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Ph.D. degree in Communication

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USES AND GRATIFICATIONS OF FACEBOOK.COM

By

Sarah K. Foregger

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT
USES AND GRATIFICATIONS OF FACEBOOK.COM

By

Sarah K. Foregger

This study explores undergraduate students' uses and gratifications of a popular social networking website, Facebook.com. Facebook has a high penetration among college students in the United States, yet few academic studies seek to theoretically understand its popularity. This study utilized the uses and gratifications approach, which has long been employed to understand the audience appeal of mass media and the assumptions of which are particularly applicable to interactive media. Following methods similar to those used by Greenberg (1974), Charney and Greenberg (2001), and Sherry, et.al. (2006) a multi-stage design was used. Exploratory factor analysis was conducted on data collected online from 340 participants enrolled in communication courses at a large Midwestern university. This study found 9 factors of Facebook use: *Pass Time, Connection, Sexual Attraction, Utilities and Upkeep, Establish/Maintain Old Ties, Accumulation, Social Comparison, Channel Use, and Networking*. Frequency and duration of Facebook use was also found to differ by sex and year in school. As Facebook is rapidly growing in popularity among other demographic groups, including those over-25 and those in other countries, future studies should explore whether the factors of Facebook use found in this study apply to different groups of Facebook users.

DEDICATION

To my wonderful Advisor, Sandi Smith, who stuck with me. This dissertation would not exist without her help. I hope to always make her proud.

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A dissertation is a test of endurance. It is a marathon and I, by nature, am a sprinter. I have been fortunate however, to have had the very best support from people lined up at every mile-marker. They have cheered me on and believed I could finish. I owe the completion of this dissertation to them.

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Just four short years ago, the word “Facebook” was not part of the millennial college student’s lexicon. Today, Facebook is not only an integral part of college students’ vocabulary, but it has also become a verb. Students exclaim to new acquaintances, “I’m going to facebook you!” They gossip about who has recently “facebooked” them. They spend time “facebooking.” Facebook has become, like Google before it, something to do and not just somewhere on the internet to be.

Facebook has also become a major topic in the popular press: a recent Lexis Nexus search retrieved over 1800 articles on the topic of Facebook. Academia, however, has yet to theoretically study this website with humble Harvard dorm-room beginnings that now claims over 42 million active users and over 85% market share of United States universities (Facebook.com). In fact, PC Magazine columnist John Dvorak noted in 2006: “academia, which should be studying this [facebook] phenomenon, is just as out of the loop as anyone over 30” (Dvorak, 2006, ¶6).

Facebook is indeed a phenomenon that is becoming more entrenched in college life as time goes on (Jones & Soltren, 2005). However this phenomenon is one that parents, teachers, and administrators are scrambling to understand. Many are concerned with how students are choosing to use Facebook. Since a student’s full profile is not viewable to anyone outside of their university without their approval, many students have had a false sense of invulnerability and privacy, posting suggestive or drunken photos without regard to long-term consequences. Yet this may not be typical of how the majority of students are using Facebook. Studying Facebook with the uses and gratifications approach (Blumler & Katz, 1974) may help address concerns of parents and school officials and answer questions about student use.

The uses and gratifications approach has long been used as a tool to explain people's media choices. Quite simply, this approach emphasizes that people's needs influence their media selections; by seeking out and using specific media, people can meet these individual needs. Furthermore, the uses and gratifications approach is especially well suited for studying the internet, as the interactive nature of the internet underscores the "core notion" of uses and gratifications; that of audience choice (Ruggerio, 2000).

As Facebook grows in popularity and continues to increase its market share, it is important and long-overdue to study Facebook from a theoretical perspective. Further, as administrators and parents worry, it is important to explain the types of uses of Facebook by students. Knowledge of how and why students use Facebook can help administration and parents better inform their future educational efforts regarding Facebook. This study seeks to fill the current knowledge gap by explaining how college students are using Facebook; the most common uses for Facebook; and what gratifications are derived from Facebook by invoking the uses and gratifications approach. As such, the history of and issues with Facebook will be discussed, an overview of the uses and gratifications approach will be given, research questions and hypotheses will be presented, and results from a qualitative pre-study with 185 college student respondents will be offered.

History of Facebook

In this section, the history of Facebook' is provided, Facebook as a social networking site is described, the positive potential in Facebook's networks is explored, and issues associated with Facebook are discussed.

