships can be called forward at any time and can remain dormant (even for years) until one

friend decides he or she wants to interact with the other. Facebook is free to users. This means

that it does not cost users anything to keep these dormant relationships, and the ease of recalling

these friendships makes maintaining them easy. This may explain why students report having a

higher number of friends, 150-200 (Ellison, Stienfield, & Lampe, 2007), or 200-350 (Sheldon

2008) on Facebook than users may be expected to report if they were to report their number of

offline friends.

Time and resource constraints help make a reasonable assumption that a person cannot

interact with all of these friends on a regular basis. The fact that Facebook friendships can

remain dormant for years means that two Facebook friends may never interact after agreeing to

be friends. If Facebook users have a significant number of friends, and it is unlikely that they can

interact with all of them, then why do Facebook users have so many Facebook friends?

The ability for Facebook users to see how many friends a person has on Facebook may

answer this question. Facebook users know that their friend count increases with every friend

they add or accept. Many of us can recall stories of talking to children where popularity was

described by discussing the number of friends they had. The first students to have Facebook tried

to obtain as many friends as possible (Cassidy, 2006). This evidence, along with my own

anecdotal evidence of having several people befriend me after meeting me on one or two

occasions, has led me to suspect that Facebook users knowingly add or accept friends they know

they will not interact with as a way to increase their perceived popularity.

In order to examine these issues this paper includes a review of literature on some

different proposed motives a college student may have for using Facebook, as well as a review of

literature on the similarities and differences between a traditional friend in an offline context and

a Facebook friend. Next will be a summary of the measures used, the hypotheses, research

methods, and results. The paper will conclude with a discussion of the results, the limitations of the study, and directions for future research. The conclusions drawn will give insight into whether or not Facebook users interact with more friends on Facebook than they do in an offline context, and it will determine if users have Facebook friends to increase their popularity.

MOTIVES OF FACEBOOK USAGE

The primary purpose of a SNS such as Facebook is to allow users to interact with other members. Interaction can take many forms. Users can communicate with each other, play games, blog their feelings on a particular issue, or invite other users to a party or event. Research has been done to see what motivates people to use Facebook for these reasons and how it affects the friendships an individual has with other Facebook users. The five motives of Facebook usage that have been identified are self-promotion and narcissism (e.g., Cassidy, 2006; Twenge, 2006; Buffardi & Campbell, 2008), entertainment (Facebook, 2008), social capital (Ellison, Steinfield, & Lampe, 2007), a poor offline social network (Ross, Orr, Sisic, Arseneault, Simmering, & Orr, 2008; Sheldon, 2008), and popularity (Zywica & Danowski, 2008; Tong, Van Der Heide, Langwell, & Walther, 2008). In a review of the literature on why people use Facebook, these five motives were the most recurring. Previous research on each of the five identified motives of Facebook usage is now presented in the following sections.

Self-Promotion and Narcissism

Duncan Watts, a sociologist at Columbia, said there is a dramatic shift in the way young people see the Internet (Cassidy, 2006). He stated younger Internet users are accustomed to being connected by the Internet, and they no longer find the concept interesting. Watts felt that Facebook is more about voyeurism and exhibitionism because people like to express themselves (Cassidy, 2006). Calvert (2000) also felt that Facebook supports voyeurism and exhibitionism

among its users, but other research has shown that Facebook is used more for voyeurism than it is for exhibitionism (Bumgarner, 2007).

Facebook's use as a tool for exhibition may appeal to people with high amounts of narcissism. Jean Twenge (2006) thought that younger Americans are currently using SNS more because they are narcissistic. She stated that the main users of SNS are in their mid-teens to age thirty-five. The Baby Boomers taught this group, named "Generation Me", to be individualistic and encouraged them to develop their self-esteem. Twenge explained this is why narcissism has risen in America since the 1950's, as shown by the fact that this group has scored consistently higher on the Narcissistic Personality Inventory (NPI) than older Americans. Rosen (2007) stated that we must also remember the context of the situation. Before the creation of SNS, high class citizens had used painted portraits for centuries to display their importance and power. SNS, therefore, could be a technological version of the painted portrait with technology allowing these portraits to be created by and accessed by more people (Rosen, 2007).

Buffardi and Campbell's (2008) research investigated the role that narcissism plays in social networking sites. Narcissism is linked to higher levels of social activity in social networking sites because it allows Facebook users to share an affiliation with someone they have interacted little with. Narcissists like to be in control, and SNS allow these users to control how they present themselves. Buffardi and Campbell found that people rating higher in narcissism did have more Facebook friends and posted more messages on their friends' walls (an area on their profile), but there was no evidence that they put more information on their own profile about themselves.

Sheldon (2008) found that 19% of users change their profile daily. Another 19% change their profile one to three times a week, and an additional 50% update their profile every few

months. The fact that 38% of Facebook users change their profile multiple times a week may be an indication that Facebook is used as a form of self-promotion. Facebook representative Chris Hughes, as cited by Cassidy (2006), agreed that Facebook is used to emphasize different aspects of a user's personality.

