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Personality Traits and Motivations for Usage of Online Social Network Sites Among College Freshmen

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Personality Traits and Motivations for Usage of Online Social Network Sites Among College Freshmen

A Dissertation Presented for the

Doctor of Philosophy

Degree

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Jason Paul Rieger

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DEDICATION

This dissertation is dedicated to my loving wife, Amanda Leigh Rieger… thank you so much for your support and for putting up with the endless dinner conversations and car rides filled with statistics and other boredom inducing topics.

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ABSTRACT

Millions of people worldwide log onto social network sites (SNS) every day. Some users have positive experiences while others have negative experiences. The functionality of any given SNS is the same for each user, but the choice of how and when to use certain features leads each user to have different experiences. This study utilized a uses and gratifications framework to help understand what gratification expectations affect the usage of SNS among college freshmen in their first semester. Additionally, the research explored a possible link between individual personality traits of freshmen and gratification expectations as well as a link between levels of homesickness and gratification expectations.

College students (n = 499) enrolled in a First-Year study course completed an online survey that contained a uses and gratifications of SNS scale, the McCroskey (1997) 12-item Introversion scale; the Leary, Kelly, Cottrell, and Schreindorfer (2001) 10-item Need to Belong scale, and the Utrecht Homesickness Scale (Stroebe, van Vliet & Hewston, 2002).

Based on an exploratory factor analysis, gratification expectations were reduced into two factors. The first factor consisted of items related to expectations for entertainment gratifications. The second factor consisted of items related to expectations for social gratifications.

Based on the results of this study, it is reasonable to conclude that incoming freshmen utilize SNS to satisfy a need for social gratifications as well as entertainment gratifications. The data also indicated that, to some extent, the characteristics of extraverts and introverts are represented in the way freshmen use SNS. Additionally, the findings indicated freshmen are more likely to use SNS to keep up with their friends than with their family. Although there was not a strong positive correlation between homesickness and gratification expectations, there was a clear indication of usage of SNS to relieve symptoms of homesickness.

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Chapter 1

INTRODUCTION TO THE STUDY

Background

Everyday millions of people worldwide are logging on to social network sites (SNS). As of September 2013, one such SNS, Facebook, was self-reporting more than 800 million active users ("Facebook's latest news," 2013). Barsky and Purdon (2006) report Cyworld.com (the leading SNS in South Korea) had a user base of more than 15-million people in South Korea alone. SNS represent a rich and diverse range of technologies that are rapidly changing. Facebook, for example, quickly grew from a SNS for college students to a world-wide phenomenon. MySpace was leading the SNS charge years ago, fell out of favor, and was re-launched as a site to connect musical artists with the public. Recent research has looked at both the positive and negative impacts SNS have had on their users. Some of the positive aspects included increased patterns of connectedness for individuals as well as organizations (e.g., Secker, 2008; Ellison, Steinfield, & Lampe, 2007; Mack, Behler, Roberts, & Rimland, 2007), increased access to information, both personal and public (e.g., Harris & Lessick, 2007; Cuesta, 2006; Woo, 2005), and even an increase in the potential to solve crimes (Romano, 2006). As with most things, all of these positive aspects come with negative aspects. Parents, teachers, and educators are faced with problems associated with SNS cyberbullying (Perez, 2010) and more recently potential gaming and site addictions (Gaudin, 2010; Cohen, 2009). Additionally, over disclosure of personal information on SNS has led to arrests, suspensions, firings, and cases of stalking (Kornblum & Marklein, 2006; Berrett, 2010).

Despite the growing number of concerns and incidents, usage of SNS continues to increase. Additionally, not every individual that logs onto a SNS is destined to encounter these

issues. Since the sites have the same functionality for all users, it is logical to question why the user experience varies. An understanding of the different patterns of usage may lead to the potential to develop interventions that could curb or eliminate the behavior associated with the negative outcomes of SNS usage. One factor that could lead to different patterns of usage is individual differences in personalities.

Statement of the Problem

Use of SNS is growing daily; with some sites reporting millions of users (Burcher, 2011; Boulton, 2011; "Facebook's latest news," 2013). This growth has led to several studies being conducted to determine who is using SNS (e.g., Lenhart, 2009; Hargittai, 2008). Hampton, Goulet, Rainie, and Purcell (2011) reported in 2010 that 48% of SNS users were under the age of 35. Traditional demographics such as age and sex are not the only things that determine SNS usage. This study (Personality Traits and Motivations for Usage of Online Social Network Sites Among College Freshmen) took the perspective that usage of technology can be examined in many ways. As with any technology, it is not just individual demographics that lead to usage. Models such as diffusion of innovations (Rogers, 1983) and the technology acceptance model (TAM) (Davis, 1989) study technologies with a focus on the characteristics of the technology that lead people to adopt it. Additional research uses social cognitive theory as a foundation to explain adoption of technologies (Compeau, Higgins, & Huff, 1999). Still other frameworks such as uses and gratifications (Katz, Blumler, & Gurevitch, 1974) focus on the gratifications users receive from using the technology. A clear picture of reasons for usage requires research from many perspectives. In regards to SNS, a few studies have been conducted to identify different uses for SNS from the viewpoint of the capabilities of the systems (e.g., Heiberger & Harper, 2008). Currently, only a small body of research has been undertaken to understand the individual

needs of the users that cause them to be drawn to and continue to use the various functions of SNS. The current study helps fill that gap.

The current study also took the perspective that different groups of people have different motivations for understanding who uses SNS and why. While retailers may be concerned with maintaining a link with their customers and revenue services generated through that link, stock holders in publicly traded SNS are more interested in a direct return on investment. News and other media outlets may be interested in continuing to have a presence in peoples' lives outside of the contact time provided through traditional media outlets such as television and radio broadcasts. Of particular interest to this study are administrators and educators at universities.

College administrators have a vested interest in determining how they can leverage SNS to help increase student enrollment, retention, and involvement. Additionally, there are concerns over disciplinary action that results from student use of SNS. Some research already exists that looks at how SNS are being used in academia and educational contexts (e.g., Cain, 2008; Connell, 2009). A more in depth literature review of some of the issues surrounding academic use of SNS is provided in chapter two. Uses and gratifications provides a framework for a better understanding of what motivates individuals to use technology. A better understanding of the expectation students have from using SNS will help inform colleges on how to better leverage SNS usage to their advantage for things such as policies for retention.

Conceptual Underpinnings

This study utilized uses and gratifications as a framework (Katz, Blumler, & Gurevitch, 1974) for the exploration of SNS usage. While research in the tradition of uses and gratifications was conducted prior to 1974; Katz, Blumler, and Gurevitch's (1974) book brought together some of the key concepts of the theory and began the groundwork for unifying further studies with

similar frameworks. Katz, Blumler, and Gurevitch (1974) cite studies that implemented uses and gratifications to explore the motives for participation in several activities, such as listening to soap operas and the radio, and reading the newspaper. They identify uses and gratifications as a perspective suited for the study of the social and psychological origins of needs that lead to certain expectations from mass media and other sources that lead to different patterns of exposure to the media. These patterns of exposure then result in need gratifications. Additionally, Katz, Blumler, and Gurevitch (1974) indicate that media exposure can lead to consequences other than need gratifications, perhaps mostly unintended ones (such as addiction or cyberbullying). An in depth discussion of uses and gratifications as well as a review of selected research that has utilized uses and gratifications as a framework is given in the literature review in chapter two.

Since the major function of most SNS is a social function, it seems appropriate to explore personality traits that influence behavior within social settings as possible origins of needs that lead to usage of SNS. For this study an individual's tendency toward extraversion, a measure of the individual's Need to Belong, and the individual's level of homesickness were employed. Of the many personality traits researchers have studied, tendency toward extraversion is perhaps the most widely recognized indicator of how individuals interact with other people. The measure of an individual's tendency toward extraversion has been used in numerous studies to predict or explain social behavior (e.g., McCroskey, Burroughs, Duan, & Richmond, 1990; Phillips, Smith, Modaff, & Morgan, 2003). An in-depth discussion of the measure of extraversion and selected research work that has studied the effects of extraversion is presented in the literature review in chapter two.

Another personality trait that has been studied for its effect on how people interact socially is the measure of an individual's Need to Belong. After an extensive empirical review of the literature, Baumeister and Leary (1995) concluded that human beings are fundamentally motivated by a desire to form and maintain interpersonal relationships. They describe and measure this motivation as the Need to Belong or belongingness. They suggest that a great deal of human behavior, emotion, and thought is caused by the Need to Belong. An in-depth discussion of Need to Belong and research that has measured the effects of Need to Belong is provided in chapter two.

Homesickness is characterized as the distress or functional impairment that results from an actual or anticipated separation from home and familiar objects such as friends and parents and nearly everyone leaving familiar surroundings for a new environment experiences homesickness to some degree (Thurber, Walton, & the Council on School Health, 2007). Since SNS provide a way to remain connected with parents and friends despite differences in physical locations, it seems logical that persons experiencing higher levels of homesickness might use SNS differently than those with low levels of homesickness. An in-depth discussion of homesickness and research work that has measured levels and effects of homesickness is provided in the literature review in chapter two.

Purpose of the Study

This study utilized a uses and gratifications framework to help understand what gratification expectations affect the usage of SNS among college freshmen in their first semester. Additionally, the research explored a possible link between individual personality traits of users and their gratification expectations (i.e., social and entertainment gratifications). Specifically, it explored the relationship between a user's 1) tendency toward extraversion, 2) Need to Belong,

and 3) level of homesickness and the gratifications he or she seeks and receives from the use of SNS.

<div align="center">*Research Question*s</div>

In order to fulfill the purpose of this study, the following research questions were explored:

RQ1: What gratification expectations motivate college freshmen to use SNS?

RQ2: What is the relationship between a college freshman's Need to Belong and his or her gratification expectations from using SNS?

RQ3: What is the relationship between a college freshman's level of extraversion and his or her gratification expectations from using SNS?

RQ4: What is the relationship between a college freshman's level of homesickness and his or her gratification expectations from using SNS?

<div align="center">*Importance of the Study*</div>

The results of this study make a contribution to the literature regarding the reasons freshmen use SNS and can inform administrators' policies on educators interacting with freshmen through these sites. This study adds to the existing literature for uses and gratifications by exploring psychological factors that may help explain or predict gratification expectations from the use of socially orientated technologies. It adds to the literature about SNS by providing variables other than the traditional demographics such as age and biological sex that may be helpful in explaining patterns of usage. Educators and other parties concerned with the development of strategies to encourage positive usage of SNS for activities such as building social capital (Ellison, Steinfield, & Lampe, 2007) and increasing student involvement (Heiberger & Harper, 2008) may benefit from a better understanding of the psychological and situational factors that

generate expectations from exposure to SNS. Additionally, an understanding of these same factors may be useful in developing a course for intervention and correction when patterns of usage are identified as potentially harmful or negative.

The results of this study have potential impacts on a wide range of entities, including parents, educators, and other agencies that are tasked with defending the well-being of individuals. Many states have laws that pertain directly to cyber stalking, cyber harassing, and cyberbullying (National Conference of State Legislatures, 2011). Some states, such as Tennessee, however, are still in the process of modifying or creating laws to better protect victims in an ever-changing technological society (Humphrey, 2011). The findings of this study could serve to create intervention strategies, since an understanding of the motives that generate patterns of behavior can be helpful in developing strategies to modify or eliminate undesired behavior such as addiction, over-disclosure and cyberbullying.

Another area where the results of this study may have an impact is on the financial value of SNS. Although the value of SNS is a subject of some debate, it is undeniable that SNS are currently being used as revenue streams (Moon, 2011; Sharma, 2009). In addition to the traditional advertising income base, many SNS are taking advantage of paid services within the site. Facebook for example hosts a multitude of games in which players can pay for upgrades or special items that provide them with an advantage over other players. Trefis.com, a financial community that follows popular stocks within the United States valued Facebook at around 45.1 billion dollars in 2011 (Trefis, 2011). In 2011, advertising income accounted for 60% of the total valuation while game credits made up another 17% (Trefis, 2011). By the second quarter of 2013, advertising revenue accounted for 88% of the total revenue (Melanson, 2013). Any study that examines the motivations behind patterns of exposure could impact the people investing in

the growth and maintenance of these websites. If gaming addiction is an issue within SNS, and this behavior is curbed or eliminated, this could result in a loss of revenue which could lead to a lower return on investment. On the other hand, a greater understanding of user needs could lead to the development of systems better equipped to meet those needs. This could in turn lead to a rise in usage and a potential gain in revenue resulting in a higher return on investment.

Other audiences that could derive benefit from the results of this study are agencies in general. The term agency here will refer to any entity or group, commercial, or non-profit that is among a growing number of such entities that are seeking to use SNS as potential channels for reaching out to communities and supporters. Examples of agencies include churches, political parties, and local and national businesses. SNS are being used by news crews to bring live on the spot news from anywhere. They are being used by community organizations such as libraries for patron outreach in an attempt to raise interest and bring in more patrons. Educators have begun to look at ways to incorporate SNS into college and classroom environments. An understanding of the needs of the people they are attempting to reach will make these outreaches more meaningful and more beneficial to both parties.

Definition of Terms

Need to Belong – A need to form and maintain a minimum quantity of relationships (Baumeister & Leary, 1995).

Social Network – A person's relationships with friends, neighbors, coworkers, family, and other acquaintances with whom they interact (Unger & Powell, 1980).

Social Network Site (SNS) – A web-based service that allows an individual to construct a profile, maintain a list of other users they share a connection with, and view and traverse their list of connections and those made by other users of the system (boyd & Ellison,

2008). For the purposes of this study, SNS were defined as those sites that did not limit the activities of the users to a specific content type. For example, Twitter was not included due to its focus strictly on small text based communications. YouTube, Pinterest, and Instagram were also excluded due to their focus being primarily on the sharing of specific media types.

Tendency Toward Extraversion – A measure of how people oriented an individual is likely to be (McCroskey, Burroughs, Daun & Richmond, 1990).

Homesickness – Distress of functional impairment that is caused by an actual or anticipated separation from home and familiar objects (Thurber & Walton, 2011).

Organization of the Dissertation

This dissertation is divided into five chapters. This chapter provided a background for the study, introduced the problem and the importance of the study, and identified the research questions and the conceptual underpinnings for the study, as well as defined key terms. Chapter two reviews selected literature that identifies the empirical and theoretical foundation for this dissertation. The methodology employed is presented in chapter three and includes the research design, population and sample selection, data collection procedures, and procedures for data analysis. Chapter four presents the analyses of the data, and chapter five contains a discussion of the research findings and their implications, and provides suggestions for future research.

Chapter 2

REVIEW OF THE LITERATURE

Introduction

The following review of the literature discusses the primary ideas examined in this dissertation; social network sites (SNS), college freshmen, uses and gratifications, and personality traits. Further it provides a review of the research literature relevant to these ideas. Specifically it will discuss SNS by providing a definition, a brief history, an overview of recent growth, and a look at some of the disciplinary concerns that usage of SNS has created. It will also present research indicating incoming college freshmen represent a unique population appropriate for studying to achieve the purposes of this research. It will conclude with a discussion of the main framework (uses and gratifications) and the personality measures (Need to Belong, tendency toward extraversion, and level of homesickness) that might have an influence on the uses and gratifications of SNS. In addition to reviewing the advancements made in these areas, the review of the literature will identify potential gaps and indicate the ways in which this dissertation will seek to fill some of those gaps. This chapter contains the following sections: 1) social network sites (SNS), 2) college freshmen, 3) uses and gratifications, 4) personality traits, and 5) the current study.

Social Network Sites (SNS)

Definition

While individual SNS differ in regards to the functionality they offer their users, there are some functionalities that are common across all of them. SNS are defined by boyd and Ellison (2008) as web based services that allow users to construct profiles, to create a list of users they share a connection with, and to view and traverse their own list as well as the lists of the

connections created by other users of the site. Some of the most well-known SNS, within the Unites States, at the time this research was conducted included Facebook, MySpace, and LinkedIn. Online SNS allow users to connect to their social networks via the Internet. The users of these sites post personal information about themselves and their interests to a profile. Profiles may include information about a person's relationship status, political views, religion, educational background, and other personal items. Once users have completed a basic profile, they add lists of people who are authorized to view their profile. This authorization is usually in the form of a "friend request" and allows the requestor and the grantor access to view and interact with each other's profiles. In general, "friends" have open access to all of the information stored on each other's profiles, but recent changes to the security model on several SNS has provided users more options for determining who can access their information. Several SNS offer additional functionality including the ability to play games, upload and share pictures, join groups, and host events.

Growth, Usage, and Change

SNS have been growing in popularity since the 1990s when SixDegrees.com first launched. Over the last decade, several new sites have emerged. The popularity of a specific site is dependent upon cultural and geographical factors. Barsky and Purdon (2006) reported Cyworld.com had a user base of more than 15-million people in South Korea alone, and QQ was the leading SNS in China (McLeod, 2006). In July of 2010, Social Networking Watch, a website that follows SNS, reported the most popular SNS in the United States as Facebook, YouTube, and MySpace ("U.S. Social Networking Rankings", 2010). As of September 2013, MySpace fell to ninth in the rankings and Twitter was ranked third behind Facebook and YouTube ("U.S. Social Networking Rankings", 2013).

SNS present a robust and dynamic environment, which presents a need to define the state of SNS at the time of the research. For example, at the time data were collected, Twitter was still emerging as a SNS and lacked some of the essential components. For this reason, users were asked not to consider Twitter as a SNS when responding to the survey. Additionally, during the course of this dissertation, the SNS, MySpace, was completely remodeled and re-released. In November of 2010 during the proposal stage of this dissertation, MySpace reported more than 100 million users world-wide ("Fact Sheet", 2010). In 2011, the site was purchased and redesigned to support growing musical talent and provide users with access to material by recording artists. As of September 2013, the site boasted 53 million songs and 14.2 million artists ("Stats & Facts", 2013)

As of September 2013, Facebook self-reported nearly 700 million active users daily ("Facebook's latest news", 2013), and YouTube reported more than one billion unique users per month consuming more than 6 billion hours of video ("Statistics", 2013). As the number of visitors continues to grow, it becomes more important to understand the needs and motivations of the individual users.

Disciplinary Concerns

While the benefits of using SNS are still being explored academically, many of the potential hazards of their use are being exposed frequently by mass media outlets. Concerns over privacy, safety, and the revelation of too much personal information form the basis of many research articles (e.g. Cain, 2008; Gross & Acquisti, 2005). Law enforcement agencies are using SNS to identify and prosecute criminals (Romano, 2006), employers are using them to help weed out applicants (Cuesta, 2006), and college administrators are using them to help discipline their students (Cain, 2008).