Facebook could very well be the internet phenomenon of this decade, and in fact, 'phenomenon' is a frequent descriptor of the website (Bumgarner, 2006; Charnigo & Ellis, 2007; Dvorak, 2006; North Carolina State University, 2007). Although recently disputed (Markoff, 2007; Wired Campus, 2007), the Facebook history is as follows: launched February 4, 2004 by then 19-year-old Mark Zuckerberg, a student at Harvard, Facebook was originally designed to replace Harvard's paper face books that helped students identify students in other houses, course classmates and make new social connections. The popularity of Facebook was immediate – within four days of launching, 650 Harvard undergraduates had registered (Tabak, 2004). Within a month Facebook expanded to include other colleges in the Boston area, and by the end of March, other Ivy League schools were part of Facebook (facebook.com). By the end of 2004, Facebook had over 1 million active users, and by May of 2005 over 800 college networks were included on Facebook.

Networks, as defined by Facebook.com, are affiliations of profiles based around a college, high school, workplace, or region. When members join Facebook they must affiliate themselves with a network, a process that for education or workplace networks occurs through the use of the corresponding *.edu* or *.com* email address. The viewing of a member's full profile and not simply their name and thumbnail picture is restricted for those outside of the member's network. As Facebook grew in popularity, it continued to expand rapidly increasing the number and type of networks available for membership. In September 2005, Facebook became available to high school networks, and in May 2006, it opened its virtual doors to workplace networks. Until September 2006, an email address linked to a network, for example in the case of universities – one ending in *.edu* –

was required for membership. This prerequisite changed in September 2006, when Facebook membership opened to the general public, allowing anyone with a valid email address to become a member of Facebook (facebook.com), however profiles remained, and continue to remain, restricted to full viewing only by those within the same network.

The rapid expansion of networks has led Facebook to become the 6th most popular website on the internet, just behind sites like Yahoo and Google (comscore, 2007). As of today, Facebook counts 80 million active members, 55,000 networks, 6 million active user groups, and over 1.7 billion photos – but these numbers change weekly, as almost 200,000 new registrations occur each day (facebook.com). Over half of users return daily to spend, on average, 20 minutes logged into their Facebook account (facebook.com). Although the fastest growing demographic of Facebook members are 25 and older, Facebook maintains a high penetration among college-aged students. Not only does Facebook claim 85% marketshare of U.S. colleges and universities, but a 2006 study by Ellison, Steinfeld, and Lampe found that on a campus with Facebook, 94% of the 286 surveyed were members. This echoes both Stutzman’s 2005 research, which found that by the end of the first semester, 94% of University of North Carolina freshmen had Facebook accounts and Vanden Boogart’s 2006 thesis, which found 94% of Kansas State University students had Facebook accounts.

Facebook as a Social Networking Site

Facebook is most often labeled as a social-networking site. Social networking sites, according to Ellison, et.al. (2006) are “online spaces where individuals are allowed to present themselves, articulate their social networks, and establish or maintain connections to others.” Boyd (in press) states that profiles, friends, and public comments,

differentiate social networking sites and Zuckerberg himself describes Facebook as a social utility, a way in which to communicate more effectively with friends, family, and coworkers. Facebook is, as he states, a way to share information through the “social graph” – a term that Zuckerberg defines as a digital map of our real-world connections (Facebook.com; Levy, 2007).

On Facebook – similar to other social networking websites – users are allowed to create and maintain a profile of themselves – where they can include a profile photo, photo albums, lists of favorites such as books and movies, contact information, update their relationship status and join groups, among other things. Facebook friendships are mutually approved connections between two users and are an important part of this Facebook profile. The ‘Wall’ serves as a public space to post and display comments – usually from friends, although Facebook users can post comments on their own Wall. Private messages, like emails, can be sent from user to user and a new feature now allows users to send messages to email addresses not associated with Facebook, expanding Facebook’s capabilities as a communication technology.

While the Facebook search feature allows users to find anyone with a Facebook account, viewing the full profile is restricted to those outside of the account holder’s network. Thus, a search for ‘Jane Doe’ may provide many results, but only those results within the searcher’s same network will be fully viewable. This can be quickly resolved by either adding Jane Doe as a Facebook friend or by sending a private message. The somewhat restrictive nature of the network shapes the nature of the friendships displayed on Facebook, with many representing real-life acquaintances and friendships (Boyd, 2007). Indeed, this is a purposeful part of Facebook’s design and the Facebook website

encourages users to “join the networks that reflect your real-life communities” (facebook.com). The network feature of Facebook distinguishes it from other social networking sites where users typically meet new people online and then move toward offline friendships (Ellison, et.al., 2006), the pattern of which was also found in online friendships from older discussion group formats (Parks & Floyd, 1996). As both Ellison, et.al. (2006) and Lampe (2006) note, Facebook is unique in that members seem to move their offline connections – through class, work, or schools – into their online spaces.