Entertainment

Facebook offers several forms of entertainment through the development of Facebook applications. These applications allow users to find tools and games that match their interests. The Facebook bumper stickers application allows users to put a funny picture or quote on a friend's wall. Users can also use these applications to identify who they are related to or play poker. Over 95% of Facebook members have used an application built on the Facebook platform. There are over 24,000 applications and 140 new applications are added daily (Facebook, 2008). Entertainment may also take the form of viewing other's profiles, sharing videos, or joining common interest groups.

In one study respondents answered questions about why they use Facebook (Sheldon, 2008). "Passing Time" received the highest score. "Maintaining Relationships" received the next highest score, and was followed by "Entertainment" as the third highest score.

Maintaining Relationships: Social Capital

Facebook has been seen as a way to maintain social capital, which is defined as, "the resources accumulated through the relationships among people" (Ellison, Steinfield, & Lampe, 2007, p.4). Coleman (1988) said that social capital can take many forms, including obtaining information and understanding the norms, expectations, and obligations among individuals and groups. The Internet has been identified as a source of both increases and decreases in social capital for its users (Ellison et al., 2007).

Putnam (2001) said that there are two forms of social capital: bridging and bonding. Bridging social capital is used as a way to create "weak ties" that can offer useful information or new perspectives, but no emotional support. Bonding social capital is found between individuals in emotionally close relationships, such as relationships with family and friends. Hansen (1999) said that weak ties are important in developing and maintaining bridging social capital because the cost of information and resources in maintaining many strong ties often offsets the benefits. A weak tie helps create access to information without the cost of creating a close, emotional relationship.

Ellison et al. (2007) used this information as the basis for a study on how Facebook aided students in creating and maintaining social capital. They found that 96% of college students listed their high school in their profile. Facebook users can search for people that attended a certain high school, and therefore, Ellison et al. concluded that adding the high school students attended to their profile was a good way to create and/or maintain bridging capital with those they went to high school with. They also found that Facebook was less useful for creating bonding social capital.

Ellison et al. (2007) suggested that Facebook can actually help people maintain and possibly create new forms of social capital because it utilizes current technology. Social capital is based on the concept of accumulating information and resources, and Facebook allows users to accumulate more information about their friends. The ability to search for specific people on Facebook and to reconnect with a dormant friend at the click of a button are both ways to maintain social capital. Becoming a Facebook friend with someone a user does not know offline, reading the Facebook newsfeed that gives details on all of a user's friends' Facebook activities,

and joining Facebook groups that are related to a common interest are all ways to create new forms of bridging social capital and possibly bonding social capital.

A research focus group at a small, residential college in Kansas supported the idea that Facebook is used to maintain social capital (Haspels, 2008). Through group discussions it was determined that the three functions of Facebook for college students are to maintain long distance relationships, keep informed about those around them, and build relationships with other students they see regularly.

Facebook has shown an offline to online trend, meaning that people use it to further interactions with people they have met offline. Ellison et al. (2007) found that students use Facebook more to continue relationships with people they know offline than they do to meet new people. Another study (Mayer & Puller, 2007) found that college students became Facebook friends with people who were in their same student organization, with people they met through another friend, with other students who attended their same high school, or with those who they took a course with. Only 0.4% of friends interacted only online (Mayer & Puller, 2007). This evidence of the ways college students meet their friends supports the idea of SNS serving as a way to maintain and build bridging capital with people they meet offline. This is opposite of most SNS, where people first meet online and then continue the relationship in an offline context (Ross, Orr, Sisic, Arseneault, Simmering, & Orr, 2008).

Enhancing/Compensating For A Poor Offline Social Network

There are opposing theories about who benefits from Facebook use. The 'Rich Get Richer' Hypothesis (Zywica & Danowski, 2008) said that people with extensive offline social networks use SNS to further develop these networks online. The 'Poor Get Richer' Hypothesis stated that SNS allow people with poor offline social networks further develop their relationships

by utilizing online functionalities. Ross et al. (2008) found that these hypotheses were true for different groups of people. The 'Rich Get Richer' Hypothesis was valid for people that were extroverted and had more self-esteem, whereas the 'Poor Get Richer' Hypothesis was proven to be true for introverts with less self-esteem. Extroverts, however, did not have more Facebook friends because they were extroverted, and no other significant differences were found based on the other Big Five Personality traits: neuroticism, openness to experience, agreeableness, and conscientiousness (Ross et al., 2008).

A person's offline social network may be poor if he or she does not value face-to-face communication. Sheldon (2008) found that people who are more willing to communicate in real life are also the ones more likely to communicate online, and they also have more Facebook friends. These findings support the 'Rich Get Richer' Hypothesis.

Popularity

Popularity has several definitions, and in many studies it has been defined by the respondent (Zywica & Danowski, 2008). White, as cited by Zywica and Danowski (2008), said that the number of friends a person has and the number of posts a person has on his or her wall are two indications to Facebook users that an individual is popular. Zywica and Danowski found that respondents referred to friends when describing what it means to be popular on Facebook. Two-thirds of the respondents said they knew somebody who tried to look popular on Facebook, and that adding friends was how people tried to increase their popularity.