In the last several years, mass media has been filled with coverage of disciplinary action being taken against educators. Cases from a few years ago include an incident in Atlanta, Georgia where a high school teacher resigned after being reported to the school administration for posting a photo depicting her consuming an alcoholic beverage while on vacation (Sarrio, 2010). The parent that reported her was also upset that the teacher had used vulgar language on her personal site. Although the individual had a personal policy against friending students and thought her page was private, she felt pressured by the administration to resign (Sarrio, 2010). Another case from that period occurred in Cohasset, Massachusetts where a high school teacher and administrator was forced to resign after posting negative comments about her community and school on her Facebook profile ("H. S. Teacher Loses Job", 2010).

Despite the publicity of these and other similar cases, new cases still occur. In January of 2013, a teacher in Ohio faced possible dismissal from her job after she posted a photo of her students with duct tape on their mouths to her Facebook account (Matyszczyk, 2013). The teacher claims it started with one student placing duct tape on her mouth and her classmates joined in. The students encouraged the teacher to take the photo, and she posted it as a joke. A fellow employee of the school reported her and she was placed on administrative leave (Matyszczyk, 2013). In May of 2013, the New York Supreme Court reversed a decision to fire a teacher based on comments she made about her students on her Facebook profile. One of the teacher's Facebook friends alerted the school's Assistant Principal about the posts and the teacher was fired (Loatman, 2013). A Google search reveals several other similar stories from the past several years, and the issues do not seem to be contained to contexts in which the students are minors.

While cases of disciplinary action against college professors are harder to find, there have been some. A sociology professor at Stroudsburg University was placed on administrative leave after a student reported two postings she made that could have been deemed threatening to her students. The professor had intentionally declined friend requests from her students, but was unaware that students that were friends of her friends could see what she posted (Berrett, 2010). The potential for an instructor's activity on SNS to reflect badly on the university has prompted some universities such as Depaul and Ball State to instate official social media policies (Stripling, 2010). Academics are not the only ones firing people for Facebook postings either. In 2011, Business Insider posted a list of seventeen people who have been fired for posts to Facebook. Joining the teachers were a cheerleader, a mascot, a coach, and even a nun (Love, 2011).

College Freshmen

Adjusting to the College Environment

Many events can change a person's life. Among the most common are; starting college, getting married, having a child, and the death of a close family member such as a parent, or spouse. Life transitions such as these can place strain on a person's social network. Sorenson (2003) states an individual's social network is made up primarily of others like themselves that live nearby and that distance increases the cost of maintaining social relationships. Moving due to a change of jobs or to attend college increases the physical distance between a person and their social network making it more difficult to maintain strong ties. Life transitions can change the nature of existing inter-personal relationships either strengthening them or weakening them. This can in turn cause stress or modification to existing social networks.

For many people, starting their freshman year in college causes a disturbance in their social network. Students entering college often move, leaving behind their friends and family. Those that don't move themselves might have friends in their social network that move. Paul and Brier (2001) coined the term "friendsickness" to refer to the distress a young person feels when they become college freshmen and begin to lose connection with old friends. Missing friends has been shown to be one of many factors associated with homesickness (Stroebe, van Vliet, Hewston, & Willis, 2002). Homesickness is defined as the distress and functional impairment that results from a separation from home and attachment objects (Thurber, Walton, & the Council on School Health, 2007). Prior research has shown that as much as 85% of first year students suffer mild to intense homesickness during the first eight weeks at college (e.g Stroebe, van Vliet, Hewston, & Willis, 2002; Guinagh, 1992; Carden & Feicht, 1991) Rather than simply abandoning their old social network, many students choose to maintain parts of their old social network while attempting to create a new one (Ellison, Steinfield, & Lampe, 2007). The act of balancing old social networks with new social networks adds additional stress to a student's social world (Paul & Brier, 2001). One way in which students might attempt to ease this stress is by using technologies such as SNS. Reports have shown that more and more college students are relying on SNS to help define and maintain their social world (e.g. Ellison, Steinfield, & Lampe, 2007; Junco & Cole-Avent, 2008).

Usage of SNS

SNS have been utilized by college students in both positive and negative manners. On the positive side, students use SNS to maintain social ties as well as for academic purposes. On the negative side, students are becoming victims of over exposure that is resulting in serious consequences for their academic careers. To further understand some of the benefits college

students derive from the use of SNS, Ellison, Steinfield, and Lampe (2007) surveyed 286

undergraduate students at Michigan State University to determine the relationship between SNS

usage and social capital. They defined three types of social capital. Bridging social capital are

weak ties between individuals that provide useful information, but typically do not provide

emotional support. Bonding social capital are strong emotional ties such as those that exist

between family members and close friends. Maintained social capital refers to the ability to

maintain social connections while progressing through life changes. Their study showed a strong

relationship between Facebook usage and all three types of social capitalism. The strongest

relationship was between usage and bridging social capital (Ellison, Steinfield, & Lampe, 2007).

Raacke and Bonds-Raacke (2008) surveyed 160 students at a 4-year university and found

that SNS are used to keep in touch with existing friends, make new friends, and to locate old

friends. Additionally a small number of users reported using SNS for academic and romantic

purposes. While the benefits of using SNS are being explored academically, the pitfalls are being

abundantly portrayed in the mass media.

Woo (2005) reports on the first case of a college student being expelled from college for

Facebook-related activities. Cameron Walker was a sophomore at Fisher College, and the

president of the Student Government Association. He was expelled for joining a Facebook group

that was created in an attempt to have a police sergeant at the university fired. Walker states he

was not even aware that the university administration was able to view what he and his friends

did on Facebook. Kornblum and Marklein (2006) report on a student that was expelled from

John Brown University after someone showed Facebook pictures of the student dressed in drag

to administrators. Kornblum and Marklein's report also discusses an incident where two

swimmers were kicked off the swim team at Louisiana State University after criticizing their coach on Facebook.

Uses and Gratifications

Uses and gratifications provides the framework for the exploration of the first research question: What gratification expectations motivate college freshmen to use online SNS? The uses and gratifications perspective has been used as a framework for the exploration of individual's motivations for engaging in activities since its introduction in the 1940s. Uses and gratifications provides a framework that at the heart of it attempts to discover what drives individuals to engage in specific media outlets. Katz, Blumler, and Gurevitch (1974) define the framework of uses and gratifications as a framework for studying the social and psychological origins of needs. These needs generate expectations of mass media, or other sources, leading to different patterns of exposure or engagement in other activities that result in a gratification of the need. They also note that these patterns of exposures can have additional consequences, mostly which are unintended. In their review of the literature, Katz, Blumler and Gurevitch (1974) cite multiple studies that drew upon uses and gratifications as a framework to explore motivations for engagement in several activities including listening to soap operas, listening to the radio, and reading the newspaper and comic books. Palmgreen (1984) conducted a meta-analysis of existing research which classified more than 40 studies that had implemented uses and gratifications as a framework for the study of consumer use of mass media. Although SNS have many characteristics that make them different from other mass media, Eighmey and McCord (1998) found websites have many of the same uses that are associated with other mass media. More recent studies have successfully applied the uses and gratifications framework to a variety

of modern technologies including online service adoption (Lin, 1999), web site usage, (Eighmey & McCord, 1998), and the Internet in general (Stafford, Stafford, & Schkade, 2004).

Lin (1999) conducted a telephone survey with 384 participants to determine the relationship between TV-use motives and online-service adoption likelihood. Although the data did not support the hypothesis that motives for television use would be significantly related to motives for online-service use, a factor analysis of the online-service use survey items revealed three motivations for the use of online services. The first factor contained items dealing with a need to escape, seek companionship, or identity needs. The second factor contained items associated with surveillance, or news/information gathering. The final factor contained items related to a need for entertainment.

Eighmey and McCord (1998) utilized a uses and gratifications framework to determine motivations for using specific websites on the Internet. Thirty-one college graduates that were first time users of a graphic web browser were presented with five commercial websites then asked to evaluate them using an 80-item scale. The data gathered from this research shows the users were influenced in their opinions of the websites by entertainment value, personal relevance, information involvement, and continuing relationship. The results of this study are important in that they indicate a potential for new gratifications dimensions, related to the interactive potential of the Internet (i.e., continuing relationship), to emerge.

Stafford, Stafford, and Schkade (2004) conducted a study to determine motivations for Internet usage in general. They started by using a four-item open ended questionnaire to gather keywords associated with Internet usage. The resulting 45 keywords were then used in semantic differential scale in which participants were asked to rate each of the 45 keywords on a 7-point scale anchored by very important and very unimportant. They then performed a factor analysis

on the keywords which yielded three high level dimensions related to use of the Internet. The three dimensions are process gratifications (items such as using search engines and surfing websites) content gratifications (gaining information and knowledge) and social gratifications (such as chatting and interacting). Like Eighmey and McCord (1998), Stafford, Stafford and Schkade indicate a new dimension of uses and gratifications (social) specific to the Internet has emerged.

Previous research utilizing uses and gratifications for the framework has identified a variety of possible gratification expectations individuals may have when adopting or continuing use of specific technologies (e.g. Rubin, 1983; Eighmey & McCord, 1998). In many studies (e.g. Rubin, 1983; James, Wotring, & Forrest, 1995; Linn, 1999; Rieger & Allard, 2011) the gratification expectations were factored into as many as four major groups; social gratifications (the ability to create or maintain social connections through media), entertainment gratifications (the ability to seek entertainment through the media), escape gratifications (the ability to use the media as a means to relax or unwind), and surveillance gratifications (the ability to use the media to gather news and information).

Various activities that can be performed within SNS can be classified within these gratification expectations. For example, the ability to chat with and send messages to friends would fit into the factor of social gratifications. The ability to play games, listen to music, watch videos, and take quizzes for fun, fit into the factor of entertainment gratifications. Browsing user profiles and surfing the SNS can fit within escape gratifications. Looking at the latest updates to friends' blogs, statuses, and other profile information can gratify surveillance needs. Although it did not utilize a uses and gratifications framework, Lenhart's (2009) PEW report identified potential uses of SNS as; staying in touch with, making plans with or making new friends,

organizing with others for an event or a cause, making new business contacts, and promoting oneself or one's work. The results of the PEW report identify another potential gratification domain that has not been present in other uses and gratification based research; professional outcomes. The professional outcome is present in a report by Junco and Cole-Avent (2008) which indicates MySpace helped launch the musical careers of various artists through unique functions available on the site. The professional domain is also the driving force behind the SNS LinkedIn. The opening line of text on their homepage states "Over 120 million professionals use LinkedIn to exchange information, ideas and opportunities."

Some research has applied a uses and gratifications framework directly to SNS. Hou (2011) conducted an online survey to determine the effect of expected gratification outcomes on frequency and duration of online social game usage and engagement of game activity. Hou's snowball survey resulted in 93 usable responses. The results show that expectations of filling time, relaxing, and interacting with others increased the frequency of playing social games. Older ages and an expectation of social interaction increased the duration of playing social games. Finally, the results indicated that an expectation of social interaction and diversion caused users to become more engaged in game activities.

A qualitative approach to uses and gratifications from SNS was implemented by Urista, Dong, and Day (2009). Urista, Dong, and Day recruited undergraduates at a university in central California to participate in five focus group sessions. A total of 50 students participated. Analysis of the recordings from the sessions yielded five general reasons the undergraduates had for using SNS; efficient communication, convenient communication, curiosity about others, popularity, and relationship formation and reinforcement.

Joinson (2008) conducted a traditional two-stage uses and gratifications study in an attempt to determine the gratification domains of Facebook. In the initial stage, 137 Facebook users generated words and phrases that described their activities on Facebook. The results of the initial stage led to the creation of a 46-item scale. In the second stage, 241 Facebook users rated the items on the scale using a 7-point Likert scale anchored with very unimportant and very important. Factor analysis resulted in seven gratification domains associated with using Facebook; social connection, shared identities, photographs, content, social investigation, social network surfing and status updating.

Papacharissi and Mendelson (2011) combined uses and gratifications with social network approaches to examine user's salient motives for Facebook use. The researchers constructed a uses and gratifications scale consisting of eleven a priori motive categories consisting of three items per category. Students enrolled in introductory communications classes within an urban university were invited to participate in an online survey for extra credit. Additionally, the students were asked to invite their friends to participate in the study. A total of 344 responses were obtained. The uses and gratifications items were subjected to a factor analysis using a Varimax rotation in which an eigenvalue above 1.0 was required to retain a factor. Additionally each factor was required to have at least three items that met a 60/40 loading criteria. The final rotation resulted in the identification of seven factors; 1) expressive information seeking, 2) habitual pass time, 3) relaxing entertainment, 4) cool and new trend, 5) companionship, 6) professional advancement, and 7) escape. Two additional factors were identified 1) social interaction, and 2) meeting new people, but did not have at least three items; thus they failed to meet the requirements for retaining them as factors.

Smock, Ellison, Lampe, and Wohn (2011) used the items from the Papacharissi and Mendelson (2011) uses and gratifications scale to see if gratification expectations could be used to predict the use of specific site features. All nine motivation factors from the Papacharissi and Mendelson scale were used. Additionally they tested to see if the motivations that predict general Facebook usage differed from those that predicted specific feature usage. A total of 267 undergraduate students from two entry-level telecommunication courses at a large university participated in the study. The results of the study indicated an association between expressive information sharing and the use of status updates. The use of comments was predicted by three factors; relaxing entertainment, companionship, and social interaction. The use of wall posts was positively predicted by habitual pass time, professional advancement, and social interaction. The use of private messages was predicted by professional advancement and social interaction. The use of chat was predicted by social interaction, and the use of groups was predicted by expressive information sharing. The use of groups was also negatively predicted by the social interaction factor indicating they are used less by individuals motivated to use Facebook for social interaction.

Uses and gratifications has a rich history. As with any framework for researching reasons for usage of mass media, uses and gratifications has both weaknesses and strengths. Weaknesses include the lack of a clear conceptual framework to guide the research, and uniform scales for measuring gratification expectations. Additionally, research on what social and psychological variables lead to patterns of usage is lacking. Conversely, one of the greatest strengths of uses and gratifications is that it provides a framework that allows researchers to move the focus away from the media being studied and examine the relationship between the media and the person using it. The traditional employment of uses and gratifications for studying the use of mass

media, as well as its more recent adoption for studying the usage of computer based technologies make it an appropriate framework for studying motivations for the use of SNS.

Personality Traits

The field of psychology has a long tradition of identifying and defining the characteristics of individuals that, once measured, can help predict and explain behavioral differences among individuals. Several personality traits and groups of traits such as The Big 5 (extraversion, agreeableness, conscientiousness, stability, and openness to experience) and the Myers-Briggs combinations have been used in numerous studies to predict and explain behavior (e.g. Bibby, 2008; Gangadharbatla, 2008). Recent studies have specifically linked certain personality traits to usage of different technologies. Hamburger and Ben-Artzi, (2000) collected data about patterns of Internet usage from 72 students at an Israeli university. The data indicated a positive relationship between extraversion and use of the Internet for leisure and a negative relationship between neuroticism and usage of information services among men. For women there was a positive relationship between neuroticism and use of social services and a positive relationship between extraversion and use of social services on the Internet.

Since the phenomenon of SNS has a highly social function, personality factors specifically targeted at predicting behavior in social settings or those that help explain individual social networks will probably be useful in explaining individual usage of SNS. For this dissertation, two personality traits were selected due to their usage to predict or explain social behavior in prior research: 1.) Need to Belong, which was selected for its ability to explain how, when, and why individuals seek to expand their social networks, and 2.) extraversion which was selected for its ability to explain individual's desires to interact in social settings. Homesickness was also selected since it has been shown to have factors of missing family, missing friends, and

loneliness which are all relative to an individual's social network (Stroebe, van Vliet, Hewston, & Willis, 2002).

Need to Belong

Need to Belong helps to inform the second research question: What is the relationship between a college freshman's Need to Belong and his or her gratification expectations from using SNS? The formation and maintenance of social networks is thought to be a part of human nature. A social network consists of a person's interpersonal relationships with other people (such as coworkers, friends, and family) that interact with that person (Unger & Powell, 1980). After an extensive empirical review of the literature, Baumeister and Leary (1995) concluded human beings are fundamentally motivated by a desire to form and maintain interpersonal relationships. They described and measured this motivation as "Need to Belong" or "belongingness". Baumeister and Leary (1995) posited that a great deal of human behavior, emotion, and thought is caused by the Need to Belong. Further, their review of the literature concluded multiple links exist between the Need to Belong and such things as cognitive process and behavior responses (Baumeister & Leary, 1995). Leary, Kelly, Cottrell, and Schreindorfer (2001) conducted nine studies to determine if the Need to Belong scale was a unique measure separate from other existing personality trait measures. In addition to establishing the Need to Belong as a unique measure, they concluded although people may be extraverted and sociable, extraversion does not indicate the individual is motivated to be socially accepted or belong to groups.

Since Baumeister and Leary published their paper, several studies have used measures of Need to Belong to explain individual behavior and predict how individuals will react in certain situations. De Cremer and Leonardelli (2003) conducted an experiment on 42 Dutch psychology

undergraduate students to study the effect of an individual's Need to Belong on their willingness to cooperate and their frustration at making decisions for a group. The results indicate the higher a person rates on a measure of belongingness, the more willing they are to cooperate and the more frustrated they feel about making group decisions.

Carvallo and Gabriel (2006) undertook a study to determine if dismissive avoidant individuals truly lacked a desire to belong. Their data indicates despite claims to the contrary, even dismissive avoidant individuals displayed some measure of belongingness. These results are important in that they lead credence to Baumeister and Leary's (1995) claim that the Need to Belong is a fundamental human need.

Mellor, Stokes, Firth, Hayashi, and Cummins (2008) measured the relationship between the Need to Belong, relationship satisfaction, loneliness, and life satisfaction. The results of this study showed Need to Belong is weakly positively correlated with loneliness, and satisfaction with personal relationships is significantly negatively correlated with the Need to Belong.

Gangadharbatla (2008) administered a survey to two hundred thirty-seven undergraduate students at a large southwestern university in an effort to study the effects of Internet self-efficacy, need for cognition, Need to Belong, and collective self-esteem on individual attitudes toward SNS. The data showed, of the four variables measured, only need for cognition did not have a significant effect on individual attitudes toward SNS. Gangadharbatla (2008) concluded people's attitudes and behaviors with regard to SNS may stem from their Need to Belong and there is a greater chance that an individual will join and participate in SNS if they have a high Need to Belong. Although this research indicates a relationship between the Need to Belong and joining and participating in SNS, it does not explore the effects of the Need to Belong on the specific usage of SNS that may fulfill the individual's Need to Belong.