Positive Potential in Facebook Connectivity

Some scholars have seen promise for administration and faculty in the connective nature of these Facebook networks. In her article on integrating technology into student affairs, Shier (2005) writes that Facebook could contribute to the academic social community, helping students to connect and communicate, as well as become a part of a larger community. Additionally, Shier believes professors and administrators could use Facebook as a meaningful way to know and connect with students, especially at institutions where teacher/student contact is limited.

In fact, Mazer, Murphy, and Simonds (2007) did find that college teacher Facebook membership has a positive influence on students. The authors examined teachers who were members of Facebook and the effect of their online profile self-disclosure on student motivation, finding that students anticipated more motivation and affective learning from teacher profiles with more self-disclosure (i.e.: favorite books and movies listed, some personal information, photos of self with friends) as well as perceived the potential classroom climate more positively with these higher self-disclosure teachers.

Additionally, a study by Charrigo and Barnett-Ellis (2007) examined another unique use of Facebook by college staff, in this case, librarians. Charrigo and Barnett-Ellis (2007) looked at how Facebook impacted students' library use through a survey of college and university librarians and found that while most librarians were aware of Facebook, a mere 3% were using Facebook as a way to connect the library with the larger campus community. Despite the small percentage using Facebook to connect and communicate, nearly one fifth of the sample were concerned with privacy issues and the long term effects of students' making information public.

Problems from Information on Facebook

The librarians' sentiment regarding information privacy is a legitimate concern that has been echoed by colleges, universities, and parents nationwide (McElvain & Smyth, 2006; Raskin, 2006; Steinbeck & Deavers, 2007). Additionally, college administrators have struggled with whether to educate or punish students portrayed on Facebook breaking campus rules or even simply whether or how to monitor information on Facebook (McElvain & Smyth, 2006; Steinbeck & Deavers, 2007). In November 2005, Brown University's campus newspaper, the Brown Daily Herald reported on administrative actions against students nationwide as a result of Facebook information. Among the sanctions mentioned were the cases of four Northern Kentucky University students who received code of conduct violations for photos they posted on Facebook showing them drinking alcohol, as well as the case of Cameron Walker, a student at Fischer College in Boston who was found in violation of the campus code of conduct and expelled for co-creating a Facebook group slandering a campus police sergeant (Woo, 2005). Nearly a year later, in 2006, USA Today reported in an article appropriately

titled, “What You Say Online Can Haunt You,” other instances of negative and unexpected outcomes from information found on Facebook, including the expulsion of a student from John Brown Christian University in Arkansas for pictures posted of himself dressed in drag and the cutting of two Louisiana State University swim team members because of their criticisms of their coach on Facebook (Kornblum & Marklein, 2006)

On the other hand, many schools and student affairs professionals have seen Facebook as an opportunity and as part of their responsibility to educate students on issues of internet privacy and safety (McElvain & Smyth, 2006). Cornell University in Ithaca, New York was one of the first schools that chose to integrate an educational segment of orientation to Facebook, and their Office of Information Technology created an information technology policy dedicated to this new technology entitled “Thoughts on Facebook,” advising students to “act on behalf of their self 4-5 years in the future” (Mitrano, 2006). Many schools have followed suit, warning students of the future implications of their Facebook actions during freshman orientation.

Despite the possibility of negative consequences resulting from leaving a lasting digital mark, students continue to flock to Facebook and the fact remains that there is simply not enough known about how students actually use the site. Misunderstandings of Facebook may stem from the lack of quantitative academic research regarding Facebook. Of the research that has been conducted and published in academic journals, the vast majority of it focuses on privacy issues surrounding Facebook (Acquisti & Gross, 2006; Govani & Pashley, 2005; Hewitt & Forte, 2006; Jones & Soltren, 2005; Steinbeck & Deavers, 2007) although individual studies have been conducted to understand social capital (Ellison, et.al., 2006), librarians’ perspectives of Facebook use (Charrigo &

Barnett-Ellis, 2007), and the effects of teachers' Facebook self-disclosure (Mazer, et.al., 2007). There are some qualitative scholars who examine Facebook from a critical perspective (Boyd, 2007; Dickman, et.al., 2006) and Facebook has become a focal concern of the popular press. Additionally, some researchers self-publish descriptive reports regarding campus specific Facebook use on blogs or websites (Stutzman, 2005). North Carolina State University and University of North Carolina have held symposiums on the topic of Facebook designed to educate and inform both social network site researchers as well as college officials. However, it remains that a topic where empirical knowledge is most needed – students' use of Facebook – has yet to be examined from a theoretical perspective.