Another kind of popularity, sociometric popularity, is defined by Tong, Van Der Heide, Langwell, and Walther (2008) as the number of friends or connections a person has. People with sociometric popularity are judged to be more trustworthy, kind, and dominant (Parkhurst & Hopemeyer, 1998).

Tong, et al. (2008) used this information in their study to research how sociometric popularity affected students' ratings of how socially attractive a person is. Students were presented multiple Facebook profiles where the only changing element was the number of friends the profile owner had. Their study found a curvilinear relationship between how socially attractive a user was and the number of Facebook friends the user had. After viewing profiles where the owner had 102, 302, 502, 702, and 902 friends, the profile with 302 friends was perceived by raters to be the most socially attractive. The profile with 502 friends was perceived to be the next most socially attractive, followed by 702, 902, and 102 friends. This suggests that Facebook users notice the number of friends another Facebook user has, and it influences how socially attractive a person is perceived to be.

TRADITIONAL VS. FACEBOOK FRIENDS

The term friend can have different meanings to different people. A common question among kids is, "Will you be my friend?" and there is always a competition to see who is the "best friend." As people grow older, the term friend can take on new meanings. There are the friends a person works with, the friends from a school or organization, the friends a person socializes with, and the friends who serve the dual role of being a family member and a friend. Dunbar and Hill (2003) found that the average human group size consisted of about 150 people. Of these 150 people, 15 were considered to be close friends, and of those, a person had about 5 very close friends. Parks' research supported their findings. For years Parks asked people to list the friends and family they felt close to. Although the responses varied, people indicated they felt close to between 10 and 20 people (M. Parks, personal communication, December 5, 2008).

The increased number of friendships a person has by using a SNS has caused some scholars to create a distinction between a traditional friend and a SNS friend (Rosen, 2007;

Boyd, 2006). The reason that this distinction between traditional friends and SNS friends is

necessary is because of the inconsistencies in the numbers and patterns of interactions a person

has with their traditional friends and their SNS friends. On SNS sites such as Friendster and

MySpace users can have millions of friends, and Facebook users can have hundreds of friends.

Boyd (2006) said that those that perpetuate the notion that there is no difference between these

two kinds of friends are the people that do not use SNS.

Friendster is a good case study of the unexpected reasons two people may become friends

on a SNS. Friendster founders expected users to add their traditional friends, but this was not the

case. Friendster users became friends with all sorts of people with no apparent methodology.

They befriended people they had not talked to in years, people they thought they knew, and even

people who just seemed intriguing (Boyd, 2006).

Rosen (2007) defined traditional friendship as "a relationship which, broadly speaking,

involves the sharing of mutual interests, reciprocity, trust, and the revelation of intimate details

over time within specific social (and cultural) contexts" (p. 26). Rosen said that SNS friends

cannot fill the same role as a traditional friend "…because friendship depends on mutual

revelations that are concealed from the rest of the world, it can only flourish within the

boundaries of privacy. The idea of public friendship is an oxymoron" (p. 26).

Rosen felt that friendship is different on SNS than it is in traditional senses because

anyone can see who he or she is friends with. It is also "oddly bureaucratized" (Rosen, 2007, p.

26) because people can spend lots of time organizing and even ranking their friendships.

Boyd (2006) defended current SNS "friending" practices because she thought that they

"resolve the social tensions that emerged due to technological limitations" (p. 2). She elaborated

that these differences are caused by the unique way SNS are designed. Technology makes it

easier to find a friend on a SNS, and most SNS are available twenty-four hours a day, seven days a week (Boyd, 2006).

Just because someone adds a friend on a SNS does not mean he or she would not prefer to use the SNS to connect with his or her traditional friends. Although SNS provide unique ways to become friends with others, they encounter many of the same problems encountered in traditional social networks. Boyd (2006) said if a person is presented a situation where another person expects to be considered a friend, the person will call them a friend to "save face" (p. 4). Since most SNS make it easy to see when a person has accepted or rejected a friend request, the least socially awkward decision is to accept the request (Boyd, 2006). The idea that people "save face" in their friendships on Facebook suggests that friendships do not mean as much on Facebook as they do in offline contexts, and sometimes it might be easier to become a friend with someone instead of telling them no. It also suggests that people may have more friends on Facebook than they do in an offline context.

Do Facebook users add and accept friends in the same ways that Friendster account holders do? Some evidence has shown that they do. Stern and Taylor (2007) did a study that showed most Facebook users accepted friend requests from people they did not know. Twenty-two percent did not deny friend requests because they did not think it meant much. Twenty percent of the respondents said that the purpose of Facebook is to meet people, so they accepted friend requests. Cassidy (2006), who corresponded with some of the first Facebook account holders at Harvard, found similar evidence. Multiple people indicated they competed to see how many friends they could get. This research also suggests that friendships do not mean as much on Facebook as they do in offline contexts.

SUMMARY OF RESEARCH RELEVANT TO THIS STUDY

The fact that there have been proposed differences between a traditional friend and a

Facebook friend indicates that Facebook friends may be valued differently than traditional

friends. Boyd (2006) has proposed that some Facebook friendships occur to "save face," and

Stern and Taylor (2007) found that 22% of people thought Facebook friendships meant little, and

another 20% thought that the purpose of Facebook was to meet people. This suggests that

Facebook users are not valued as much as traditional friends.