One way that SNS may help satisfy the Need to Belong is through their ability to help individuals expand and strengthen their social networks. Baumeister and Leary (1995) found individuals with sufficient interpersonal relationships to satisfy the Need to Belong would not be as interested in forming new relationships in comparison to individuals who lacked a sufficient number of interpersonal relationships. Lenhart (2009) concluded that SNS are used primarily for the maintenance and explanation of existing social networks. Prior research has demonstrated the ability of the Need to Belong to predict how individuals will behave in social situations as well as their attitudes towards SNS. Thus is seems logical to explore the effects of "Need to Belong" on an individual's motivation for using, as well as their actual usage of SNS.

Tendency toward extraversion

Tendency toward extraversion helps to inform the third research question: What is the relationship between a college freshman's level of extraversion and his or her gratification expectations from using SNS? Of the many personality traits researchers have studied, the measure of extraversion is perhaps the mostly widely recognized description of how individuals interact with other people. Tieger and Barron-Tieger (1995) describe extraverts as individuals who focus their attention on the world outside of themselves. Extraverts are classified as people that seek out other people, enjoy lots of social interaction, are pulled to the outer world of people and things, tend to like lots of activities, usually know many other people, and tend to meet new people with frequency and ease (Tieger & Barron-Tieger, 1995). In contrast, McCroskey, Burroughs, Duan, and Richmond (1990) characterize introverted individuals as shy, timid, or quiet people that tend to prefer to withdraw from communication. Tieger and Barron-Tieger (1998) describe introverts as naturally independent, preferring fewer more substantive

interactions, tending to have one or two best friends whom they keep for a long time, and as individuals who place a higher value on their privacy as compared to extraverts.

The measure of an individual's general tendency toward extraverted characteristics has been used in numerous studies to predict or explain social behavior (e.g. McCroskey, Burroughs, Duan, and Richmond, 1990; Phillips, Smith, Modaff, & Morgan, 2003). Roberts, Wilson, Fedurek, and Dunbar (2007) conducted a study on the effect of personality traits on personal network size and structure. Although their review of the literature indicated a positive relationship between tendencies toward extraversion and personal network size, the data collected for the research did not support those findings. The populations represented in the research from their literature review had been limited to primarily undergraduate students with a mean age of 19 or 20. Roberts, Wilson, Fedurek, and Dunbar (2007) expanded the population to a wider range and found that extraversion scores were correlated with age. When age was controlled for in the wider population, the relationship between extraversion and network size was no longer present. Their findings imply that extraversion may have an impact on SNS usage for college aged students, but not for an older population.

A tradition of using measurements of extraversion to make predictions about individual usage of SNS has already been established. Bibby (2008) studied the effect of extraversion, stability, self-esteem, and narcissism on use of social network sites. Survey data was collected from 174 undergraduate and postgraduate students at a British university. The scale implemented Goldberg's bipolar adjective list to measure extraversion, agreeableness, conscientiousness, stability, and openness to experience. Additionally, the scale contained 22 statements concerning the use of SNS. The responses to these statements were subjected to a factor analysis which resulted in 11 items factoring into three gratifications sought from the usage of SNS. The

gratifications identified were classified as "to occupy oneself", "leisure interests", and "keeping in touch". While the results of the data indicated all five personality traits have an effect on using SNS to occupy oneself, the data specifically indicates people with tendencies that lean more toward extraversion are likely to spend more time engaged in leisurely activities. There was no significant relationship with the keeping in touch factor. Based on the findings, Bibby concluded personality traits would be a good predictor of SNS usage.

Krämer and Winter (2008) conducted a study of 58 users of the German SNS StudiVZ to determine if a relationship between self-esteem, extraversion, self-efficacy, and self-presentation existed within SNS. They collected data from the users via a questionnaire. Additionally, they saved the public profiles of the participants and coded them in regard to several aspects such as number of virtual friends and number of photos. Their data indicated that a person's level of extraversion affected their choice of a more or less traditional profile photo. Specifically individuals that tended more toward extraversion were more likely to choose a less traditional photo (i.e., photos in black and white or with altered colors) rather than a realistic colored photo. Additionally users with medium extraversion scores had the highest number of groups listed in their profile although posthoc tests indicated no significant difference. Although this study focused specifically on how the individual's personality traits affected their profile pages, the findings suggest individual personality traits may have an influence on the overall usage of SNS.

Homesickness

Homesickness helps to inform the fourth research question: What is the relationship between a college freshman's level of homesickness and his or her gratification expectations from using SNS? In a clinical report on preventing and treating homesickness, Thurber, Walton, and the Council on School Health (2007) define homesickness as "distress and functional

impairment caused by an actual or anticipated separation from home and attachment objects such as parents" (p. 192). They noted that nearly everyone leaving familiar surroundings for a new environment, experiences homesickness to some degree. They attributed the low percentages obtained in some studies to the use of retrospective self-reports.

Students entering college for the first time are prone to experiencing homesickness. Even those that do not make a physical move transition from the familiar environment of high school to the new environment of college. Several studies in multiple countries have been conducted to measure levels of homesickness, and causes and effects of homesickness among college freshmen. In a review of homesickness, Fisher (1990) noted that homesick persons are distressed and likely to behave less effectively in their new environment. Additionally, among college students, satisfaction with residence was lower among homesick students, and distance from home distinguished homesick and non-homesick groups. Fisher also noted, with the exception of one study, in general there were no differences between sexes in reports of homesickness.

Fisher, Murray, and Frazer (1985) conducted a study involving 100 first year students at Dundee University in the U.K. Participants were asked to complete a survey consisting of homesickness items and several demographic items. Additionally participants were asked to provide a definition for the term homesickness and indicate if they had experienced it. They concluded that in a population of individuals involved in a transition that requires leaving home, roughly 60% of them will be affected by homesickness. They also found that self-reports of homesickness were linked to a greater desire to visit home, less satisfaction with current residence, and less satisfaction with current relationships. The majority of the homesick group reported that the length, frequency, and intensity of homesickness all decreased during the first five weeks of the term.

Fisher and Hood (1987) conducted another study with 100 First-Year students at Dundee University. Students that had been accepted to the university were sent letters inviting them to participate in the study two months prior to the start of the academic year. The Middlesex Hospital Questionnaire (MHQ) and Cognitive Failures Questionnaire (CFQ) were included with the letters. Students that completed and returned the questionnaires were contacted again during the sixth week of their first term and asked to fill out the MHQ and CFQ again. Additionally, they were asked to fill out the College Adaptation Questionnaire (CAQ), provide a personal definition for homesickness, and indicate the intensity of current homesickness as well as the intensity of homesickness upon arrival at college. Results indicated more than 71% of incoming freshmen experienced homesickness during the first six weeks of the term. Of those reporting homesickness, 36% did not recall having homesickness at the start of their first term, but felt homesick six weeks into the term. On the other hand, 57% recalled having homesickness at the start of the term but not have homesickness six weeks into the term. There were no significant differences in reporting of homesickness between males and females. Brewin, Furnham, Howes (1989) conducted a survey of 64 freshmen at two colleges in the U.K. Their results confirmed earlier research indicating that homesickness was a reasonably common occurrence with a typically short duration.

Carden and Feicht (1991) conducted a study of 75 American and 65 Turkish first year college students. The American students were from a private liberal arts college for women. The Turkish students were all female students from a coeducational university in Istanbul. The study occurred during the fourth week of the fall term. Participants were asked to complete three questionnaires including a homesickness questionnaire. Only 19% of the American students reported experiencing homesickness while 77% of the Turkish students reported experiencing

homesickness. Additionally, the mean homesickness score was significantly higher for the Turkish students. In line with the findings of Fisher (1990), the Turkish students classified as experiencing homesickness rated themselves as less satisfied with college than the students that were classified as not being homesick.

Guinagh (1992) surveyed 304 students enrolled in psychology or education classes. Participants had to have started at the university their freshmen year and completed at least one semester. All students were asked to answer eight questions, the last one asking if they had experienced homesickness. Participants answering yes to the last question were then directed to a section of the questionnaire dealing with homesickness. Almost 70% of the participants reported feeling some level of homesickness during their first term on campus. The results indicated a significant difference in reports of homesickness between males (57.5%) and females (75%). One third of the students recalled that homesickness persisted for less than a week while over 18% recalled it persisting for more than eight weeks.

Paul and Brier (2001) focused strictly on first year student's concerns about friends during their transition to college. Similar to Archer, Ireland, Amos, Broad and Currid (1998), they used grief and bereavement theory to guide the construction of a 10-item friendsickness scale. Incoming freshmen were recruited during summer orientation to take part in the study. Volunteers were mailed an initial survey of precollege concerns six weeks prior to moving to campus. Participants were then sent a second survey ten weeks into the semester containing scales to access college experiences and friendsickness. Friendsickness data was collected from a total of 68 first year college students. Fifty-two percent reported moderate to high levels of friendsickness while 6% experienced essentially no friendsickness.

Tognoli (2003) conducted interviews with 27 first year undergraduate students residing in dormitories at a university in New York. After the interview, scales to measure self-esteem, ego identity, and internal locus of control were also administered. Thirteen of the 27 participants (48%) indicated they had felt homesick. Those reporting feelings of homesickness scored lower on all three scales than those reporting no feelings of homesickness.

Watt and Badger (2009) conducted two separate studies on university students in Australia. The first study utilized an online survey that was completed by 161 international students at five Australian universities. Among other items, participants were asked to complete the Utrecht Homesickness Scale (UHS) and the Leary Kelly, Cottrell, and Schreindorfer 10-item Need to Belong scale. Levels of homesickness ranging from weak to very strong were reported by 72% of the participants. Their results indicated that homesickness was greater among individuals with a higher Need to Belong. The second study was conducted with 144 students at the University of New England in Australia. Participants were split into control and experimental groups. Homesickness was again measured using the UHS. Need to Belong was however was manipulated by presenting titles and description of neutral topics to the control group and titles and descriptions designed to provoke the Need to Belong. The titles and descriptions were based off items from the Need to Belong Scale. Scores for homesickness were significantly higher for the experimental group. Further analysis supported their hypothesis that Need to Belong has a causal effect on homesickness.

Homesickness Scales

Early measures of homesickness among college students were assessed through single items questions (e.g. Brewin, Furham, and Howes, 1989; Fisher, Murray, and Frazer, 1985). More recently, several scales have been created to measure homesickness, but to date no single

scale was found to be prevalent in a review of the literature. Carden and Feicht (1991) used a

review of the literature to construct a 60-item Homesickness Questionnaire (HSQ) concerned

with several areas including college experience and contact with family.

Archer, Ireland, Amos, Broad and Currid (1998) used items derived from features of grief

to develop a 33-item homesickness questionnaire. They combined the data from three different

studies for a total sample of 264 first year college students. The surveys were administered six to

seven weeks into the second term of the student's first year at college. Using the combined data

from the three studies, the scale yielded a Chronbach's alpha of .88. The scale factored into two

components that were labeled disliking the environment (11 items) and attachment to home (14

items) and accounted for 33% of the variance. Eight of the items did not load high on either

factor. Females scored significantly higher than men on the attachment to home subscale, but did

not score significantly different on the disliking the environment subscale.

Shin and Abell (1999) constructed a 20-item homesickness and contentment scale based

on data gathered from 201 students and spouses (100 couples) at a public university in the

southeast. The homesickness subscale produced high alpha coefficients; however the scale is

very specific to individuals living in a country other than their own. Items such as "I want to go

back to my home country" and "I forget my country's national holidays" would have no meaning

to a person living within their home country.

Stroebe, van Vliet, Hewston, and Willis (2002) created the Utrecht Homesickness Scale

(UHS) through a series of pilot studies and questionnaires. The 20-item scale was created by

deriving items from existing literature and a pilot study in which 100 participants gave a

definition of homesickness. Through a series of survey and analysis, the scale was reduced from

51 initial items to the final 20 items which reduce to five factors; missing family, missing

friends, having adjustment difficulties, ruminations about home, and feeling lonely. The scale was then administered along with other scales as part of a homesickness study at two universities, one in the UK and one in the Netherlands. A total of 280 first year students at Cardiff University in the UK completed the questionnaire. Roughly 80% of the participants reported having felt some homesickness. First year students entering the Faculty of Social Sciences of Utrecht University in the Netherlands were also mailed a similar survey. The UHS was the same for both populations, but other items included in the questionnaire differed. A total of 482 students from the Netherlands responded and almost 50% of them reported having felt homesick at some time after starting college. Both surveys contained a single item asking how often students had experienced homesickness in the previous four weeks. There was a strong correlation ($r = .71$) between the frequency of homesickness item and total homesickness scores obtained from the scale.

Prior research has shown that factors of homesickness may include an attachment to home, missing friends, missing family, and a feeling of loneliness. Since one of the uses of SNS is to maintain contact with existing social networks, it is possible that individuals in a new environment may take advantage of SNS to help alleviate feelings of homesickness. Therefore, there may be differences in motivations for using SNS between homesick and non-homesick individuals.

The Current Study

The literature in this chapter reviewed the existing research surrounding the RQs identified in chapter one. Many studies tend to report the usage of SNS based on demographical categories such as age, biological sex, education, and income (e.g. Lenhart, 2009; Corbett, 2009). This dissertation expands on previous research in exploring expectations of professional

outcomes; a gratification dimension that has not been explored in depth in existing literature. Given the main purpose of SNS is the maintenance and explanation of previously constructed social networks (Lenhart, 2009), this research attempted to discover what affect the level of an individual's Need to Belong has on his or her use of SNS. Finally, this research expands upon the findings of Krämer and Winter (2008) in an attempt to determine if extraversion has an effect on more than just the way users manage their profile. This research also explored a possible relationship between homesickness and motivations for using SNS.

Figure 2.1 illustrates the concepts related to each of the four research questions.
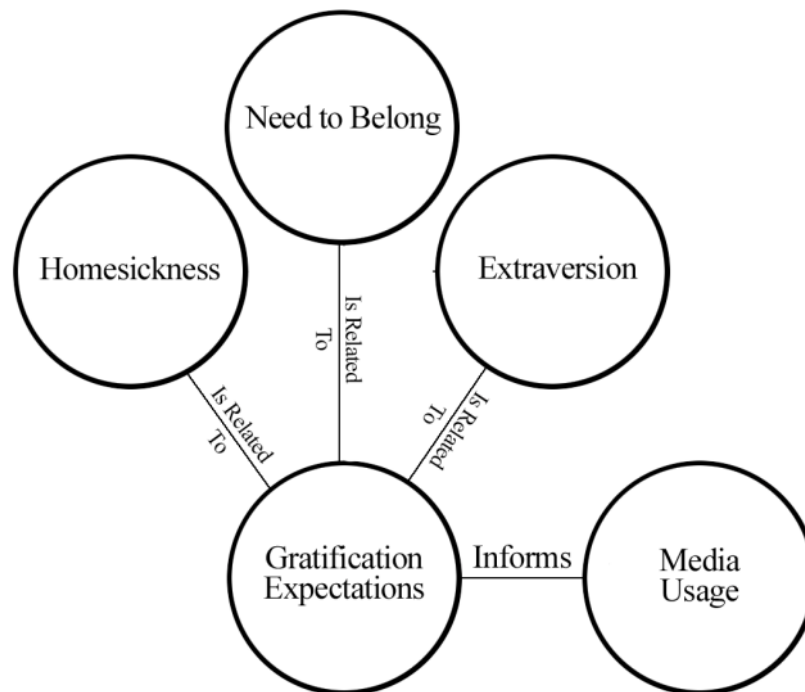
Figure2.1: Illustration of concepts

Chapter 3

METHODOLOGY

Introduction

This chapter outlines the method used to explore the research questions presented in Chapter 1. It describes the selected population, the method of sampling, the development of the instrument, the procedure for data collection, and the method of analysis. This chapter contains the following sections: 1) population and participants, 2) research design 3) instrument design and development, 4) research procedures, 5) data analysis strategy, and 6) limitations.

Population and Participants

This study focused specifically on college freshmen progressing through their first term at The University of Tennessee, Knoxville; a large four-year university in the southeastern United States. This study defined college freshmen as traditional students attending a university for the first time. College students have the potential to exhibit large diverse social networks. In addition to attempting to maintain social ties with friends and family back home, students expand their existing social networks to incorporate new people they are exposed to through the various activities they participate in at college. The extended networks might include new roommates, new friends, college professors, student organizations, and athletic teams, as well as professional contacts such as national organizations and potential future employers. College students have been shown to have high levels of adoption for SNS. Lenhart (2009) reported 68% of full time students and 71% of part time students have profiles on social network sites (SNS). Due to the complexity of their social networks, as well as their high level of adoption, college students were targeted as the population for this study.

Giddan (as cited in Paul & Brier, 2001) argues that the first year of college is the most difficult period of adjustment for students. Many concepts have been developed to categorize and describe the difficulties first year students experience at college. Paul and Brier (2001) introduced the concept of "friendsickness" to describe the challenge that occurs when college students move away from an established network of friends. Homesickness has been defined as the distress and functional impairment associated with an actual or anticipated separation from home (Thurber & Walton 2011). Since a large number of incoming college students at four-year universities undergo a separation from home, they have been the subjects of many homesickness studies in countries such as The United States, The United Kingdom, Iran, and Australia (e.g. Fisher, Murray, & Frazer, 1985; Khademi, & Aghdam, 2013; Tognoli, 2003; Watt & Badger, 2009). In previous research, 40 to 80 percent of students surveyed reported feelings of homesickness during their first semester on campus (e.g. Fisher, Murray, & Frazer, 1985; Guinagh, 1992; Tognoli, 2003). More recent studies have moved away from expressing homesickness as a dichotomous thing and instead look at levels of homesickness rather than if students experienced homesickness (Khademi, & Aghdam, 2013; Longo, & Kim-Spoon, 2013). The potential for incoming freshmen to experience elevated levels of homesickness along with the difficulties faced in transitioning to college make college freshmen a unique population to study in regards to their social networks. Since SNS enable individuals to maintain social connections even when physical interactions are restricted or impossible, it is possible that freshmen are motivated to use SNS in ways that differ from other college students.