The current study proposes to examine Facebook from an empirical view, using the uses and gratifications perspective. As Facebook is a new technology with popularity that is unlikely to wane, it is important for communication scholars to begin addressing the commentary of the popular press as well as investigating Facebook from an empirical communication perspective. An appropriate theoretical approach for this investigation is the uses and gratifications approach, which has often been used to understand the uses of new media by individuals.

The Uses and Gratifications Approach

The uses and gratifications approach has long been used to study and understand the audience appeal of mass media. Over time, scholars have used the uses and gratifications approach to examine and explain use of media ranging from television and videocassette recorders (VCRs) to video games and cell phones. From these studies,

many factors have come forth¹ (see Table 1 for a selection) providing researchers with deeper insight to the medium studied.

By most accounts, what is now known as the uses and gratifications paradigm of media research emerged from studies of radio program gratifications in the early 1940's (Katz & Foulkes, 1962; Katz, Blumler, & Gurevitch, 1974; Rosengren, 1974; Rubin, 1994; Ruggerio, 2000). These early studies concentrated on describing audience motives for media use and represented a sharp departure from previous mass media research, which either focused solely on intended media effects or considered only the sender's end of the communication and ignored the audience's motives (Katz, et.al., 1974; McLeod & Becker, 1974; Rosengren, 1974; Rubin, 1994; Ruggerio, 2000).

¹ See Table 1, p 340-342 in Dobos & Dimmick (1988) and Exhibit 1 in Parker & Plank (2000) for a review of other selected uses and gratifications factors.

Table 1
Factors Found in Selected Previous Uses and Gratifications Research

Authors	Year	Terminology	Channel	Uses and Gratifications Factors Found
Greenberg	1974	Gratifications	TV (by British children)	Learning, habit, arousal, companionship, relaxation, forget, pass time
McLeod & Becker	1974	Gratifications	TV (by voters)	Surveillance, vote guidance, anticipated communication, excitement, reinforcement
Rubin & Rubin	1982	Motivations	TV (by older persons)	Information, inexpensiveness, entertainment, convenience, companionship, relaxation
Rubin & Perse	1987	Motives	TV – news	Exciting entertainment, pass time, information
Bantz	1982	Factor	TV	Surveillance, companionship, voyeurism, view by default, social resource, entertainment
Perse	1986	Motives	TV – program	Surveillance, companionship, exemplar, entertainment, voyeurism, social resource
			TV – soap opera	Exciting entertainment, habit/pass time, information, relax-escape, voyeurism
Rubin & Bantz	1987	Motives	VCR	Library storage, music or videos, exercise tapes, movie rental, child viewing, time shifting, socializing, critical viewing
Sherry, Lucas, Greenberg, Lachlan	2006	Uses and Gratifications Dimensions	Video Games	Competition, challenge, social interaction, diversion, fantasy, arousal
Dimmick, Sikand & Patterson	1994	Gratifications	Telephone	Sociability, instrumentality (“social coordination”), reassurance
Leung & Wei	2000	Gratification Items	Cell Phone	Fashion/status, affection/sociability, relaxation, mobility, immediate access, instrumentality, reassurance

Traditional media effects research, as Rosengren (1974) notes, begins with media consumption and content and attempts to find either the long-term effects of exposure or the persuasive goals intended by communicators (Katz, et.al, 1974). Uses and gratifications research, on the other hand, begins with the individual and his or her needs and problems and tries to understand the functions media serves for the individual media consumer (Rosengren, 1974; Rubin, 1974; Ruggerio, 2000). Both perspectives seek to explain outcomes of media consumption (Rubin, 1994) however the outcomes of interest differ: media effects research investigates the effects intended by the sender whereas the uses and gratifications perspective examines the effects consciously intended by the media consumer (Rosengren, 1974).

Uses and gratifications is frequently contrasted with traditional media effects (Rosengren, 1974), although study of media through the uses and gratifications approach does not preclude the study of effects. Uses and gratifications research can lead to the study of the effects of media from the traditional exposure-leads-to-effects view (Rosengren, 1974; Rubin 1994) as media exposure can be predicted from media gratifications (LaRose & Eastin, 2006; Vincent & Basil, 1997). Additionally, many researchers find that motives research is useful in predicting outcomes of media use (Papacharissi & Rubin, 2000). Finally, some researchers contend that uses and gratifications is merely a subset of traditional media effects (Ruggerio, 2000).