The research presented on popularity as a motive for Facebook usage is relevant to this

study because it shows that people consider the number of friends another person has when

deciding if he or she is popular. Furthermore, students have already indicated that one way

people try to look popular is by having friends on Facebook (Zywica & Danowski, 2008). The

ideas that people value friendships less on Facebook and add friends to look more popular are of

central interest to this study, and these concepts will be used in developing the measures for this

study.

HYPOTHESES

Hypothesis 1

In order to address the overarching question if students have many Facebook friends to

increase their popularity, there must first be an analysis done to see how many Facebook friends

people interact with on a regular basis. If people interact with many of their Facebook friends on

a regular basis, then there is less evidence that a motive for using Facebook is to increase a

person's popularity because he or she utilizes all of the Facebook relationships he or she has.

None of the literature reviewed asked Facebook users to indicate how many friends they interact

with on a regular basis. Technology makes it easier to have many friends on Facebook (Boyd,

2006). Furthermore, people may become friends with people to "save face" (Boyd, 2006), and Stern and Taylor (2007) found that 22% of people thought Facebook friendships mean little, while another 20% thought that the purpose of Facebook was to meet new people. This research has led me to hypothesize:

Hypothesis 1: People interact with more Facebook friends than they do traditional friends on a regular basis.

"Interacting with Facebook friends" will be defined as it is presented to respondents in the survey, "such as viewing profiles, posting on a wall, sending a message, inviting to an event or group, etc." This definition is being used because interaction on Facebook can take many forms. It does not have to be direct communication. For example, an individual may look at other peoples' profiles or read about them on the Facebook newsfeed without them knowing.

"Regular basis" will be defined as the number of people a person has interacted with in the two weeks prior to taking the survey. This study will be conducted on college students, who attend the same university and live within a fairly close proximity of each other. Haspels (2008) found that one of the main purposes of Facebook for college students is to build relationships with other students they see regularly. In a given week two friends on campus might not see each other if they have a lot of tests, work, or if they leave to go home for the weekend. A two week period will increase the probability that friends will have an opportunity to interact with each other.

"Traditional friends" will be defined as the number of people a person feels close to in an offline context. Dunbar and Hill (2003) found that a person feels close to approximately 15 people, while Parks estimated people feel close to 10-20 people (M. Parks, personal

communication, December 5, 2008). Twenty is the upper bound of the number of close friends found in the review of literature, and it will serve as the test value in testing this hypothesis.

Hypothesis 2

Popularity has several definitions, and in many studies it is defined by the respondent (Zywica & Danowski, 2008). Both direct and indirect measures have shown that people consider the number of friends a person has on Facebook when determining how popular the person is. Zywica and Danowski (2008) found that respondents referred to the number of friends when describing what it means to be popular on Facebook. Two-thirds of the respondents said they knew somebody that tried to look popular on Facebook, and that adding friends was how people tried to increase their popularity. Tong et al., (2008) found that a person with 302 friends was perceived to be the most socially attractive by their peers, and people with more or less than 302 friends were perceived to be less socially attractive.

Furthermore, Stern and Taylor (2007) found that 22% of respondents did not deny friend requests because they didn't think it meant much, and 20% of the respondents said that the purpose of Facebook is to meet people. The first Facebook users tried to obtain as many friends as possible (Cassidy, 2006). This evidence suggests that friendship does not mean as much on Facebook as it does in an offline context. These findings have led me to hypothesize:

Hypothesis 2: Students add and accept friends on Facebook primarily as a means for increasing their self-perceived popularity.

To test this hypothesis a definition of popularity is needed. People who seek to be popular on Facebook are those who 1) take significant notice of the number of friends that they and other people have, and (2) create new friendships that have little meaning.

This definition was developed after reviewing literature on Facebook usage. The fact that people with 302 friends are perceived to be the most socially attractive (Tong et al., 2008), and students feel their peers create Facebook friendships to become popular (Zywica & Danowski, 2008) suggest that people who want to increase their popularity notice how many friends people have. The idea that people "save face" because it is easier to become friends than to say no (Boyd, 2006), the fact that it is easy to have many friends on Facebook because of its technological capabilities (Boyd, 2006), and the fact that people feel Facebook friendships mean little (Stern & Taylor, 2007) suggest that friendship on Facebook does not mean as much as friendship does in an offline context.

METHODOLOGY

Sample

To answer these questions, a survey of 428 students was conducted at a medium-sized Midwestern university. Of these, 407 responses were included in this analysis. The remaining responses were omitted because they were incomplete, the respondents did not sign the consent form, or they were not a student. Three responses were also omitted because the user did not have Facebook. 24.1% (n=74) of respondents were male and 75.9% (n=308) were female. 98.2% (n=392) indicated they were of Caucasian ethnicity. The average age of respondents was 21.11 (SD=3.07), and respondents had been on Facebook an average of 2.83 years (SD=1.01).

Respondents indicated they had an average of 405.18 Facebook friends (SD 227.23). A few responses were significantly higher than the rest, and therefore, and all outliers for all measures were removed from this analysis. A summary of the demographics is presented in Table 1.