The population for this study was freshmen at The University of Tennessee, Knoxville Campus. The incoming population for the class of 2016 consisted of about 4,200 students; 89% of which were in state residents (S. Martin, e-mail to University of Tennessee, Knoxville,

Faculty and Staff, August 20, 2012). The Office of the Assistant Provost for Student Success was instrumental in the recruitment of participants for this study. All incoming freshmen at the university are required to participate in a First-Year Studies (FYS) program. The program consists of a required course during the summer (FYS100) before students arrive on campus, an optional course (FYS101) offered during their first semester, and an optional seminar (FYS129) that is offered in both the fall and spring to students currently completing their first academic year. The Office of the Assistance Provost for Student Success is responsible for these courses.

Approximately five weeks after the start of classes for the fall term, their staff assisted in recruiting participants for this study by sending an e-mail message through the Blackboard site for the FYS100 course. Blackboard is an online course management system adopted by the university and used by class instructors to communicate course content, announcements, quizzes, and other course information to all of the students enrolled in a particular course. The e-mail contained information about the study as well as a link to the online survey. Additionally, a link to the survey was posted to the announcements section of the Blackboard site for the course. Records from the Registrar's Office indicate that 4,137 freshmen (98.50% of reported freshmen enrollment) enrolled in the FYS100 class for the incoming class of fall 2012 (E. Schonagen, personal e-mail, September 28, 2012). 1061 responses were received. A full discussion of the participants is discussed in chapter four.

Research Design

This study utilized an online quantitative survey for initial data collection. Since the population for this study was required to be online to complete their FY100 course, an online survey was appropriate. College students have many factors in their life that compete for their time and energy. The survey's relatively short completion time, ability to be accessed at any

time, and ability to be completed without further assistance from other people allowed for the

collection of data from a large and diverse sample of the population.

Since data collected from surveys is subject to some limitations (such as accidental

exclusion of important concepts and errors introduced by self-reporting and self-selecting), a

small focus group was also conducted after the survey data had been collected. The purpose of

the focus group was to provide additional validity to the results of the data from the survey,

clarify any questions or ambiguity that arose during data analysis of the survey results, and to

probe for any facets of usage of SNS that might not have been represented in the survey. A total

of nine people participated in three focus group discussions. Details about participants are

provided in chapter four.

<p style="text-align:center">Instrument Design and Development</p>

The initial instrument consisted of an electronic survey containing approximately 90

items (see Appendix A). During the data collection period, data was collected and stored on

servers provided by The University of Tennessee. Once the data collection period had passed, the

data was retrieved from the server and stored on a local hard drive as well as on a backup CD-

ROM. Although the survey was accessed electronically, no traceable information such as IP

address was captured during the survey. Additionally, none of the survey items requested

information that could be directly tied to any individual participant.

Demographics

Prior studies have produced mixed results in determining if males and females differ in

ratios of experiencing, and overall levels of homesickness. Fisher (1990) reports that in general

there are no significant sex differences in the reporting of homesickness. Stroebe, van Vliet,

Hewstone, and Willis (2002) confirmed these findings. Guinagh (1992), however, reported a

significant difference in the percentage of males versus the percentage of females reporting homesickness. To measure the ratio of male-to-female responses and to test for differences in responses, an item to indicate biological sex was included.

Prior to the start of the survey, on the informed consent page participants were asked to verify that they were eighteen years or older before continuing to the survey. Since it was possible for participants to continue even though they were not over the age of eighteen, an additional measure to protect against using data from minors was used. Participants were asked to include their year of birth. Data for anyone indicating a birth year after 1994 was deleted before further analysis was performed.

Use of SNS

The survey contained six scale items to determine the individual's overall usage of SNS, and six items for participants to self-report the average time spent engaged in specific activities on SNS. This scale was pilot tested on college students in general (Rieger & Allard; 2001). The items used are listed below.

- How many different Online Social Network Sites (SNS) [such as MySpace, Facebook, Linked, and Google+] do you have at least one profile on?
- Some users have multiple profiles on a single SNS. How many total SNS profiles do you actively use (log in to at least occasionally)?
- Please indicate the approximate number of friends you have on each profile. (Leave any extra lines blank. If you have more than 5 profiles, please indicate the number of friends on each of the five profiles that you use most often.)
- On an average week day (Monday through Friday) how many times per day do you engage in activity (post comments, browse pictures, read updates, etc.) on an SNS profile?
- On an average weekend (Saturday or Sunday) how many times per day do you engage in activity on an SNS profile?
- On average, each time you engage in activity on an SNS profile, how long are you actively engaged?
- During an average login session, how much time, in minutes, do you spend engaged in the following activities?
  - Socializing with friends
  - Socializing with family

    o   Promoting yourself
    o   Promoting a company or an organization
    o   Playing Games
    o   Looking for information

Need to Belong

The Leary, Kelly, Cottrell, and Schreindorfer (2001) scale was used to measure each participant's Need to Belong. The scale consists of 10 Likert scale items, has been used in several previous studies, and has yielded Cronbach's alpha ratings above .73 (e.g. De Cremer & Leonardelli, 2003; Greenwood & Long, 2009). The scale items are listed below ($\alpha = .77$). Three of the items (indicated with *) are reverse coded.

- If other people don't seem to accept me, I don't let it bother me.*
- I try hard not to do things that will make other people avoid or reject me.
- I seldom worry about whether other people care about me.*
- I need to feel that there are people I can turn to in times of need.
- I want other people to accept me.
- I do not like being alone.
- Being apart from my friends for long periods of time does not bother me.*
- I have a strong Need to Belong.
- It bothers me a great deal when I am not included in other people's plans.
- My feelings are easily hurt when I feel that others do not accept me.

Extraversion

McCroskey's 12-item introversion scale was used to measure the individual's tendency toward extraversion. McCroskey (1997) reports that the scale yielded reliability estimates between .80 and .90 across administrations in several diverse populations. As published, the scale contains an additional six items that are used to measure neuroticism. These items are used as fillers to avoid making it obvious what the scale is intended to measure. Since the twelve items measuring extraversion were interspersed with the Need to Belong items, the six neuroticism items were not be included. The items were re-worded from questions (such as "Do

you like to play pranks upon others?") to statements ("I like to play pranks upon others") to

match the language of the Need to Belong scale. The twelve included items are listed below.

Two of the items (indicated with *) are reverse coded (α = .86).

- I am inclined to keep in the background on social occasions?*
- I like to mix socially with people?
- I am inclined to limit your acquaintances to a select few?*
- Do you like to have many social engagements?
- I would rate myself as a happy-go-lucky individual?
- Can you usually let yourself go and have a good time at a party?
- I would be very unhappy if I were prevented from making numerous social contacts?
- I usually take the initiative in making new friends?
- I like to play pranks upon others?
- I'm usually a "good mixer?"
- I often "have the time of your life" at social affairs?
- I derive more satisfaction from social activities than from anything else?

Homesickness

The Utrecht Homesickness Scale (UHS) was selected to measure levels of homesickness.

This scale was selected over other available homesickness scales such as Shin and Abell (1999)

and Archer, Ireland, Amos, Broad, & Currid (1998) due to its ability to be easily modified to fit

the freshmen population. The Shin and Abell scale is better suited to students studying in a

foreign country. The Archer, et al. scale is longer than the UHS scale and contains several items

that would have needed to be re-worded into American English. In previous implementations,

the UHS scale has factored into five components (1) missing family (2) loneliness (3) missing

friends (4) adjustment difficulties and (5) ruminations about home, and the individual items and

overall scale have yielded reliability estimates between .78 and .94 (Stroebe, van Vliet,

Hewstone & Willis, 2002; Watt & Badger, 2009). In the spring semester prior to conducting

data collection for this study, Rieger, Allard, and Schumann conducted a pilot study with second

semester freshmen from the class of 2015 to test survey distribution, response rates, and the UHS

scale on the target population. Based on the results of the pilot, six additional items were added

to see if participants specifically identified using SNS to reduce overall homesickness or any of

the five individual components of homesickness. The items used are listed below (α = .95).

- Missing your parents
- Feeling unloved
- Feeling isolated from the rest of the world
- Missing your friends
- Finding it difficult to adjust to a new situation
- Regretting the decision to leave an old situation
- Continuously having thoughts about home
- Repeatedly thinking of the past
- Missing your family
- Feeling Lonely
- Feeling uprooted
- Missing people whom you can trust and talk to
- Feeling lost in a new situation
- Having difficulties getting used to new traditions
- Thoughts that an old situation was better than here and now
- Missing home
- Feeling missed by your family
- Longing for acquaintances
- Searching for familiar faces
- Feeling uncomfortable in a new situation
- Using OSNS to prevent missing my friends
- Using OSNS to help adjust to college
- Using OSNS to prevent missing my family
- Using OSNS to decrease feelings of loneliness
- Using OSNS to prevent missing home
- Using OSNS to prevent being homesick

Motivations for Use

Due to differences in media and applications of the uses and gratifications paradigm,

there is not a widely accepted measure for uses and gratifications. Additionally Stafford,

Stafford, and Schkade (2004) concluded that additional motivations not measured in previously

studied media might drive internet usage. At the time this study was proposed, the scale

developed by Paracharissi and Mendelson for examining Facebook gratifications was not in

publication. For these reasons, a unique measure of motivations for using SNS was developed, piloted, and employed in this study. The results of the pilot study are described in the pilot study section below.

Based on the results of the pilot study described in the section below, 17 items were selected to measure uses and gratifications of SNS. The two items that were recommended for removal were not included. In addition to the 17 items adopted from the pilot study, an item "To get political news and information" was also included on the survey since the survey was administered during the middle of a presidential election. To verify the validity of the scale responses, an item asking participants to rank uses of SNS in order of importance was included. An item asking participants to identify how much time (in minutes) they spend engaged in certain activities such as socializing with friends and playing games was also included.

To verify the validity of the data collected in this study, as well as identify any motivations that may have been missed, three focus groups were also conducted. Nine participants from the university were each given a $5 gift card to participate. These discussions were recorded and the recordings were analyzed as outlined in the data analyses strategy below. Recruitment methods and measures to protect participant confidentiality are outlined in the research procedures section below.

Pilot Study

A pilot study was conducted to test measurement reliability and to inform the current study. Rieger and Allard (2011) examined existing uses and gratifications literature as well as literature on SNS to create a 19-item uses of SNS scale. The scale was then employed in a pilot study with 159 college students. Students were recruited to participate through tools available via the SNS Facebook and MySpace. Participants were also asked to forward a link to the survey to

any of their friends who were also enrolled in college courses. In addition to the uses and gratifications items, participants were also asked to fill out the McCroskey's 12-item introversion scale and the Leary, Kelly, Cottrell, and Schreindorfer (2001) Need to Belong scale.

Data collected for the motivation items were subjected to a rotated factor analysis using a Varimax rotation and a 1.0 cutoff for the eigenvalues. Five factors emerged; however, the fifth factor contained only a single item. Additionally, the item "to find out what is going on" loaded closely to two different factors. It was determined that this item was worded too ambiguously. These two items were not recommended for inclusion in future research. Table 3.1 shows the rotated matrix component resulting from the study.

Rieger and Allard (2011) tested the relationship between scores on the introversion scale and the gratification factors as well as scores on the Need to Belong scale and the gratifications factors. The results of the pilot study lead to several hypotheses that were evaluated in the current study. The hypotheses are listed below grouped with the specific research question they help to inform.

RQ1: What gratification expectations motivate college freshmen to use online SNS?

H1: College freshmen will be motivated to use SNS to fulfill expectations for entertainment gratifications.

H2: College freshmen will be motivated to use SNS to fulfill expectations for social gratifications.

H3: College freshmen will be motivated to use SNS to fulfill expectations for promotional gratifications.

H4: College freshmen will be motivated to use SNS to fulfill expectations for networking and escape gratifications.

RQ2: What is the relationship between a college freshman's Need to Belong and his or her gratification expectations from using SNS?

H5: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for entertainment gratifications.

H6: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for social gratifications.

H7: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for networking and escape gratifications.

RQ3: What is the relationship between a college freshman's level of extraversion and his or her gratification expectations from using SNS?

H8: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for entertainment gratifications.

H9: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for social gratifications.

H10: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for promotional gratifications.

H11: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for networking and escape gratifications.

RQ4: What is the relationship between a college freshman's level of homesickness and his or her gratification expectations from using SNS?

Since homesickness was not measured in the pilot study, there are no additional hypotheses to help inform RQ4.

Table 3.1: Rieger and Allard Rotated Factor Matrix of SNS Uses

	Entertainment	Social	Promotional	Networking / Escape	Surveillance
To find amusement	.88				
To be entertained	.85				
To get away from work/school	.82				
To relieve boredom	.75				
To have fun	.63				
To find out what is going on	.51	.37	-.03	.11	.49
To share photos with others		.78			
To look at other people's shared photos		.76			
To get news about my friends		.64			
To get news about my family		.60			
To chat online		.55			
To arrange a social gathering		.48			
To promote my company			.90		
To promote my work			.87		
To promote myself			.44		
To make friends online				.79	
To seek companionship				.78	
To escape my problems				.63	
To get news about the world					.79

Research Procedures

Approval was sought and granted from the university's Internal Review Board (IRB) before any data collection began. Since the population for this study was users of SNS, individuals eligible to participate would have had access to internet services. Additionally all incoming freshmen are required to access the blackboard site via an internet connection on a regular basis in order to participate in the class. Since the target population was required to have access to the internet to participate in class, they should also have had access to fill out an online electronic survey. An electronic survey has advantages over traditional paper surveys in that they eliminate delays in sending the survey and receiving the results and do not place a burden on the participant to remember to fill out the survey and place it back in the mail.

Freshmen entering the university in the fall of 2012 underwent several activities before classes began. All incoming freshmen went through a two day orientation process in the summer. During orientation, they visited the campus and spent the night in a dorm room. They attended several information sessions about life on campus, the academic environment, and services that are offered to students. Additionally, students met with an advisor and registered for classes at the end of orientation. All incoming freshmen were also required to participate in the FYS100 course, an online course that contains activities to help students successfully transition to college. FYS100 culminates with all of the students reading a common book and submitting a written or graphic response to the book. During welcome week (the first week of classes), students attended a session where they met the author of the book and participated in small group sessions with other incoming freshmen (http://torch.utk.edu/).

Freshmen entering the university in the fall of 2012 began to move onto campus the week of August 13, 2012. In accordance with previous studies, the invitation to participate was sent

out approximately five weeks later when homesickness is thought to begin to peak (e.g. Archer, Ireland, Amos, Broad, & Currid, 1998; Urani, Miller, Johnson, & Petzel, 2003). Data for this study was collected using MR Interview, an online survey tool provided by The University of Tennessee. This software was selected because it is known to be in compliance with online data collection requirements of the IRB. On September 18, 2012, an e-mail was sent by a representative of the Assistant Provost for Student Success, through the FYS100 Blackboard site, with an invitation and link to participate in the survey (see Appendix D). The initial invitation to participate did not include information about the $30 gift card incentive. For this reason, an announcement with the information about the gift card was posted to the FYS100 Blackboard site on September 19, 2012. Posting the announcement caused a second e-mail to be sent to the students enrolled in the course. A representative of the Assistant Provost for Student Success also posted a link to the survey on the homepage of the FYS100 Blackboard site the day the initial invitation to participate was sent. On September 25, 2012, another e-mail was sent through Blackboard encouraging students to complete the survey. On October 9, 2012 the link to the survey was removed. Each time an e-mail was sent Blackboard generated an error message rather than confirming that the message had been sent to all of the intended recipients. Because of this error message, it is impossible to tell if all of the e-mails reached all 4,137 students enrolled.

At the start of the survey, students were presented with an informed consent screen with; information about the survey, information for contacting the university counseling center in the event of severe or prolonged symptoms resulting from exposure to the homesickness items, information about entering the drawing for the gift card, confidentiality information, and contact information for the principle investigator and the IRB office. By continuing to the survey,

students indicated that they were at least 18 years of age and agreed to participate in the study. According to information captured by the interview system and provided with the dataset, the survey took an average of 16 minutes to complete and participants were given the option to discontinue participation at any time without penalty. No personally identifiable information was collected during participation in the survey. After completing the survey, participants were invited to a different website to submit their name and e-mail address to be eligible to win the $30 apple gift card. The list of names and e-mail addresses were stored in alphabetical order to eliminate any way to link entries with specific survey responses. A total of 266 participants entered the drawing. One month after the link to the survey was removed, one name was randomly selected (via a random number generator) and that person was contacted to receive the $30 apple gift card. Once the gift card was collected, the file containing the names and e-mail addresses was destroyed.

Using the correlations found in the study conducted by Rieger and Allard (2011) and IBM SPSS Sample Power 3, it was determined that in order to detect similar correlations with an alpha of .05 and a power of 95%, a minimum of 284 valid responses would be needed. Due to the errors reported by Blackboard each time a reminder was sent, it is impossible to tell if every student enrolled received every e-mail. It is, however, likely that each student received at least one of the e-mails or was exposed to the link to the survey posted on the course site. A total of 1061 responses were received for a response rate of 25.64%. Of those 1061 responses, 508 people completed the survey successfully by clicking the final submit button, 469 timed out before completing the survey, and 84 participants explicitly stopped the survey.

MR Interview, keeps a record of the responses from participants that time out. A time out occurs when a participant closes the browser without clicking the final submit button on the

survey. Since participants were routed away from the survey to enter the drawing for the gift

card, they may not have known to click the final submit button to end the survey rather than

close the browser window. This issue was not known to the researcher at the time data was being

collected. A total of 25 participants timed out after answering the final question on the survey,

but without clicking the final submit button. These responses were added to the data as

successful completions. Of the 533 successful completions, 3 listed a birth year that would put

them under the age for taking the survey, 8 did not answer any of the questions, and 23 indicated

that they did not have any social networks. After eliminating these invalid surveys, a final N =

499 was obtained; which exceeds the minimum requirement of 284 identified by Sample Power.

Focus Group

The purpose of the focus group was to provide additional validity to the results of the

data from the survey, clarify any questions or ambiguity that arose during data analysis of the

survey results, and to probe for any facets of usage of SNS that might not have been represented

in the survey. After survey data was collected, a separate IRB was submitted and approved to

conduct three focus groups. The focus groups were facilitated by the primary researcher who has

completed multiple courses in qualitative methodology. A letter inviting students to participate

was sent via e-mail from a representative of the Assistant Provost for Student Success to the

students that were enrolled in the FYS100 course. The letter explained the purpose of the focus

groups and offered students a $5 gift card for their participation. Students were allowed to select

from four options for their gift card. These options were selected based on their proximity to

campus. A total of three focus groups were conducted at different times on three consecutive

days starting on January 29, 2012. Participation in each group was limited to five people. The

participants were allowed to select which focus group they participated in and were added to

each session based on their requested time and in the order in which they responded to the invitation. Specific numbers of attendees are provided in the data analyses in chapter four.