TABLE 1
Demographic Information

	UNI Sample 407 Responses		UNI Population 12,908 Students	
	Percentage	Number	Percentage	Number
Gender				
Male	24.1%	98	58.3%	7,528
Female	75.9%	308	41.7%	5,380
Ethnicity				
Caucasian (White)	98.2%	392	86.4%	11,148
Non-Caucasian	1.8%	7	13.6%	1,760
Daily Facebook Usage				
Less Than 10 minutes	6.9%	28		
10-30 minutes	16.2%	66		
31-60 minutes	21.6%	88		
1-2 hours	23.6%	96		
2-3 hours	14.0%	57		
More than 3 hours	17.4%	71		
	Mean	**Standard Deviation**	**Range**	
Age	21.11	3.07	18 - 43 years old	
Length of Facebook Membership (Years)	2.83	1.01	.2 - 5.2 years on Facebook	
Number of Facebook Friends*	405.18*	227.23	5 - 1,021 friends	

*Outliers Removed

Since this research included a survey that was administered to students at a university, the

first step was to obtain approval from the university's Institutional Review Board (IRB). To see

the survey, please refer to Appendix 1. The survey was administered through

www.surveymonkey.com and was advertised to all students at the university through a weekly

online news bulletin. Students receive this bulletin as an email every Monday during the year,

and it lists all of the events occurring on campus. These events can include academic lectures,

student organization meetings, music and arts performances, athletic events, and service

opportunities.

An announcement was placed in this bulletin for two consecutive weeks that told students

they had an opportunity to take a five minute survey about their Facebook usage. Participants

that took the survey were entered into a drawing to win a Wii Game System. To be eligible for

the Wii, students had to enter their university email address. This incentive benefited the study

because it deterred non-students from taking the survey. The emails were saved in a file separate

from responses to preserve the anonymity of respondents. Since the survey was administered

over the Internet, students could control where and when they took the survey, which gave them

as much privacy when taking the survey as they desired. An extra fee was also paid to Survey

Monkey to ensure that responses being transmitted over the Internet were transferred securely.

Hypothesis 1: Number of Friends a Person Interacts With

The data for this hypothesis will be collected with the question, "Think about the

Facebook friends you have interacted with on Facebook in the past two weeks. How many have

you interacted with?" This hypothesis was measured using a single variable, named

Friends2Weeks. It will be accepted or rejected based on the measures of central tendency (mean,

median, and mode). A one sample T-test will also be performed on the mean using a test value of

20, since 20 is the upper bound of the number of close friends a person has in an offline context

that has been identified in the review of literature (Dunbar & Hill, 2003; M. Parks, personal

communication, December 5, 2008).

Hypothesis 2: Popularity's Impact On The Number Of Friends A Person Has

A new scale, the Perceived Popularity and Facebook Friending (PPFF) Scale was developed

for this study to determine how much a student's desire to increase his or her self-perceived

popularity influenced their friending habits on Facebook. No scales were found in the review of

literature that measured this. This scale will allow Facebook users to report if the desire to be

popular influences their Facebook usage, whereas past research has asked students if they feel

others have Facebook friends to increase their popularity (Zywica & Danowski, 2008; Tong et al., 2008).

This scale was developed to assess the definition of popularity that was developed for this study. A discussion with other Facebook users created a list of the scenarios in which a person may notice the number of friends another person has, and another list contained the scenarios in which two people may become friends on Facebook. The items for this scale that were selected from the original lists were those that most closely matched the definition of popularity used in this study. The items included in this scale are shown in Table 2.

TABLE 2
Perceived Popularity and Facebook Friending (PPFF) Scale

I like to add friends to increase my friend count
I like to request friends I have not met because we have similar interests or I find them interesting
I like to request friends that I have met once or twice because I want to get to know them better
I accept all friend requests because I want to increase my friend count
I accept all friend requests because I like meeting people
I accept friend requests of people I have met once or twice because I want to get to know them better
If a person has a large number of friends, I think they must be popular
I want to try to obtain as many friends as I can because it makes me feel more popular

The PPFF scale is a Likert scale with 1=Strongly Disagree and 5=Strongly Agree. The sum of a student's ratings for each question is computed, and an average rating for the scale is assigned to a single variable named *AvgPPFF*. Since 3 is the neutral point between the low score (1) and high score (5), a one sample T-test will be performed testing the value 3. A significantly higher score on the PPFF scale will indicate students become Facebook friends with many people they do not know well to increase their self perceived-popularity, while a significantly

lower score will indicate the opposite. The average score for all items on the PPFF in this study

was 1.97 (SD=0.58, Cronbach's alpha=0.785).

RESULTS

The goal of this study was to see if a desire to be popular influenced the number of

Facebook friends people have. The survey asked students to identify how many Facebook friends

they interact with on a regular basis, and the PPFF scale measured the extent to which people

become friends with people they do not know well on Facebook because they feel the number of

friends they have influences their popularity. Students indicated they had an average of 405.18

friends, and the average amount of time students spend on Facebook daily is summarized in

Table 1. The results of the study are presented in this section.

Hypothesis 1: Number of Facebook Friends Interacted With

This point was measured with a single question, which asked students to identify how

many of their Facebook friends they had interacted with in the two weeks prior to taking the

survey. A total of 11 responses were removed from this analysis because they were considered to

be outliers in the data.

TABLE 3
Regular Interaction with Facebook Friends: Friends2Weeks

Number of Responses	394
Mean	**29.39**
Significance	*.000***
Median	20
Mode	20
Standard Deviation	25.17
Range	0 – 102 friends

**p<0.001

Table 3 indicates that a person interacts with an average of 29.39 friends in a two week

period. This is significantly higher (p<0.001) than the number of close friends a person has in an

offline context, as reported in the review of literature (Dunbar & Hill, 2003; M. Parks, personal communication, Dec 5, 2008). Based on the mean, Hypothesis 1 appears to be accepted because respondents indicated they interact with more friends on Facebook than people have close friends in an offline context.

The median and mode for this sample were both 20. Twenty was the test value in the one sample T-test because it is the upper bound of the number of close friends a person has. Even though the mean number of Facebook friends was significantly higher than 20, the most common response was 20. Not only was the most common response 20, but the value in the middle of the dataset was also 20. After considering all measures of central tendency, I am reluctant to accept Hypothesis 1 as true.

Since 75.9% of respondents were female, additional analysis was done to see if an imbalance in gender biased the results. An independent sample T-test showed there is no significant differences between men (M=27.54, SD=23.18) and women (M=29.99, SD=25.80) with p=0.412.

Hypothesis 2: Perceived Popularity's Effects on Facebook Friending

This hypothesis was measured using the PPFF (Cronbach's alpha =0.785). The PPFF is a Likert Scale with 1= Strongly Disagree and 5=Strongly Agree. Each respondent's mean rating was computed for this scale and was stored in a variable named *AvgPPFF*. AvgPPFF was tested in a one sample T-test against the value 3, the neutral point on the scale. The results of this scale are shown in Table 4.

TABLE 4
AvgPPFF

Mean	1.97
Significance of Mean	0.00**
Standard Deviation	0.58

**p<0.001

Table 4 indicates that the mean score on the PPFF was 1.97. This is significantly lower than the neutral value 3 (p<0.001). This suggests that students may not become friends with people they do not know well to increase their popularity, and therefore, Hypothesis 2 is rejected.

An independent sample T-test was done to see if having a sample that was 75.9% female influenced the results. Men (M=2.07, SD=0.60) scored significantly higher (p=0.036) than women (M=1.93, SD=0.57), but the mean for both men and women is lower than the neutral value of 3. This suggests gender did not influence the results of the study.

DISCUSSION

Hypothesis 1 proposed that people interact with more Facebook friends regularly than they do traditional friends. When considering the mean, the results of this study indicate that respondents interact with a significantly higher number of people on Facebook than people report feeling close to in an offline context, as identified in the review of literature (Dunbar & Hill, 2003; M. Parks, personal communication, December 5, 2008). If an analysis of just the mean was done conclusions may be drawn that these respondents interact with more of their Facebook friends than they do their offline friends, and that the technological capabilities offered by SNS increase the number of friends a person interacts with.

An analysis of other statistics, however, makes me reluctant to accept Hypothesis 1. The median for this sample was 20. This shows that although the mean number of friends is higher, the results centered themselves around the value 20. Not only was the data centered on 20, but 20

was also the mode for the sample, which shows that 20 was the most common response. This suggests that the technological capabilities offered by SNS such as Facebook do not increase the number of friends a person interacts with. After considering the mean, median, and mode, I hesitate to accept Hypothesis 1.

Hypothesis 2 proposed that people become friends with others on Facebook primarily as a way to increase their popularity. The results of this study lead me to reject this hypothesis. Students may have many friends on Facebook for other reasons than increasing their popularity. These reasons may vary among users, but they may be influenced by motives indentified in the review of literature: self promotion/narcissism, entertainment, maintaining social capital, or compensating for a poor offline social network.

Based on the findings of this study, social capital may be the most common motive for becoming friends with others on Facebook. Respondents indicated they had an average of 405.18 friends, and yet the average number of friends they interacted with in a two week period was only 29.39. This supports the suggestion that Facebook can maintain and create new forms of social capital (Ellison et al., 2007). The majority of friends that these respondents do not regularly interact with could be considered "weak ties," which have been identified as a beneficial way of having access to new sources of information at little cost (Hansen, 1999; Putnam, 2001).

The 405.18 average number of friends respondents had in this study is higher than the 200-350 friends found by Sheldon (2008), or 150-200 found by Ellison et al. (2007) in samples of college students. This difference is most likely caused by the fact that this is a more recent study. As more people join Facebook the number of people an individual can become friends with increases. Since it is also easy to maintain dormant relationships on Facebook, there is less

incentive to unfriend people. For these reasons it is logical that the average number of Facebook friends a person has should increase over time. Another factor that may influence the significance of these findings is the way the statistics are reported. Sheldon (2008) and Ellison et al., (2007) reported ranges, whereas this study reports a single value statistic.