At the start of the focus group, students were greeted and welcomed to the group. A statement of purpose, the informed consent forms (see Appendix B), and the participant's pledge of confidentiality (see Appendix C), were distributed to each participant. Participants were then asked to sign the informed consent and confidentiality forms before the focus group began. The signed copy was collected by the primary investigator. In accordance with the guidelines of the IRB office at the University of Tennessee, the informed consent forms will be kept in a locked filing cabinet in the primary researcher's office for a period of three years.

The focus group was audio recorded to aid in analysis and was conducted in a manner similar to a long interview. While a discussion guide was present, participants were allowed and encouraged to discuss aspects of SNS in whatever order and manner naturally occurred to them. Participants were asked not to identify themselves or any of the other participants during the recording. To further protect confidentiality, only the participants' initials were used to verify who was present and to make sure each person received the gift card they requested. After the participants exhausted their knowledge of SNS and no new information was emerging, the focus session ended. The participants were thanked for taking the time to participate and were provided with an envelope that contained a copy of the informed consent form, a copy of the participant confidentiality statement, and a $5 gift card to the location they selected during the recruiting process. The analysis of the focus groups is provided in chapter four.

Data Analysis Strategy

All statistical analyses were performed using the current edition of the IBM Statistical

Package for the Social Science (SPSS 20). The data were analyzed using descriptive statistics,

frequencies, correlations, independent samples t-test, and exploratory factor analysis.

The recordings of the focus groups did not undergo verbatim transcriptions or in depth

textual analysis. The recordings were listened to in order to enhance notes taken during the focus

groups and to attempt to identify any additional information that may not have emerged from the

online survey. Information from the focus groups that inform the findings is noted in the results

section.

Limitations

The results of this study must be considered within the context of its limitations. The

decision to use a convenience sample of college freshmen at The University of Tennessee,

Knoxville, limits the ability to generalize these findings to other populations. Additionally, as

with any convenience sample, it is impossible to know how the participants in the sample

compare to those who chose not to respond to the survey. This sample is taken from a single

college in a single geographical location. These freshmen underwent a specific orientation

process to help them make the adjustment to college. Freshmen that do not undergo the same

orientation process may exhibit different levels of homesickness as well as present different

gratification expectations. Freshmen living in other geographical locations with different cultural

and social backgrounds may have different characteristics that may not be represented within the

chosen population.

This study focuses on three specific personality traits: extraversion, Need to Belong, and

homesickness. Other personality traits and situational factors may also be helpful in exploring

and explaining gratification expectations from the use of SNS. Additionally, there is a wide range of factors outside of the scope of this research (such as affect, diffusion of innovations, and social cognitive theory) that may also be helpful in informing why freshmen use SNS.

Another limitation is the use of self-reported measures. Some of the items such as "missing one's parents" may be considered socially unacceptable. While some controls were implemented to help validate results from the uses and gratifications items, no additional controls were added to help validate the results of the personality scales. However, since it is difficult to accurately measure how a person feels or to what extent they are experiencing a particular phenomenon, relying on the individual's own perceptions being portrayed in the self-reporting is necessary.

The actual responses were skewed toward females. While a weighted variable was used to adjust for differences in the response pool versus the freshmen population, the larger percentage of female participants may have impacted the results of this study since weighted data does not represent actual responses.

Finally, any study of SNS is limited by the fact that SNS are rapidly changing in availability, functionality, usage, and definitions. Researchers seeking to examine a specific aspect of a SNS may find that aspect is no longer valid at some point during the research process. Specific sites, or features of sites, may be removed, drop out of favor with users, or be remodeled so that the research no longer fits the object being researched.

Chapter 4

ANALYSIS OF DATA

Introduction

This chapter includes the data analyses. It provides a brief review of the purpose of the study as well as the data collection method. It concludes with the findings of the study organized by research questions and supporting hypotheses. This chapter contains the following sections: 1) review of the study, 2) demographic data, 3) scale descriptives, 4) findings.

Review of the Study

The purpose of this study was to expand on previous research in exploring expectations of professional outcomes as gratification dimensions. Additionally this research explored the effect the level of an individual's Need to Belong has on his or her use of SNS. Finally, this research attempted to determine if level of extraversion has an effect on the way incoming freshmen use SNS. It also explored a possible relationship between homesickness and motivation for using SNS.

Data for this study were collected primarily from an online survey. The survey consisted of approximately 90 items including scales for measuring usage of SNS, an individual's Need to Belong, level of extroversion, and level of homesickness. Freshmen enrolled in FYS100 were invited to participate through a course management system (Blackboard) via a link on the FYS100 course website as well as e-mails sent using the communication tools provided by Blackboard. Additionally, students completing the survey were invited via a separate e-mail to participate in a brief focus group designed to further explore freshmen motivations for the use of SNS. All data were collected from freshmen currently enrolled in their first semester at college.

All statistical analyses were performed using the current edition of the IBM Statistical Package for the Social Science (SPSS 20). The data were analyzed using descriptive statistics, frequencies, exploratory factor analysis, independent sample t-tests, and correlations. The analyses were used to answer the research questions and hypotheses that guided this study.

Demographic Data

The demographic data for this study is presented in two sections. The first section provides analyses for the data collected from the online survey. The second provides data on the focus group participants.

Online Survey

Of the 499 responses used, 174 (34.86%) of the participants were male and 322 (64.52%) were female. Three participants indicated that they preferred not to answer the biological sex question. The demographics reflected in the response group compared to the actual freshmen population were skewed toward females. The actual incoming freshmen population is comprised of roughly 51% females and 49% males ("Quick Facts", 2013). Since the ability to generalize the results of this study is of importance, the demographics for other public four-year universities in the southeast were checked. Statistics on the incoming freshmen classes were not readily available, however, *U.S. News and World Report* (http://colleges.usnews.rankingsandreviews.com/best-colleges) has data on the male-to-female ratio for entire universities. The percentages for ten other southeastern universities with similar overall enrollment were averaged. Across the ten universities the average enrollment was split at 52% females and 48% males.

A review of the literature on levels of homesickness indicated mixed results in determining if females report higher levels of homesickness than males. If females do report

higher levels than males, a sample that is skewed towards females could produce results that are also skewed. In order to compare scores between males and females on the homesickness variable, an independent samples t-test was conducted. This test was found to be statistically significant, $t(446) = 2.74$, p < .01; d = .27. These results indicate females ($M = 72.84$, $SD = 28.62$) reported higher levels of total homesickness than males ($M = 65.33$, $SD = 26.20$). As an additional measure, independent sample t-tests were also conducted to compare score between males and females on the extraversion and Need to Belong scales. The t-test for extraversion was found to be statistically non-significant. The t-test for Need to Belong was found to be statistically significant, $t(467) = 2.59$, p < .05; d = .25. These results indicate females ($M = 42.89$, $SD = 9.93$) score higher on the Need to Belong scale than males ($M = 40.45$, $SD = 9.50$).

Since females scored higher than males on both the Homesickness and the Need to Belong scale, the data was weighted to adjust for the difference in the male-to-female ratio in the sample and the population. The biological sex variable was recoded into a new weight variable. Males in the sample were given a weight of 1.38 and females were given a weight of .79. This resulted in an N = 496 since weighted statistics could not be performed on the three participants who did not respond to the biological sex item. All data analyses were performed with weighted cases based on the weight variable.

Focus Groups

A total of 14 students responded to the invitation to participate in the focus group. The participants were given the option to attend during one of three different times. Session one initially consisted of five participants and an alternate in the event that someone dropped out. All five participants showed for the first session and the alternate did not. The session consisted of four females and one male. Initially four people signed up for the second session; two sent e-

mails cancelling prior to the session and one did not show. The remaining participant was female. Although a single participant does not meet the criteria for a focus group, four people had indicated they would attend at the time the focus group was scheduled. Since the participant had already shown up and was willing to continue, a long interview was conducted using the same discussion guide that was prepared for the focus group. The results of the interview were folded in with the results from the other two focus groups. Four participants signed up for the third session and one of them did not show. The session consisted of two males and one female. In total, six females and three males participated in the focus groups. A summary of the participants is given in table 4.1.

Table 4.1: Summary of Focus Group Participants

Focus Group	Total Signed Up	Total Attended	Males Attended	Females Attended
Session 1	6	5	4	1
Session 2	4	1	0	1
Session 3	4	3	2	1
All groups	14	9	6	3

Scale Descriptives

Several items were used to determine an individual's time spent actively engaged in activities on SNS (usage). An overall usage score was determined by adding the score for the item "On an average week day (Monday through Friday) how many times per day do you engage in activity on an OSNS profile?" to the item "On an average weekend (Saturday or Sunday) how many times per day do you engage in activity on an OSNS profile?" and multiplying the result by the item "On average, each time you engage in activity on an OSNS profile, how long are you actively engaged?" A score for total time spent was determined by adding the individual scores for the six items that asked participants to report, in minutes, the time they spent engaged in various activities each time they log into a SNS.

Table 4.2 shows the reliability, N, valid range, min, max, mean, and standard deviation for the Need to Belong, extraversion, and homesickness scales. The three reversed items on the Need to Belong scale were recoded to new variables. These new variables were used for all analysis. The scale showed high reliability (10 items; $\alpha = .77$). Individual scores were computed by adding the responses for each of the ten items. Valid score ranges were between 10 and 70 inclusive. All total scores fell within the valid range. The minimum score was 10 and the maximum was 68. The mean was 41.69 with a standard deviation of 9.79.

The two reversed items on the extraversion scale were recoded to new variables. These new variables were used for all analyses. The scale showed high reliability (12 items; $\alpha = .86$). Individual scores were computed by adding the responses for each of the twelve items. Valid score ranges were between 12 and 84 inclusive. All total scores fell within the valid range. The minimum score was 17 and the maximum was 82. The mean was 52.48 with a standard deviation of 12.30.

Table 4.2: Scale descriptive statistics

Scale	α	N	Valid Range	Min	Max	*M*	*SD*
Need to Belong	.77	470	10-70	10	68	41.69	9.79
Extraversion	.86	474	12-84	17	82	52.48	12.30
Homesickness	.95	450	20-140	20	140	69.16	27.68

The items for the UHS scale yielded a high reliability (20 items; α = .95). A total homesickness score was obtained by adding the scores for each individual item. All 20 items were included in the total homesickness score. Valid score ranges were between 20 and 140 inclusive. All total scores fell within the valid range. The minimum score was 20 and the maximum was 140. The mean was 69.16 with a standard deviation of 27.68. The 18-item uses and gratifications scale also showed high reliability (α = .88).

<div align="center">*Findings*</div>

RQ1: What gratification expectations motivate college freshmen to use online social network SNS?

The data from this research indicate that participants are motivated to use SNS by expectations of two sets of gratification outcomes. The first gratification expectation relates to using SNS for entertainment gratifications. The second gratification expectation relates to using SNS for social gratifications.

To answer RQ1, data was collected on how likely participants were to use SNS for certain purposes such as "to be entertained", and "to escape my problems". Participants were asked to rate these 18 items on a Likert scale from one to seven with one being highly unlikely and seven being highly likely. Using IBM SPSS Statistics version 20, exploratory factor analysis (EFA) was performed on these 18 items.

Norušis (2003) explains the Kaiser-Meyer-Olkin (KMO) measure provides an indication to whether or not the variables are suitable for factor analysis. Scores closer to 1 are desirable whereas scores below .5 are unacceptable. The KMO score for the 18 gratification items was .89 indicating that a factor analysis was reasonable.

Estimates for an appropriate sample size vary from researcher to researcher. Norušis (2003) cites anywhere from 10 cases to an overall sample size of at least 300 as suggestions. Matsunaga (2010) states scholars appear to agree that a sample size of less than 200 is not large enough. Following the 10:1 rule, a minimum n = 180 is needed to perform an EFA on the gratifications items. With N = 496 for this study, there are more than enough responses to meet all suggestions for the minimum sample size.

Costello and Osborne (2005) reviewed over 1,700 studies that utilized some form of EFA. They found that the majority used a principal component analysis with a Varimax rotation. Additionally of those that reported their criteria for the number of factors retained, more than half of them used the Kaiser criterion. An EFA was conducted using these standards. Table 4.3 shows the rotate component matrix with values under .32 suppressed.

Several criteria to determine what constitutes a cross factor loading have been utilized in past research. Matsunaga (2010) mentions .5/.2, .6/.3, and .6/.4 as common criteria used in social scientific studies. Costello and Osborne (2005) use a simpler criterion in which any item that loads at higher than .32 on more than one factor is considered to be cross loaded. This score was chosen because it represents a 10% overlap in variance with other items on the same factor. The .32 criterion was used for this research. The initial rotated solution produced nine items with cross factor loadings.

Although the rotation method described above is considered the norm, Costello and Osborne (2005) argue that this does not always yield the best solution for a particular data set. Their first concern is that principal component analysis may not be the best extraction method. Their research yielded arguments in favor of both PCA and other extraction methods. Further, they were unable to produce a clear suggestion for which extraction method to use, citing

Table 4.3: Initial factor analysis solution

	Factor 1	Factor 2	Factor 3
To be entertained	.81		.33
To Find Amusement	.80		.38
To get away from work /school	.75		
To relieve boredom	.68		.39
To have fun	.62	.33	
To escape my problems	.55	.46	
To promote my work		.79	
To promote a company or organization		.71	
To promote myself		.71	
To make friends online		.68	
To get political news and information		.62	
To seek companionship		.59	
To chat online		.42	.37
To share photos with others			.72
To look at other peoples' shared photos	.38		.69
To get news about my friends	.43		.64
To get news about my family			.59
To arrange a social gathering		.40	.58

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

maximum likelihood (ML) or principal axis factors (PAF) as the two likely to give the best results. Matsunaga (2010) recommended performing PCA on an initial data set, then collecting additional data and performing the analysis on the new data using PAF. Norušis (2003) states PCA is the simplest method for extraction and allows for the calculation of exact factor scores. Since there does not appear to be a consensus for one method over the others, and factor scores are needed to test the hypotheses, PCA was used as the extraction method.

Costello and Osborne (2005) and Matsunaga (2010) both agree the Kaiser-Guttman criterion is not an optimal strategy, in that it is known to overestimate the number of factors returned. They, however, differ on which approach is the best for determining the true number of factors. Matsunaga (2010) suggests that previous studies indicated parallel analysis (PA) is one of the most accurate methods for determining the number of factors; while Costello and Osborne (2005) state that the best choice for researchers is a scree test due to its availability in the most common statistical software.

A scree test involves examining a graph of the eigenvalues and looking for a natural bend in the data. The number of data points above the bend indicates the number of factors to retain. Additionally, to test for data points clustered together near the bend, factor analysis should be run with fewer and more factors than indicated. It is recommended that the analysis that produces the cleanest factor structure has the best fit to the data. The scree plot for the 18 uses and gratifications items is shown in figure 4.1 below. Based on the scree plot, it can be argued that there are two or three factors above the natural bend.
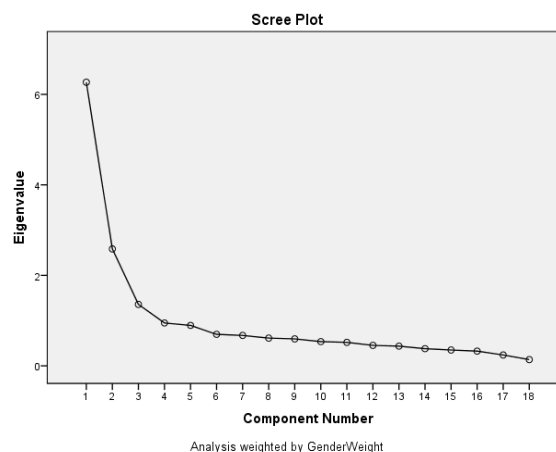
Figure 4.2: Scree plot for uses and gratifications items

Costello and Osborne (2005) in agreement with Matsunaga (2010) advise that a Varimax

rotation produces factors that are uncorrelated, however, that social sciences generally expect

correlation among factors. They recommend using an oblique rotation method such as Promax

instead. Based on the scree plot and the recommendations by Costello and Osborne (2005) and

Matsunaga (2010), EFA was conducted using PCA with a Promax rotation specifying solutions

for two, three, and four factors.

The obliquely rotated solutions yield a pattern and a structure matrix. The factor pattern

matrix shows loadings that relate the factors and the variables (Norušis, 2003). The structure

matrix shows the correlation coefficients between the factors (Norušis, 2003). Looking at the

pattern matrix, a four-factor solution yielded cross loadings for four of the eighteen items. A

three-factor solution reduced the cross loadings to three items. The two-factor solution reduced

the number of cross loadings to a single item "To arrange a social gathering." Based on Costello

and Osborne's (2005) criteria for a clean factor solution, two factors were chosen.

The item "To arrange a social gathering" loaded on both factors in the pattern matrix and

had a high correlation in the structure matrix. Three items, "To chat online", "To get news about

my family", and "To escape my problems" failed to load high (above .50) on either factor in the

pattern matrix. All three items also scored below a .60, but above a .32 on both factors in the structure matrix. Due to the lack of clear loading on either factor, these four items were dropped from the analysis. Repeating the factor analysis with the fourteen remaining items resulted in a clean two-factor analysis. The KMO score for the fourteen items was .87, still indicating a case for factor analysis. The pattern matrix for the final factor analysis is shown in table 4.4, and the structure matrix is shown in table 4.5 with scores less than .32 suppressed.

Looking at the structure matrix, the item "To have fun" has a moderate correlation to both factors. On the pattern matrix, it scores above a .60 on the first factor and below a .32 on the second factor. Additionally it fits well with the other items (such as "To be entertained" and "To find amusement") in the first factor. For this reason, the item was retained and included in the factor score for the first factor. The first factor contained items associated with socializing and entertainment gratifications. The second factor contained items associated with networking and promoting.

Another important consideration when conducting factor analyses is the face validity of the factors. Previous research, including the pilot study, separates social gratifications from entertainment. Other data collected from the survey supports treating these items as two separate factors. Participants were asked to rank five uses of SNS in order of importance from one to five with five being the most important use. Entertainment had the highest average ranking (3.62) followed by maintaining social ties (3.50). Therefore the combination of these two factors into a single factor does not appear to be correct when taken at face value.