LIMITATIONS OF STUDY

Demographics

This study was conducted at a medium-sized, Midwestern university with an enrollment of approximately 13,000 students. The sample in this study was very homogenous. 98.2% of students indicated they were Caucasian, so analysis could not be done by ethnicity. This sample was also unbalanced in gender because 75.9% of respondents were female.

Close Friends and Friends a Person Interacts With

The primary purpose of Hypothesis 1 was to determine how many people a person interacts with on Facebook on a regular basis. None of the literature reviewed examined this subject. Data was available, however, that indicated how many close friends people have in an offline context. The number of close friends a person has offline and the number of people a person interacts with on Facebook may not be comparable. Facebook users may not interact with all of their close friends online, and they may interact with people on Facebook they do not consider to be close friends. This hypothesis was exploratory in nature.

The definition of "regular basis" used in Hypothesis 1 is also a limitation of the study. Some people may feel that to be close friends people should interact more frequently than in a two week time period. They may feel a weekly or daily basis is more acceptable, while others may think less frequent interactions is acceptable. Interacting less frequently than once every two weeks with friends is especially feasible when considering the demographics of this study. Many

college students do not get to interact with their hometown and high school friends on a regular

basis, which suggests that people can have close friends they do not interact with regularly.

Another limitation of this hypothesis is that it was evaluated using a single item measure.

Interaction in future studies could be better defined using a multiple item scale, where students

specify how many friends they interact with using different functionalities on Facebook. They

could be asked to indicate things such as how many profiles they looked at, how many friends

they sent a message, how many friends they interact with in an offline context, and how many

people they consider themselves to be close to. Asking all of these questions to the same sample

would allow for a more complete analysis of the differences between interactions in offline and

online contexts.

PPFF Scale

The PPFF had no validation besides the Cronbach's alpha used to measure for internal

consistency and reliability. The items in this scale should be tested using other statistics to

determine if there is consistency and reliability. The items should also be reevaluated to ensure

they are measuring the extent to which people add friends they do not know well to increase their

popularity. The scale can also be strengthened by incorporating items from other scales that have

more proven validity in assessing people's desire to be popular.

This scale, as with all scales, may be influenced by respondent biases. The questions in the

PPFF are fairly straightforward. Some of the questions include, "I like to add friends to increase

my friend count" and "If a person has a large number of friends, I think they must be popular."

Students may have felt uncomfortable answering these questions honestly and might have

answered with what they felt was a more socially acceptable answer. Attempts were made to try

and prevent this bias. Respondents were not required to submit any personal information, except

their email address if they wanted a chance to win the Wii. They also had the option to take the

survey from any computer with Internet access, giving them the ability to control the amount of

privacy they had when they completed the survey.

DIRECTIONS FOR FUTURE RESEARCH

Demographics

As addressed in the study's limitations, the sample in this study was primarily

Midwestern Caucasian college students. Facebook is now available to anyone who is 13 years or

older. People who have Facebook but are not in college between the ages of 18 and 23 are not

well represented in this study. Young college students today are also the first students who had

the opportunity to have Facebook in high school, and further research should be done to see if

there are differences between these students and those students who did not have Facebook in

high school. In summary, further research needs to be done to see if there are differences in

Facebook usage based on age, ethnicity, and geographic location.

Popularity Definitions and Measures

A review of literature (Tong et al., 2008; Zywica & Danowski, 2008; Boyd, 2006; Stern &

Taylor, 2007) served as the basis for the development of the definition of popularity used in this

study, which was defined in a Facebook-related context. People who seek to be popular on

Facebook are those who 1) take significant notice of the number of friends that they and other

people have, and (2) create new friendships that have little meaning. As discussed in this study,

popularity can be defined in several ways.

The goal of this study was to see if a specific action on Facebook, the action of adding and

accepting friends a person does not know well, was related to a person's desire to be popular.

Future research should use measures to identify which students feel popularity is generally

important. These measures should be paired with measures to determine what people use Facebook for, and the results of this research would determine what people who desire to be popular use Facebook for. This research would contrast the present study, which assessed if a single Facebook activity, becoming friends with people, was caused by a desire to be popular.

CONCLUSION

The goal of the study was to see if people interact with more Facebook friends than they do offline friends on a regular basis and if the primary reason students become friends with others on Facebook is to increase their popularity. The results do not give enough evidence to determine if people interact with more Facebook friends on a regular basis than they do traditional friends. The number of friends a person interacts with regularly, however, is small when compared to the average total number of friends a person has. The results of this study suggest that this does not occur because people desire to be popular, which contradicts previous findings. One explanation of why people have many friends but only regularly interact with a few of them is that they want to maintain and increase their social capital.

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Appendix 1

Metrics Used

I.   Demographics

1. Do you currently have a Facebook Account?
2. When did you first create a Facebook Account?
3. What year are you in school?
4. What is your major?
5. How old are you?
6. Gender: (Circle One) Male   Female
7. Ethnicity: (Check all that apply)

____Caucasian (White)   ____Mixed
____African American   ____Latino
____ Asian   ____Other
____Prefer not to respond

8. In the past week, on average, how many minutes per day have you spent on Facebook? (*Check One*)

____ less than 10 minutes   ____ 1-2 hours

____ 10-30 minutes   ____ *2-3 hours*

____ 31-60 minutes   ____ *more than 3 hours*

9. About how many Facebook friends do you have?

10. About how many of your Facebook friends attend UNI?

11. Think about the Facebook friends you have interacted with on Facebook in the past two weeks.

How many have you interacted with?

3.   Use of Facebook to Meet New People vs. Connect with Existing Offline Contacts
(Modified From: Ellison, Lampe, Stienfield, 2007)

**Please rate each statement on how well it summarizes your primary usage of Facebook.
Rate each item between 1 and 5 with 1 = *Strongly Disagree* and 5 = *Strongly Agree.***

I use Facebook regularly to connect with offline contacts	**1** **2** **3** **4** **5**
I have used Facebook regularly to check out someone I have met socially	**1** **2** **3** **4** **5**

I use Facebook regularly to learn more about other people living near me	**1**	**2**	**3**	**4**	**5**
I use Facebook regularly to keep in touch with my old friends.	**1**	**2**	**3**	**4**	**5**
I use Facebook regularly to meet new people	**1**	**2**	**3**	**4**	**5**

4. Gratifications of Facebook Use
(Modified from: Sheldon, 2008)

How often do you use Facebook for the following reasons?
Please rate each item on a scale from 1 to 5 with 1 ='Not at all' and 5 = 'All the time'

Relationship Maintenance

To post a message on my friend's wall	**1**	**2**	**3**	**4**	**5**
To communicate with my friends	**1**	**2**	**3**	**4**	**5**
To stay in touch with friends	**1**	**2**	**3**	**4**	**5**
The only way to stay in touch with my friends	**1**	**2**	**3**	**4**	**5**

Passing Time

To pass time when bored	**1**	**2**	**3**	**4**	**5**
It is the one of the routine things I do when online	**1**	**2**	**3**	**4**	**5**
To get away from what I am doing	**1**	**2**	**3**	**4**	**5**

Virtual Community

To join a group that fits my interests	**1**	**2**	**3**	**4**	**5**
To meet new people	**1**	**2**	**3**	**4**	**5**
Develop a romantic relationship	**1**	**2**	**3**	**4**	**5**
Feel like I belong to a group	**1**	**2**	**3**	**4**	**5**

Entertainment

To advertise my party	**1**	**2**	**3**	**4**	**5**
To see other people's pictures	**1**	**2**	**3**	**4**	**5**
It is entertaining	**1**	**2**	**3**	**4**	**5**
To read other people's profiles	**1**	**2**	**3**	**4**	**5**

Coolness

It makes me cool among my peers	**1**	**2**	**3**	**4**	**5**
Have fun	**1**	**2**	**3**	**4**	**5**
It is cool	**1**	**2**	**3**	**4**	**5**

Companionship

To feel less lonely	**1**	**2**	**3**	**4**	**5**
Find companionship	**1**	**2**	**3**	**4**	**5**
No one to talk to or be with	**1**	**2**	**3**	**4**	**5**

6. Perceived Popularity and Facebook Friending (Cronin, 2009)

Please rate each statement on how well it summarizes your primary usage of Facebook. Rate each item between 1 and 5 with 1 = *Strongly Disagree* **and 5 =** *Strongly Agree.*

I like to add friends to increase my friend count.	**1**	**2**	**3**	**4**	**5**
I like to request friends I have not met because we have similar interests or I find them interesting	**1**	**2**	**3**	**4**	**5**
I like to request friends that I have met once or twice because I want to get to know them better.	**1**	**2**	**3**	**4**	**5**
I accept all friend requests because I want to increase my friend count.	**1**	**2**	**3**	**4**	**5**
I accept all friend requests because I like meeting people.	**1**	**2**	**3**	**4**	**5**
I accept friend requests of people I have met once or twice because I want to get to know them better	**1**	**2**	**3**	**4**	**5**
If a person has a large number of friends, I think they must be popular	**1**	**2**	**3**	**4**	**5**
I want to try to obtain as many friends as I can because it makes me feel more popular	**1**	**2**	**3**	**4**	**5**

Additional Questions For Analysis

I like to request friends that I have interacted with multiple times and because I would like to continue to interact with them often in the future.	**1**	**2**	**3**	**4**	**5**
I accept friend requests of people I have interacted with multiple times because I would like to continue to interact with them.	**1**	**2**	**3**	**4**	**5**
I accept all Facebook friend requests because I would feel bad to say no.	**1**	**2**	**3**	**4**	**5**
I will not accept a request until I verify who the person is.	**1**	**2**	**3**	**4**	**5**
I will not accept the friend request if I do not know the person	**1**	**2**	**3**	**4**	**5**
I do not care about the number of Facebook friends I have.	**1**	**2**	**3**	**4**	**5**
I feel good when I see how many friends I have, but do not think about it otherwise	**1**	**2**	**3**	**4**	**5**
If a person has a large number of friends, I think they may be insecure.	**1**	**2**	**3**	**4**	**5**
I do not pay attention to about the number of Facebook friends that I have.	**1**	**2**	**3**	**4**	**5**