Participants were asked to rate each of the uses and gratifications items on a scale from one to seven with one being highly unlikely to use and seven being highly likely to use. It would thus follow that any item rated less than four indicates a feature of SNS the participant is

Table 4.4: Pattern matrix for gratification expectations

	Entertainment Social	Promotion Networking
To find amusement	.87	
To be entertained	.86	
To relieve boredom	.81	
To get news about my friends	.75	
To look at other peoples' shared photos	.72	
To share photos with others	.67	
To get away from work / school	.67	
To have fun	.61	
To promote my work		.83
To promote a company or organization		.76
To promote myself		.73
To make friends online		.67
To get political news and information		.64
To seek companionship		.60

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

**Table 4.5: Structure matrix for gratification expectations**

	Entertainment Social	Promotion Networking
To find amusement	.88	
To be entertained	.87	
To relieve boredom	.77	
To look at other peoples' shared photos	.72	
To get away from work / school	.70	
To get news about my friends	.70	
To have fun	.70	.46
To share photos with others	.68	
To promote my work		.81
To promote myself		.75
To promote a company or organization		.75
To make friends online		.68
To get political news and information		.65
To seek companionship		.58

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

unlikely to use. The six items in the networking and promotional gratifications factor all had an average rating of less than 3.10 across all participants. By contrast, the eight items on the social and entertainment factor had an average rating greater than 4.49 across all participants. The four items that were removed from the factor analysis had an average score between 2.99 and 4.39. Since the purpose of the study was to examine the gratification expectations of SNS, it makes sense to further explore just the items rated higher than a 4.00, which indicate the participant is likely to use SNS for that purpose.

Similar to the process used with all of the uses and gratifications items, the ten items that had an average score greater than 4.00 were subjected to an exploratory factor analysis (EFA). The Kaiser-Meyer-Olkin (KMO) score for these ten items was .90 indicating that factor analysis was reasonable. Based on the scree plot for the 10 items (Figure 4.2), there appears to be two factors above the natural bend.
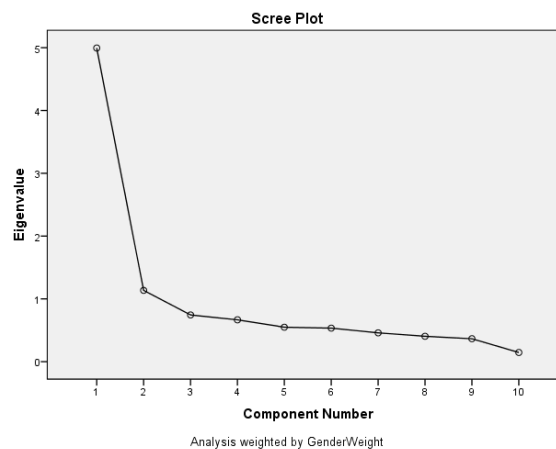
Figure 4.2: Scree plot for items rate higher than 4.00

An EFA was conducted using principal component analysis (PCA) with a Promax rotation specifying a two factor solution. All ten items loaded above a .50 on one of the two

factors. None of the items had high cross loadings. The first factor contains items related to entertainment gratifications. The second factor contains the items related to social gratifications. The two factors explain 61.30% of the variance. The structure and pattern matrixes are shown in tables 4.6 and 4.7 with scores less than .32 suppressed.

A test for reliability of the items for the two subscales yielded acceptable results (5 items; $\alpha = .87$), and (5 items; $\alpha = .77$) for factors one and two respectively. Factor scores for the entertainment items and the social items were calculated by adding individual item scores together. These factor scores were used for further analyses. An attempt to further reduce the items rated below a 4.00 did not result in clean factors. These items were excluded from further analyses.

In order to compare scores between males and females on the individual gratification factors, independent samples t-tests were conducted. The test for entertainment gratifications had a Levine's $F = 6.67$, thus equal variance was not assumed. The test was found to be statistically significant, $t(461.50) = 3.65$, p < .00; d = .33. These results indicate females ($M = 26.84$, $SD = 6.45$) scored higher than males ($M = 24.49$, $SD = 7.71$) on the entertainment gratifications sub scale. For the test for social gratifications, equal variance was assumed. The test was found to be statistically significant, $t(475) = 4.97$, p < .00; d = .45. These results indicate females ($M = 29.78$, $SD = 7.22$) scored higher on the social gratifications subscale than males ($M = 26.35$, $SD = 7.83$).

H1: College freshmen will be motivated to use SNS to fulfill expectations for entertainment gratifications was supported by the emergence of an entertainment gratification factor in the EFA.

H2: College freshmen will be motivated to use SNS to fulfill expectations for social gratifications was supported by the emergence of a social gratification factor in the EFA.

Table 4.6: Pattern matrix for items rated above 4.00

	Entertainment	Social
To be entertained	.90	
To find amusement	.87	
To get away from work/school	.81	
To relieve boredom	.79	
To have fun	.73	
To get news about my family		.91
To share photos with others		.68
To arrange a social gathering		.63
To look at other people's shared photos		.62
To get news about my friends		.59

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

Table 4.7: Structure matrix for items rated above 4.00

	Entertainment	Social
To find amusement	.90	.57
To be entertained	.89	.53
To relieve boredom	.79	.46
To get away from work/school	.76	.38
To have fun	.74	.45
To look at other people's shared photos	.60	.76
To share photos with others	.52	.75
To get news about my family		.73
To get news about my friends	.57	.72
To arrange a social gathering	.44	.66

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

H3: College freshmen will be motivated to use SNS to fulfill expectations for promotional gratifications was not supported due to the lack of a promotion gratification factor emerging from the EFA.

H4: College freshmen will be motivated to use SNS to fulfill expectations for networking and escape gratifications was not supported due to the lack of a networking and escape gratification factor emerging from the EFA.

RQ2: What is the relationship between a college freshman's Need to Belong and his or her gratification expectations from using online SNS?

Pearson's correlations were used to examine the relationship between scores on the Need to Belong scale and scores on each of the gratification factors identified in the EFA used to answer RQ1. A Pearson's correlation was also used to study the relationship between the Need to Belong scale and the overall SNS usage score. The correlation between the score on the Need to Belong scale and overall SNS usage was statistically insignificant.

H5: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for entertainment gratifications was supported. There was a statistically significant, modest, positive correlation between scores on the Need to Belong scale and scores on the entertainment subscale, $r = .22$, $p < .01$.

H6: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for social gratifications was supported. There was a statistically significant, weak, positive correlation between scores on the Need to Belong scale and scores on the social subscale, $r = .18$, $p < .01$.

H7: There will be a direct and positive correlation between a college freshman's score on the Need to Belong scale and his or her use of SNS for networking and escape gratifications could not be evaluated because this gratification factor was not present in the current data.

Q3: What is the relationship between a college freshman's level of extraversion and his or her gratification expectations from using online SNS?

Pearson's correlations were used to examine the relationship between scores on the extraversion scale and scores on each of the two factors identified in the EFA used to answer RQ1. A Pearson's correlation was also used to examine the relationship between scores on the extraversion scale and the overall SNS usage score. The correlation between the score on the extraversion scale and overall SNS usage was statistically insignificant.

H8: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for entertainment gratifications was supported. There was a statistically significant, modest, positive correlation between scores on the extraversion scale and scores on the entertainment subscale, $r = .26$, $p < .01$.

H9: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for entertainment gratifications was supported. There was a statistically significant, modest, positive correlation between scores on the extraversion scale and scores on the social subscale, $r = .27$, $p < .01$.

H10: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for promotional gratifications could not be evaluated because this gratification factor was not present in the current data.

H11: There will be a direct and positive correlation between a college freshman's score on the extraversion scale and his or her use of SNS for networking and escape gratifications could not be evaluated because this gratification factor was not present in the current data.

RQ4: What is the relationship between a college freshman's level of homesickness and his or her gratification expectations from using online SNS?

An EFA on the 20-item Utrecht Homesickness Scale (UHS) resulted in the identification of two factors of homesickness. Similar to the factors reported by Archer, Ireland, Amos, Broad, and Currid (1998), the first factor contained items related to disliking or discontentment with the new environment. The second factor contained items related to an attachment to or longing for friends, family, and home. Correlations between these factors and the uses and gratifications factors identified in RQ1 were modest to moderate. The highest correlation was between the longing factor and the networking and promotion factor, $r = .31$, $p < .01$.

To collect data about participants' levels of homesickness, the UHS was used. This scale is reported to factor into five distinct subscales that measure an individual's level of missing family, loneliness, missing friends, adjustment difficulty, and ruminations about home (Strobe, van Vliet, Hewstone & Willis 2002). Other research has reported only two factors for homesickness. Due to the discrepancy in prior research, the homesickness scale was subjected to an EFA following the same process used to analyze the gratification items for RQ1. The KMO score was .94 indicating a strong case for factor analysis. The scree plot for the homesickness scale (Figure 4.3) indicates the possibility of two factors.
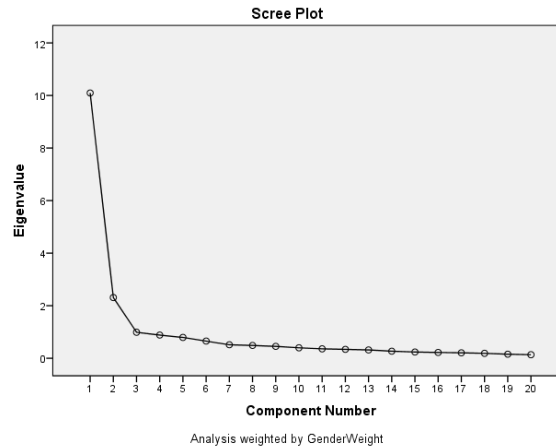
Figure 4.3: Scree plot for homesickness scale

To determine the number of factors to retain, EFAs using PCA and Promax rotation were run for two and three factors. Looking at the pattern matrix for both analyses, the three-factor solution contained high cross loadings for three of the items, with two of them scoring below .50 on both factors they loaded on. The two factor solution contained high cross loadings for only a single item ("Missing people whom you can trust and talk to") and it was the only item with a score of less than .50 on both factors. The item "Missing people whom you can trust and talk to" was removed and the analysis was run again for both three and two factors.

The KMO score for the 19 remaining items was .94. The pattern matrix contained two cross loadings and one item that did not load above .50 on any factor with the three-factor solution. The pattern matrix contained no cross loadings and no items below .50 on either factor for the two-factor solution. Based on Costello and Osborne's (2005) criteria for a clean factor solution, two factors were chosen. The final pattern matrix is shown in table 4.8 and the final structure matrix is shown in table 4.9 with scores less than .32 suppressed.

Table 4.8: Pattern matrix for homesickness items

	Discontent	Longing
Feeling lonely	.89	
Feeling lost in a new situation	.84	
Feeling uncomfortable in a new situation	.84	
Feeling isolated from the rest of the world	.83	
Finding it difficult to adjust to a new situation	.79	
Feeling uprooted	.79	
Feeling unloved	.78	
Having difficulties getting used to new traditions	.77	
Thoughts that an old situation was better than here and now	.71	
Longing for acquaintances	.69	
Repeatedly thinking of the past	.66	
Regretting the decision to leave an old situation	.60	
Searching for familiar faces	.57	
Missing your parents		.95
Missing your family		.95
Missing home		.91
Feeling missed by your family		.82
Continuously having thoughts about home		.64
Missing your friends		.55

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

Table 4.9: Structure matrix for homesickness items

	Discontent	Longing
Feeling lost in a new situation	.86	.50
Feeling lonely	.85	.41
Feeling uncomfortable in a new situation	.83	.44
Feeling uprooted	.80	.45
Having difficulties getting used to new traditions	.79	.47
Finding it difficult to adjust to a new situation	.79	.43
Longing for acquaintances	.75	.49
Thoughts that an old situation was better than here and now	.75	.46
Repeatedly thinking of the past	.74	.51
Feeling isolated from the rest of the world	.74	
Feeling unloved	.69	
Searching for familiar faces	.68	.51
Regretting the decision to leave an old situation	.65	.42
Missing home	.52	.92
Missing your family	.45	.91
Missing your parents	.39	.88
Continuously having thoughts about home	.63	.79
Feeling missed by your family	.37	.78
Missing your friends	.43	.62

Extraction Method: Principal Component Analysis
Rotation Method: Promax with Kaiser Normalization

Looking at the items contained in the two-factor solution, the factors are similar to the factors reported by Archer, Ireland, Amos, Broad, and Currid (1998). The two factors can be labeled as disliking or discontent with the new environment, and an attachment to or longing for friends and family. To further confirm that validity of these two factors, independent samples t-tests were conducted to compare scores of males to females. In the Archer, Ireland, Amos, Broad, and Currid (1998) study, there was a statistically significant difference in scores on the attachment factor, but not on the disliking factor. Similar results were obtained for the current study. The t-test to compare scores between males and females on the discontentment subscale was statistically significant but had a very small effect size, $t(462) = 2.02$, $p < .05$; $d = .19$. These results indicate females ($M = 41.67$, $SD = 20.02$) scored higher than males ($M = 38.09$, $SD = 18.03$) on the discontentment sub scale. The t-test to compare scores between males and females on the longing subscale was also found to be statistically significant, $t(476) = 4.98$, $p < .00$; $d = .45$. These results indicate females ($M = 26.86$, $SD = 10.07$) scored higher than males ($M = 22.40$, $SD = 9.42$) on the longing sub scale. Due to the similarity of the results in this study to the results in the Archer, Ireland, Amos, Broad, and Currid (1998) study the two factors resulting from the EFA described above were used to further explore homesickness.

These two factors accounted for 62.51% of the variance. A test for reliability of the items for the two subscales yielded acceptable results (13 items; $\alpha = .94$), and (6 items; $\alpha = .90$) for factors one and two respectively. Factor scores were calculated by adding the individual item scores together. Factor scores were stored in new variables and these variables were used to further explore this research question.

To examine this research question, Pearson's correlations were used to study the relationship between the scores on the subscales for each of the factors identified for RQ1 with

the factors identified for the homesickness scale. A Pearson's correlation was also used to examine the relationship between scores on the two homesickness subscales with the overall SNS usage score. There were statistically significant, positive correlations between scores on the longing sub scale and; the entertainment gratifications sub scale (r = .26, p < .01), the social gratifications sub scale (r = .30, p < .01), and overall usage scores (r = .11, p < .05). There were statistically significant, positive correlations between scores on the discontentment sub scale and; the entertainment gratifications sub scale (r = .19, p < .01), the social gratifications sub scale (r = .13, p < .01), and overall usage scores (r = .16, p < .01).

Participants were also asked to respond to single item questions to indicate on a scale from one to seven (with one being not at all) the extent to which they experienced using SNS to alleviate specific symptoms related to homesickness. The item "Using SNS to prevent missing my family" scored an average of 2.77 while the item "Using SNS to prevent missing my friends" scored an average of 3.56 across all participants. Scores on the single item "Using SNS to prevent missing my family" had positive, statistically significant correlations with scores on the discontentment sub scale (r = .58, p < .01) and the longing sub scale (r = .49, p < .01). Scores on the single item "Using SNS to prevent missing my friends" also had positive, statistically significant correlations with scores on the discontentment sub scale (r = .48, p < .01), and the longing sub scale (r = .47, p < .01).

The longing and discontent factor scores had moderate to high correlations with the other four items asking directly about using SNS to reduce symptoms of homesickness. The strongest correlation was between scores on the discontentment factor and using SNS to decrease feelings of loneliness, r=.65, p<.01. Correlations above .60 were also observed between discontentment scores and using SNS to prevent being homesick (r=.61, p<.01), longing scores and using SNS to

prevent missing home (r=.61, p<.01), and longing scores and using SNS to prevent being

homesick (r=.62, p<.01). The correlations for the factors and single items are given in table 4.10.

Focus Group Analyses

      The purpose of the focus group was to provide additional validity to the results of the

data from the survey, clarify any questions or ambiguity that arose during data analysis of the

survey results, and to probe for any facets of usage of SNS that might not have been represented

in the survey. The focus groups were conducted after the survey data had been collected and

underwent preliminary analyses. The focus groups were recorded, but no verbatim transcriptions

were produced. Notes were taken during each session and the recordings were reviewed to

enhance the notes.

      A total of nine people participated in the three focus group sessions. The second focus

group originally had four participants registered, but only a single participant showed up for the

session. Since that participant was willing to continue with the session, a long interview was

conducted using the same interview guide that was prepared for the focus group. The results of

the interview were folded into the results of the other two focus groups.

      Focus group participants listed Facebook as their primary SNS. Twitter, Instagram,

Google+, LinkedIn, and Tumbler were also mentioned. They defined SNS as 1) something that

anyone can join, 2) where all of your friends are, and 3) the easiest way to communicate. The

items from the entertainment gratification sub scale were not emphasized in the focus groups.

Participants mentioned that they checked their SNS when they were bored in class, but otherwise

did not specifically mention the use of SNS for entertainment or amusement. The items on the

social gratifications factor, however, were well represented in the focus group. Their primary

interest in using SNS was to keep up friends and identified the behavior of observing friends but

not interacting with them as "stalking". Additionally, a heavy emphasis was placed on the communication aspects of SNS. It was important to the participants that SNS provided the ability to reach everyone at once and they perceived that their friends checked their Facebook accounts more often than their e-mail accounts.

Table 4.10: Correlations between homesickness factors and single items

Using SNS To:		help adjust to college	prevent missing my family	prevent missing my friends	decrease feelings of loneliness	prevent missing home	prevent being homesick
Discontent	Pearson Correlation	.51**	.47**	.45**	.65**	.56**	.61**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	450	447	447	450	447	446
Longing	Pearson Correlation	.43**	.57**	.47**	.44**	.61**	.62**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	450	447	447	450	447	446

Chapter 5

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

Introduction

This chapter presents the findings, conclusions and implications for this study. It provides

an executive summary of the study and a review and discussion of the findings. The chapter

concludes with implications of the findings and suggestions for further research. This chapter

contains the following sections: 1) review of the study, 2) summary of the findings, 3)

discussion, 4) conclusions, 5) implications, 6) future research.

Review of the Study

Millions of people worldwide log onto social network sites (SNS) every day. Some users

have positive experiences that include increased social connectedness, increased access to

information, and access to materials that provide entertainment and an escape from everyday

worries. Along with the positive experiences, however, there are also many negative experiences.

Users of SNS have been the victims of cyberbullying, arrested for materials posted, and have

become targets for stalkers. The functionality of any given SNS is the same for each user that

visits the site, but the choice of how and when to use certain features and not others leads each

user to have different experiences with SNS.

The purpose of this study was to utilize a uses and gratifications framework to help

understand what gratification expectations affect the usage of SNS among college freshmen in

their first semester. Additionally, the research explored a possible link between the social

personality traits of the individual and their gratification expectations as well as a link between

levels of homesickness and gratification expectations.

College freshmen in their first semester were selected for this research due to their potential for high levels of homesickness as well as their unique social situations. College students are often moving away from or leaving home for an extended period for the first time in their lives. Additionally, as they make the transition to college, many of their existing social ties are severed and new ones are created.

Approximately six weeks after the start of the fall semester, college freshmen (n=499) enrolled in a first-years study course completed an online survey that contained a uses and gratifications of SNS scale, the McCroskey (1997) 12-item introversion scale, the Leary, Kelly, Cottrell, and Schreindorfer (2001) 10-item Need to Belong scale, and the Utrecht Homesickness Scale (Stroebe, van Vliet & Hewston, 2002). The data were analyzed using the current version of the IBM Statistical Package for the Social Science (SPSS 20). Descriptive statistics, frequencies, exploratory factor analysis, independent samples t-tests, and correlations were used to answer the research questions and hypotheses that guided this study. Following is a summary of the findings, discussion, conclusions, implications, and recommendations for future research.

Summary of the Findings

1. Based on the exploratory factor analysis (EFA), freshmen gratification expectations can be classified into two factors. The first factor contains items related to expectations for entertainment gratifications. The second factor contains items related to expectations for social gratifications. Females scored higher than males on both gratification sub scales.

2. There was not a statistically significant relationship between freshmen Need to Belong and total usage of SNS. There was a statistically significant, weak correlation between scores on the Need to Belong scale and using SNS for social gratifications and a modest correlation with using SNS for entertainment gratifications.

3. There was not a statistically significant relationship between freshmen tendency toward extraversion and total usage of SNS. There was a statistically significant, modest correlation between extraversion and using SNS for social gratifications and a modest correlation with using SNS for entertainment gratifications.

4. Based on an EFA, homesickness items can be reduced to two factors; discontentment with the new environment and a longing for home. Both factors had statistically significant correlations with overall SNS usage, and both gratification factors. The correlations scores ranged from weak to moderate.

Discussion

Chapter four limited the analyses to specifically addressing the research questions and hypotheses that guided this study. The following section draws on additional data from the survey items, as well as information obtained from the participants in the focus groups to further explore and discuss freshmen usage of SNS.

Uses and Gratifications

A Pearson's correlation was used to evaluate the relationship between the uses and gratifications factor scores and scores on the extraversion scale, Need to Belong scale, homesickness longing subscale, and homesickness discontent subscale. The strongest correlation was a moderate positive correlation between longing for friends and family and using SNS for social gratifications, $r=.30$, $p<.01$. Although the correlation is moderate, it does indicate that at

least some of the freshmen suffering from symptoms of homesickness related to missing their friends and family, are turning to SNS as another means of socializing. Educators that are concerned with students not adjusting well to college life due to missing their friends and family may want to encourage the creation and use of SNS support groups to help these students.

The factors resulting from the EFA in this study did not match the factors from the pilot study. While the participants for this study were limited to college freshmen, the participants for the pilot study included anyone currently enrolled in college classes. It is possible that, as college students progress toward graduation and begin to consider life-long careers, their usage of SNS changes. In particular it would seem logical that students would have more of a desire to promote themselves and their work. Additionally students may begin using SNS to expand their physical social networks by connecting to other professionals in their field of study.

Tendency toward extraversion

The data collected in this research indicated mild positive correlations between scores on the McCroskey (1997) 12-item introversion scale and freshmen using SNS for entertainment ($r=.26$, $p<.01$) and social ($r=.27$, $p<.01$) gratifications, meaning freshmen with a higher tendency toward extraversion also rated their likelihood to use SNS for these gratifications higher. Additionally, there was a moderate positive correlation between scores on the introversion scale and the total number of friends reported, $r=.33$, $p<.01$. Although none of the correlations are extremely strong, there is some indication that the characteristics that differentiate introverts from extroverts carry over to some extent on SNS.

Need to Belong

Baumeister and Leary (1995) concluded that human beings are fundamentally motivated by a desire to form and maintain interpersonal relationships. They described and measured this

motivation as "Need to Belong". Despite prior research that indicated a person's willingness to join SNS might be greater if they have a higher Need to Belong, the data collected for this research does not indicate a correlation between scores on the Need to Belong scale and specific gratification expectations from the use of SNS. Further there was a negligible correlation between scores on the Need to Belong scale and the total number of friends reported, $r=.10$, $p<.01$.

One reason for the lack of a correlation could be that while the Need to Belong drives people to create additional interpersonal relationships, freshmen indicated a very small interest in using SNS to seek out additional relationships. On a scale from one to seven with one being highly unlikely to use SNS for this reason, the average rating for the item "To make friends online" was a 2.60 across all participants. The item "To seek companionship" averaged 2.52 across all participants. Based on these findings, it is unlikely that the Need to Belong is a useful measure for determining how incoming freshmen utilize SNS.

These results also imply that college freshmen are unlikely to view SNS as a viable resource for making new friends and acquaintances on campus. Participants in the focus group indicated a reluctance to accept a friend request from anyone they had not previously met in person. Participants in the focus group did however indicate they used SNS over the summer to become more familiar with their roommates once they had been assigned. Administrators wishing to use Facebook as a means to encourage students to meet and socialize with new classmates will want to consider opportunities that allow the students to meet in person and then provide an easy way for students to continue that connection through the use of SNS. Many SNS provide tools such as groups and events that might be useful in accomplishing this.

Homesickness

This study utilized the Utrecth homesickness Scale (UHS) to measure levels of homesickness among college freshmen in their first year at the university. In previous research, the scale items reduced to five unique factors (Stroebe, van Vliet, Hewston & Willis, 2002). The data collected for this study, however, reduced to only two factors. Although these results are inconsistent with the original scale, they are consistent with the findings of Archer, Ireland, Amos, Broad and Currid (1998) which indicates only two dimensions. These two dimensions indicate a discontentment with the new environment, and a longing for the old environment.

The correlations between scores on the homesickness sub scales and the uses and gratifications subscales were only weak to moderate. One of the reasons for the lack of stronger correlations could be attributed to the fact that some of the participants do not make social connections with their family members through SNS. Several of the participants in the focus groups indicated that they do not accept friend requests from family members. When asked to rate on a scale from one to seven (with one being highly unlikely) how likely a participant was to use SNS for specific reasons, the item "To get news about my family" had an average score of 4.39 while the item "To get news about my friends" had an average score of 5.69.

Although higher levels of homesickness do not have very strong correlations with the gratification expectations identified through this research, there are strong correlations between levels of homesickness, and using SNS to alleviate the symptoms of homesickness. These results indicate that both family members and educators have an opportunity to use SNS to help alleviate the symptoms of homesickness. Parents and family members of students that are homesick due to missing friends and family should be encouraged to be more active on SNS. Even if they do not interact directly with their students, their student will be able to view this

activity when they log onto the SNS. Administrators can utilize some of the features of SNS to help students transition to college life. Since participants in the focus group indicated SNS are an easier way to communicate and keep up, administrators should consider options for making information about campus events and other aspects of campus life available through SNS.

Gaming

While gaming on SNS is growing in popularity, the participants in the focus group felt like it was more of an annoyance. They were put off by the amount of communication they received from different games in the form of game requests. There was also concern over games charging money after claiming to be free to play. Participants in the focus group felt like SNS should be used for socializing while systems designed specifically for games should be used for gaming. In response to a survey item asking participants how much time they spent playing games on SNS, 90% indicated they spent less than five minutes per login session. Only 1.4% indicated spending 30 minutes or more per login session. This is interesting given the fact that entertainment is one of the gratifications sought from the use of SNS. Although the data is self-reported, it still provides a strong indication that any effect gaming has on a student's ability to succeed in college does not stem primarily from SNS games.

Conclusions

Based on the results of this study, it is reasonable to conclude that incoming freshmen utilize SNS to satisfy the need for social gratifications as well as entertainment gratifications. For reasons beyond the scope of this study to explain, only a very small percentage of them are interested in using SNS for promotional and networking gratifications.

Prior research indicates a relationship between a higher Need to Belong and a willingness to join and participate in SNS (Gangadharbatla, 2008). The results of this study indicate that

higher scores on the Need to Belong scale do not have high correlations with specific

gratification expectations, a higher number of reported friends, or a greater amount of time spent

using SNS.

Tieger and Barron-Tieger (1995) classify extraverts as people that seek out other people,

enjoy lots of social interaction, tend to know many other people, and tend to meet new people

with frequency and ease. The results of this study indicate that to some extent these

characteristics are represented in the way individuals use SNS. The data indicate a moderate

positive correlation between higher scores on the McCroskey (1997) 12-item introversion scale

(meaning a higher tendency toward extraversion) and the number of friends a user has on their

SNS. There is also a mild positive correlation between a higher tendency toward extraversion

and expectations of social and entertainment gratifications.

Based on the findings of this study, freshmen are more likely to use SNS to keep up with

their friends than with their family. Some of the participants in the focus group indicated that

they would not accept friend requests from family members on their SNS. While the data shows

only a modest positive correlation between higher scores on the "longing for friends and family"

factor of the homesickness scale and the social factor of the uses and gratifications items, there

were much stronger positive correlations between scores on the "longing for friends and family"

factor and single item questions related to usage of SNS specifically to relieve symptoms of

homesickness. Although there is not a strong positive correlation between homesickness and

gratification expectations, there is a clear indication of usage of SNS to relieve symptoms of

homesickness.

Implications

The data from this research indicate that incoming freshmen are motivated to use SNS for purposes of entertainment and socializing. This has major implications for any agency wishing to use SNS as a form of outreach. Participants in the focus group indicated when they perceive an activity on their SNS as annoying rather than entertaining, they have a tendency to block the offending application or unfriend the offending user. For this reason, if agencies wish to utilize SNS for outreach to freshmen, they should ensure a proper mixture of postings that appeal to the user's desire for entertainment gratifications.

The results of this study indicate parents or other family members should be encouraged to be more involved in freshmen SNS activity. Participating in SNS gives users a direct and open look into the lives of the people with whom they are connected. For incoming freshmen, knowing that a parent or other family member has access to this information might prevent them from posting something that could be potentially damaging to their reputation or academic career. Additionally, the data indicate that having family members accessible via SNS can help to alleviate symptoms of homesickness that are associated with missing family members. At least one of the participants in the focus group indicated that SNS provided them with an outlet for keeping in touch with their grandparents and siblings despite not accepting friend requests from their parents.

Since gaming is a source of revenue for SNS, the fact that this population does not view SNS gaming as an activity they are interested in has some implications for future game development and support. When asked to rank features of SNS in order of importance, entertainment received the highest average ranking followed by socializing. It would seem logical that games would provide a form of entertainment. Instead, the participants in this study

viewed games as an annoyance and felt that SNS were not the proper platform for gaming. Participants cited multiple advertisements and an overwhelming number of game notifications and requests as part of the cause of the annoyance. If SNS want to extend their gaming population to include college freshmen, they will want to look into a method to make their game platform more appealing and more entertaining.

Additional implications include entities interested in educating freshmen about the positive and negative aspects of using SNS. Personality variables such as Need to Belong, tendency toward extraversion, and homesickness had very mild correlations with the gratification expectations. Since gratification expectations are not strongly correlated with social personality traits and levels of homesickness it is not necessarily advisable to develop different educational models that target introverts and extraverts or those with a higher Need to Belong, or higher levels of homesickness.

Universities that are concerned with homesickness affecting students' ability to adapt to and succeed in college may want to consider encouraging students to use SNS to communicate with their friends and family members. More than 30% of the participants reported that they are unlikely to use SNS to get news about their families. In addition, some users are reluctant to accept friends' requests from family members indicating that universities may also need to investigate other cost effective options for encouraging student to maintain contact with family members to help lessen the impact of homesickness caused by missing friends and family.

Future Research

Future research can build upon and expand the results of this study in many ways. While the single personality trait reflecting an individual's level of extraversion did not have a strong correlation with gratification expectations among college freshmen, there was a moderate

correlation between a tendency toward extraversion and expectations for social and entertainment gratifications. It is possible that a full examination of the Myers-Briggs personality indexes could result in stronger correlations. Additionally, other factors from the Big Five might produce stronger correlations.

Incoming freshmen are not likely to be aware of or use the entire potential array of uses provided by SNS. Many of them may be unaware of the ability to use SNS for promotional gains as well as self-image management. Future research might explore incoming freshmen's literacy on the many facets of SNS usage. The results from such research could help determine if programs should be developed to assist students in learning how to use SNS for these purposes.

As students grow and progress through college, their social needs will also progress and change. As students near completion of their degree, networking and promotion might become more important as they prepare to enter the job market. Future research in this area might include a longitudinal study that explores how student gratification expectations change between their freshmen and senior years at college.

Many of the gratification items received a low average score on the likelihood that participants would use SNS for those purposes. It is not clear based on this study whether students do not anticipate using these features because they are unaware of how to use them, do not anticipate a need for them, or utilize other technologies to satisfy their needs. Future research into the reason why students do not use SNS for certain purposes will help determine if an effort should be put into educating students about the multiple uses of SNS or if education should focus on other technologies that meet the same goals and are already familiar to the students.

Due to the dynamic nature of SNS, future research should be carefully considered and constructed. Unlike many technologies that remain consistent over time or require a direct

intervention from the user to modify or upgrade, SNS are subject to change at the whim of the system developers. The popularity of any given SNS can peak and drop rapidly resulting in the SNS being completely reimagined as with MySpace, or dying off all together as with the SNS six degrees. Features can be added, removed, or changed overnight without warning; rendering any work in progress obsolete before the research has even been completed. This dynamic nature also requires researchers to be very explicit when defining the SNS environment at the time the research is conducted.

Researchers looking to utilize the uses and gratification items from this study are encouraged to use all of the items. Despite findings that college freshmen are not likely to use several of the items listed, this may not be true of other populations. Just as this study takes the perspective that different groups of people have different motivations for understanding who uses SNS, different populations will likely have different motivations for actually using SNS.

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APPENDICES

Appendix A: Data Collection Instrument

The survey is worded the same, but formatted differently when placed in MR Interview. If you would like to see the survey used for data collection, please visit: http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=USEOFOSNS&i.test=1 This is a "test mode" so feel free to enter data and complete the survey if you wish.

How many different Online Social Network Sites (OSNS) [such as MySpace, Facebook, Linked, and Google+] do you have at least one profile on?

Some users have multiple profiles on a single OSNS. How many total OSNS profiles do you actively use (log in to at least occasionally)?

Please indicate the approximate number of friends you have on each profile. (Leave any extra lines blank. If you have more than 5 profiles, please indicate the number of friends on each of the five profiles that you use most often.)

On an average week day (Monday through Friday) how many times per day do you engage in activity (post comments, browse pictures, read updates, etc.) on an OSNS profile?

On an average weekend (Saturday or Sunday) how many times per day do you engage in activity on an OSNS profile?

On average, each time you engage in activity on an OSNS profile, how long are you actively engaged?

During an average week (Monday through Friday) approximately how many hours total do you spend engaged in activity on an OSNS profile?

During an average weekend (Saturday and Sunday) approximately how many hours total do you spend engaged in activity on an OSNS profile?

On a scale of 1 to 7 with 1 being highly unlikely and 7 being highly likely, please rate how likely you are to use OSNS for the following reasons.
To seek companionship
To relieve boredom
To promote myself
To have fun
To escape my problems
To get news about my friends
To make friends online
To share photos with others
To chat online
To promote a company or organization
To be entertained
To get away from work / school

To find amusement
To arrange a social gathering
To promote my work
To get news about my family
To look at other peoples' shared photos

Please rank the following uses of Online Social Network Sites in order of importance to you. Please use 1 to indicate the least important use, and 5 to indicate the most important use. Please use each of the numbers 1-5 only once.
To maintain social ties.
For entertainment.
To get away from the real world.
For professional development.
To gather information.

During an average login session, how much time, in minutes, do you spend engaged in the following activities?
Socializing with friends
Socializing with family
Promoting yourself
Promoting a company or an organization
Playing Games
Looking for information

Please select the option that best describes your current housing situation:

_____ I live on campus.

_____ I live off campus in housing provided by the university.

_____ I rent or own housing not provided by the university.

_____ I live at "home" with my legal guardian.

Approximately how long does it take for you to get home from the university?
_____ Less than an hour
_____ Less than 5 hours
_____ Less than a day
_____ More than a day

The following items measure certain aspects of you current life. Please respond as directed. Please indicate the extent to which you have experienced the following during the past four weeks. 1 = not at all, 7 = very strongly.
Missing your parents
Feeling unloved

Feeling isolated from the rest of the world
Using OSNS to help adjust to college
Missing your friends
Finding it difficult to adjust to a new situation
Regretting the decision to leave an old situation
Continuously having thoughts about home
Repeatedly thinking of the past
Using OSNS to help adjust to college
Missing your family
Feeling Lonely
Feeling uprooted
Using OSNS to decrease feelings of loneliness
Missing people whom you can trust and talk to
Feeling lost in a new situation
Having difficulties getting used to new traditions
Thoughts that an old situation was better than here and now
Using OSNS to prevent missing home
Missing home
Feeling missed by your family
Longing for acquaintances
Searching for familiar faces
Using OSNS to prevent missing home
Feeling uncomfortable in a new situation

The following items measure how you react to others. Please respond as directed.
For the following statements, indicate the degree to which you agree or disagree with each statement. 1 = strongly disagree, 7 = strongly agree. Please answer each question honestly. Your answers will not be associated with you in any way.
If other people don't seem to accept me, I don't let it bother me.
I am inclined to keep in the background on social occasions.
I try hard not to do things that will make other people avoid or reject me.
I like to mix socially with people.
I am inclined to limit my acquaintances to a select few.
I seldom worry about whether other people care about me.
I like to have many social engagements.
I need to feel that there are people I can turn to in times of need.
I would rate myself as a happy-go-lucky individual.
I can usually let myself go and have a good time at a party.
I want other people to accept me.
I would be very unhappy if I were prevented from making numerous social contacts.
I do not like being alone.
I usually take the initiative in making new friends.
I like to play pranks on others.
Being apart from my friends for long periods of time does not bother me.
I'm usually a good mixer.

I have a strong Need to Belong.
I often "have the time of my life" at social affairs.
I derive more satisfaction from social activities than from anything else.
It bothers me a great deal when I am not included in other people's plans.
My feelings are easily hurt when I feel that others do not accept me.

Thank you for taking the time to participate in this survey. So that we can better understand our respondents, please take a moment to provide the following information.

Sex: ___Male   ___Female

Year of Birth: 19____

Appendix B: Informed Consent Form (for focus groups)

INFORMED CONSENT FORM

Freshmen use of Online Social Networking Sites

Introduction
The purpose of this research is to further understand how incoming freshmen utilize online social networking sites (OSNS). This research is a follow-up to the online survey that you have already completed.

Participant Involvement
You must be 18 or older to participate in this study. Participation in this study is voluntary. You may withdraw from the focus group at any time without penalty. If you have any questions regarding the consent form, please do not hesitate to ask the researcher. This information will be digitally recorded. The information recorded during this interview will be strictly confidential. Only the person conducting the focus group and the people in the group will hear your responses. The information gathered in this focus group will be used to support or further explain information gathered from the survey. No information that could compromise the identity of participants will be used.

Risks
Due to the fact that digital recordings will be used, there is a potential risk to participant confidentiality. The recording will be burned to a CD and will be stored in a locked drawer in the researcher's office which is located in Greve Hall on the UT campus. Furthermore the recording will only be listened to by the researcher. No transcription of the recording will be made. Once the CD has been made, the original recordings will be erased. A full format of the digital recording device will be done three times to ensure complete overwriting of original data.

Benefits
While there is no immediate benefit to the participants in the study, it is thought that the findings of the study will benefit future students by providing certain entities at the university with insight into student motivations for the use of social networking sites. Such insight will better help educators and support groups (such as the student success center) interact with students via social network sites, and to understand the benefits students perceive from the usage of SNS.

Contact Information
If you have any questions, you may ask them now or later; if you have questions after the interview you may contact the researcher, Jason Rieger, at 504 Greve Hall, Knoxville, TN 37996 and 865-974-1596. If you have any questions about your rights as a participant contact the Office of Research Compliance Officer at 865-974-3466.

Consent
I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's Signature _____ Date_____

Investigator's Signature _____ Date_____

Appendix C: Participant's Pledge of Confidentiality

Focus Group Participant Pledge of Confidentiality

As a participant of this project's focus group, I understand that any information shared during this focus group is considered to be confidential. The information shared during this focus group is done so on good faith that the information would remain strictly confidential. I understand that I have a responsibility to honor this confidentiality agreement. I hereby agree not to share any information from this focus group with anyone except the primary researcher of this project. Any violation of this agreement would constitute a serious breach of ethical standards, and I pledge not to do so.

_____   _____

   Focus Group Participant   Date

Appendix D: Copy of E-mail Inviting Students to Participate

Hello, Volunteers!

Want to participate in research here at UT? Here's your opportunity!

You can participate by sharing your thoughts on online social networking sites (OSNS) for a dissertation study in the College of Communication and Information. This study is designed to learn more about first-year students' motivations and use of social networks like Facebook, Google +, Myspace, and LinkedIn. Click the link below for more info and to access the survey:

http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=USEOFOSNS

To bring the process full circle, a summary of the findings will be posted on the FYS 100 course site in November. For more information, or if you have any questions about this study, please contact Principal Investigator Jason Rieger directly at (865) 974–1596 (jrieger@utk.edu).

Thanks for your time, and best wishes to you in class this week!

The First-Year Studies Team
The University of Tennessee
1817 Melrose Avenue
Knoxville, TN 37996-3551
Office (865) 974-3523
Fax (865) 974-2944

Appendix E: Summary of Focus Groups

In all three focus groups, participants listed the SNS they use as Facebook. Twitter, Instagram, Google+, LinkedIn, and Tumbler were also mentioned.

They defined SNS as something that anyone can join, all of your friends are on it, and it is the easiest way to communicate.

Time spent using SNS ranged from a few minutes here and there to a couple of hours per day. Most of them indicated that their smart phones were their preferred method for logging into the SNS. They estimated that if all of the time they spent in one day was condensed into a single session, the session would be between 30 minutes and 4 hours.

They indicated their primary use of SNS was to keep up with friends. They also used the term "stalking" to define a behavior by which someone frequently observes a friend's activity, but does not interact with that friend.

There was a mixture in terms of which friend requests were accepted. Some of the participants indicated they would accept friend requests from anyone while others would only accept request from people they already knew. The groups were also split on accepting friend requests from family members.

Participants indicated that the most important feature of a SNS was the photos, followed by the ability to reach everyone at once. They indicated their friends checked SNS more than e-mail or any other communication technology.

The participants do not turn to SNS for gaming. Many of them found the constant game invites to be annoying and viewed SNS gaming as something the "older people" do.

Participants indicated that their usage of SNS had an impact on their studies. They cited spending time on SNS rather than doing homework, and being distracted by SNS during class as two negative impacts.

Appendix F: IRB for Online Survey

FORM B APPLICATION (Approval #8913 B)

All applicants are encouraged to read the Form B guidelines. If you have any questions as you develop your Form B, contact your Departmental Review Committee (DRC) or Research Compliance Services at the Office of Research.

FORM B

IRB # _____

Date Received in OR _____

THE UNIVERSITY OF TENNESSEE

Application for Review of Research Involving Human Subjects

I. IDENTIFICATION OF PROJECT

1. **Principal Investigator Co-Principal Investigator:**
   Complete name and address including telephone number and e-mail address

   Jason Rieger

   108H-a Hoskins Library

   1400 West Cumberland
   Knoxville, TN 37996-4005

   865-974-1596

   jrieger@utk.edu

   Faculty Advisors:
   Complete name and address including telephone number and e-mail address

   Suzie Allard
   424 Communications and University Extension Building
   1345 Circle Park
   Knoxville, TN 37996

865-974-1369
sallard@utk.edu
Department: Information Sciences (College of Communication and Information)

2. **Project Classification:** *Enter one of the following terms as appropriate:* **Dissertation, Thesis, Class Project, Research Project**, or **Other** (Please specify)

    Dissertation

3. **Title of Project:**

    Personality traits and motivations for usage of online social networking sites

4. **Starting Date:** *Specify the intended starting date or insert "***Upon IRB Approval***":**

    September 15, 2012

5. **Estimated Completion Date:**

    May 31, 2013

6. **External Funding** *(if any): none*

    - o **Grant/Contract Submission Deadline:**
    - o **Funding Agency:**
    - o **Sponsor ID Number** *(if known)***:**
    - o **UT Proposal Number** *(if known):*

II. PROJECT OBJECTIVES

The purpose of this study is to further understand first year undergraduate's use of Online Social Network (SNS) sites. SNS are websites that allow people to connect and interact with their social networks. Popular SNS include MySpace, Facebook, LinkedIn, and Google+.

Personality traits have a long and rich tradition of helping to explain behavior in different settings. This study utilizes a survey research design to explore personality traits (homesickness, levels of extraversion, and Need to Belong), gratifications sought, and their impact on usage of SNS.

III. DESCRIPTION AND SOURCE OF RESEARCH PARTICIPANTS

Participants for this study will be first year students in their second month at the University of Tennessee. Participants will be recruited via the BlackBoard course management site for FYS to complete an online survey. The invitation will be sent to the students that are enrolled in First Year Studies and will come from the Assistant Provost for Student Success (please see letter in Appendix A) . All participants will be screened to make sure they are over the age of 18.

IV. METHODS AND PROCEDURES

Data will be collected via an internet survey hosted on MRInterview as provided by OIT (please refer to Appendix B for the complete listing of survey items). No personally identifiable information will be captured or stored with the survey data. The survey will begin with the informed consent page with a continue button to indicate consent. Access to the collected data will be limited to the PI and Faculty Advisors.

At the end of the survey, participants will have an opportunity to provide their e-mail address to be entered in a drawing for a gift card valued at approximately $30. E-mail addresses will be collected and stored separately from the data with no way to link an e-mail address with a particular response.

V. SPECIFIC RISKS AND PROTECTION MEASURES

Due to the nature of the items on the homesickness scale, a participant could potentially have an emotional reaction. Students will be warned of this potential risk in the informed consent. Students will be provided with contact information for the UT Counseling Center and advised to seek counseling if a severe or prolonged emotional response occurs. Students will also be able to stop filling out the survey at anytime with no negative consequences and will be advised as such.

VI. BENEFITS

While there is no immediate benefit to the participants in the study, it is thought that the findings of the study will benefit future students by providing certain entities at the university with insight into student motivations for the use of social networking sites. Such insight will better help educators and support groups (such as the student success center) interact with students via social network sites, and to understand the benefits students perceive from the usage of SNS**.**

VII. METHODS FOR OBTAINING "INFORMED CONSENT" FROM PARTICIPANTS

Participants will be presented with an informed consent message prior to access to the survey. Accessing the survey will indicate their agreement with the providing their consent. The consent message is provided in Appendix C.

VIII. QUALIFICATIONS OF THE INVESTIGATOR(S) TO CONDUCT RESEARCH

The principal investigator has completed all of the course work required for a PhD in the college of communication and information at the University of Tennessee. The faculty advisor has completed all of the requirements for tenure at the University of Tennessee and will oversee and approve all research procedures.

IX. FACILITIES AND EQUIPMENT TO BE USED IN THE RESEARCH

The survey will be hosted online using the computer and research programs available through the OIT research computing center at the University of Tennessee. A university owned laptop computer running a university licensed copy of SPSS will be used to download and analyze the collected data.

X. RESPONSIBILITY OF THE PRINCIPAL/CO-PRINCIPAL INVESTIGATOR(S)

The following information must be entered verbatim into this section:

By compliance with the policies established by the Institutional Review Board of The University of Tennessee the principal investigator(s) subscribe to the principles stated in "The Belmont Report" and standards of professional ethics in all research, development, and related activities involving human subjects under the auspices of The University of Tennessee. The principal investigator(s) further agree that:

1. **Approval will be obtained from the Institutional Review Board prior to instituting any change in this research project.**
2. **Development of any unexpected risks will be immediately reported to Research Compliance Services.**
3. **An annual review and progress report (Form R) will be completed and submitted when requested by the Institutional Review Board.**
4. **Signed informed consent documents will be kept for the duration of the project and for at least three years thereafter at a location approved by the Institutional Review Board.**

XI. SIGNATURES

ALL SIGNATURES MUST BE ORIGINAL. The Principal Investigator should keep the original copy of the Form B and submit a copy with original signatures for review. Type the name of each individual above the appropriate signature line. Add signature lines for all Co-Principal Investigators, collaborating and student investigators, faculty advisor(s), department head of the Principal Investigator, and the Chair of the Departmental Review Committee. The following information should be typed verbatim, with added categories where needed:

Principal Investigator: _____

Signature: _____ Date: _____

Student Advisor (if any): _____

Signature: _____ Date: _____

XII. DEPARTMENT REVIEW AND APPROVAL

The application described above has been reviewed by the IRB departmental review committee and has been approved. The DRC further recommends that this application be reviewed as:

[ ] Expedited Review -- Category(s): _____

OR

[ ] Full IRB Review

Chair, DRC: _____
Signature: _____   **Date:** _____

Department Head: _____
Signature: _____   **Date:** _____

Protocol sent to Research Compliance Services for final approval on (Date) : _____
Approved:
Research Compliance Services
Office of Research
1534 White Avenue

Signature: _____   **Date:** _____

For additional information on Form B, contact the Office of Research Compliance Officer or by phone at (865) 974-3466.

Appendix G: IRB for Focus Groups

FORM B APPLICATION (Approval #9017 B)

All applicants are encouraged to read the Form B guidelines. If you have any questions as you develop your Form B, contact your Departmental Review Committee (DRC) or Research Compliance Services at the Office of Research.

FORM B

IRB # _____

Date Received in OR _____

THE UNIVERSITY OF TENNESSEE
Application for Review of Research Involving Human Subjects

I. IDENTIFICATION OF PROJECT

1. **Principal Investigator Co-Principal Investigator:**
   Complete name and address including telephone number and e-mail address
   Jason Rieger
   108H-a Hoskins Library
   1400 West Cumberland
   Knoxville, TN 37996-4005
   865-974-1596
   jrieger@utk.edu

   Faculty Advisors:
   Complete name and address including telephone number and e-mail address
   Suzie Allard
   424 Communications and University Extension Building
   1345 Circle Park
   Knoxville, TN 37996
   865-974-1369
   sallard@utk.edu
   Department: Information Sciences (College of Communication and Information)

2. **Project Classification:** *Enter one of the following terms as appropriate:* **Dissertation, Thesis, Class Project, Research Project**, or **Other** (Please specify)
   Dissertation

3. **Title of Project:**
   Personality traits and motivations for usage of online social networking sites

4. **Starting Date:** *Specify the intended starting date or insert* "**Upon IRB Approval**":
   Upon IRB Approval

5. **Estimated Completion Date:**
    October 1, 2013

6. **External Funding** *(if any): none*
    o **Grant/Contract Submission Deadline:**
    o **Funding Agency:**
    o **Sponsor ID Number** *(if known)***:**
    o **UT Proposal Number** *(if known):*

II. PROJECT OBJECTIVES

The purpose of the research is to further understand the results of a survey conducted with the incoming freshmen class. The research seeks to better understand freshmen motivations for the use of online social network sites (SNS).

III. DESCRIPTION AND SOURCE OF RESEARCH PARTICIPANTS

Participants for this study will be first year students that completed the initial survey in September of 2012. Participants will be recruited via an e-mail from the Assistant Provost for Student Success. All participants will be screened to make sure they are over the age of 18. Participation will be limited to 12 students.

IV. METHODS AND PROCEDURES

Students will be given the option to attend one of two focus groups to discuss their usage of OSNS. The focus groups will be held on campus in the IT training room in Greve Hall. Dates and times will be determined once IRB approval has been granted.

At the start of the focus group, participants will be greeted and their age will be verified. The primary researcher (Jason Rieger) will lead the focus group. After informed consent forms (see attached form) have been distributed, read, signed and collected recording of the focus group will begin.

While a discussion guide (see attached guide) has been created to help guide the conversation, it will not be strictly followed. Participants will be allowed to discuss topics in the order they naturally occur during conversation.

It is thought that each session will last approximately one hour, however, the session will continue until the participants are all satisfied that they have nothing additional to contribute.

The focus group will be digitally recorded for audio only. These recordings will be backed up on a CD and the recording device will be formatted three times to ensure complete erasure of the original data. No transcription of the recordings will occur. The CD will be stored in a locked file cabinet in the POs office in Greve Hall room 504.

Once all participants have indicated that they have nothing additional to add, they will be thanked for their time and will be given a $5 gift card.

V. SPECIFIC RISKS AND PROTECTION MEASURES

Due to the nature of the focus group, participants' identities cannot be guaranteed to be protected. Participants will be asked not to use their own names (or to refer to each other by name) during the focus group. Each member of the focus group will be required to sign a research participant confidentiality agreement (attached).

VI. BENEFITS

While there is no immediate benefit to the participants in the study, it is thought that the findings of the study will benefit future students by providing certain entities at the university with insight into student motivations for the use of social networking sites. Such insight will better help educators and support groups (such as the student success center) interact with students via social network sites, and to understand the benefits students perceive from the usage of SNS.

VII. METHODS FOR OBTAINING "INFORMED CONSENT" FROM PARTICIPANTS

A copy of the informed consent form is attached. This form will be distributed prior to the start of the focus group. The form will be read and participants will be asked to sign it. The PO will collect and keep the signed consent forms on room 504 of Greve hall for three years after the completion of the focus group. Each participant will also receive a copy to keep.

VIII. QUALIFICATIONS OF THE INVESTIGATOR(S) TO CONDUCT RESEARCH

The principal investigator has completed all of the course work required for a PhD in the college of communication and information at the University of Tennessee. The faculty advisor has completed all of the requirements for tenure at the University of Tennessee and will oversee and approve all research procedures.

IX. FACILITIES AND EQUIPMENT TO BE USED IN THE RESEARCH

The focus groups will take place in the IDT training lab located on the fifth floor of Greve Hall. A digital sound recorder will be used to record audio during the focus group.

X. RESPONSIBILITY OF THE PRINCIPAL/CO-PRINCIPAL INVESTIGATOR(S)

The following information must be entered verbatim into this section:
By compliance with the policies established by the Institutional Review Board of The University of Tennessee the principal investigator(s) subscribe to the principles stated in "The Belmont Report" and standards of professional ethics in all research, development, and related activities involving human subjects under the auspices of The University of Tennessee. The principal investigator(s) further agree that:

1. **Approval will be obtained from the Institutional Review Board prior to instituting any change in this research project.**
2. **Development of any unexpected risks will be immediately reported to Research Compliance Services.**
3. **An annual review and progress report (Form R) will be completed and submitted when requested by the Institutional Review Board.**
4. **Signed informed consent documents will be kept for the duration of the project and for at least three years thereafter at a location approved by the Institutional Review Board.**

XI. SIGNATURES

ALL SIGNATURES MUST BE ORIGINAL. The Principal Investigator should keep the original copy of the Form B and submit a copy with original signatures for review. Type the name of each individual above the appropriate signature line. Add signature lines for all Co-Principal Investigators, collaborating and student investigators, faculty advisor(s), department head of the Principal Investigator, and the Chair of the Departmental Review Committee. The following information should be typed verbatim, with added categories where needed:

Principal Investigator: _____
Signature: _____ Date: _____

Student Advisor (if any): _____
Signature: _____ Date: _____

XII. DEPARTMENT REVIEW AND APPROVAL
The application described above has been reviewed by the IRB departmental review committee and has been approved. The DRC further recommends that this application be reviewed as:

[ ] Expedited Review -- Category(s): _____
OR
[ ] Full IRB Review

Chair, DRC: _____
Signature: _____ Date: _____

Department Head: _____
Signature: _____ Date: _____

Protocol sent to Research Compliance Services for final approval on (Date) : _____
Approved:
Research Compliance Services
Office of Research
1534 White Avenue

Signature: _____ Date: _____

For additional information on Form B, contact the Office of Research Compliance Officer or by phone at (865) 974-3466.

VITA

Jason Paul Rieger is a doctoral candidate studying information sciences at the University of Tennessee. Jason is employed full time at the university as an ITR Support Specialist Level III. His primary duties involve teaching technology training classes and assisting with content development inside of the university's enterprise SharePoint system. Jason has received two other degrees from the University of Tennessee. He graduated in 2001 with a Bachelor of Science in computer science and in 2011 with a Master of Science in information sciences. In his diminishing spare time, Jason enjoys participating in judo, practicing prestidigitation, and rough housing with his two daughters; Samantha and Hannah.