The following sections will illustrate that the uses and gratifications approach is indeed one viable theoretical perspective from which to examine Facebook. In the subsequent sections, the history of the uses and gratifications perspective will be presented, key assumptions of the approach will be outlined, and criticisms of the

approach will be discussed. Next, an overview of the studies that have applied uses and gratifications to various aspects of the internet, organized by internet application, will occur. Finally, the few studies that have explored social networking websites through the uses and gratifications approach will be reviewed.

History of Uses and Gratifications

While current studies provide evidence that findings from research employing the uses and gratifications approach can inform the queries of traditional media effects, early uses and gratifications research emerged as a distinct shift away from the traditional media effects perspective toward a more functionalist approach (Katz, et.al., 1974; Rubin, 1994; Ruggerio, 2000). Over time, the uses and gratifications approach has evolved in its focus and has become a staple of mass communication research. In the formative years of uses and gratifications, however, scholars took their cue from the disciplines of sociology and psychology. In the 1950's and 1960's, the trend in sociology and psychology to account for individual social and psychological variables heavily influenced uses and gratifications research (Rosengren, 1974; Rubin, 1994; Ruggerio, 2000). Uses and gratifications work from this period focused on the psychological or social attributes of individuals and examined patterns of media use related to those attributes (Katz & Foulkes, 1962; Ruggerio, 2000). In the 1970's, as psychological research shifted towards a cognitive approach, identifying the media use motivations of receivers became important and from this many typologies emerged with the purpose of both describing and explaining media consumption (Rubin, 1994; Ruggerio, 2000). The 1970's, however, was also a time when detractors of uses and gratifications began to put forth many criticisms (Elliott, 1974; McLeod & Becker, 1974). Uses and gratifications

studies in the 1980's addressed many of these concerns through systematic research focused on replication, comparison, refined methodologies, and an integrated social component (Rubin, 1994; Ruggerio, 2000).

Although conceptually strengthened, uses and gratifications seemingly fell by the wayside until the last decade, when due to advances in telecommunication and technology, it was revisited by communication scholars interested in understanding uses of these new media (Ruggerio, 2000). In the past decade alone, uses and gratifications has been used to look at new and popular media technology such as video games (Sherry, et.al., 2006), cell phones (Leung & Wei, 2000), the internet (Charney & Greenberg, 2001; Ferguson & Perse, 2000; Kaye & Johnson, 2004; LaRose & Eastin, 2004; Lin, 1999; Papacharissi & Rubin, 2000; Parker & Plank, 2000; Stafford & Stafford, 2004), specific websites on the internet (Eighmey & McCord, 1998), email (Recchiuti, 2003), internet chat (Leung, 2001; Recchiuti, 2003), and even the blogosphere (Li, 2005). As technology rapidly advances and mediated communication options increase, the uses and gratifications approach will become more important to laying an empirical foundation to understand the appeal of these media. Indeed, many scholars believe that as interactive media become more commonplace and central in our environment, the uses and gratifications approach will become even more valuable in research due to the assumptions of the uses and gratifications approach that are particularly applicable to interactive media. (Lin, 1996; Lowery & DeFleur, 1995; Rubin, 1994; Ruggerio, 2000)

Assumptions of Uses and Gratifications

The uses and gratifications approach to studying media rests on several assumptions that enhance the appropriateness of this approach in particular for internet

media studies. Several scholars have articulated these assumptions including Katz, Blumler & Guervitch (1974) and Rosengren (1974) in the classic text edited by Blumler and Katz (1974), and more recently, Ruggerio (2000) and Rubin (1994).

Katz, et.al. (1974) stated the five elements in a uses and gratifications model as: a) the audience is active, b) media choice depends on the audience's link between media and need gratification, c) media compete with other sources, both interpersonal and other media, for need satisfaction, d) audience members can self-report their needs, and e) value judgments of mass media content should be suspended until motives and gratifications are understood. Although he does not explicitly list assumptions of the uses and gratifications approach, Rosengren (1974) articulated many of these same beliefs in the presentation of his "Outline for a paradigm of uses and gratifications research" (p. 270). In 1994, Rubin offered five similar assumptions in what he called "a contemporary view of uses and gratifications assumptions" which are: a) communication behavior is goal-directed, purposive, and motivated, b) people select media, c) many factors guide our media selection, d) media compete with other channels for messages, and e) people are typically more influential than media. These assumptions – and specifically that of audience activity – further the appropriateness of using this approach in new media research.

The concept of an active audience – as active receivers with purposive media uses – is the core tenet of the uses and gratifications perspective and augments the utility of applying uses and gratifications to the study of the internet. An early criticism of uses and gratifications debated this idea of audience choice – but was countered with the conceptualization of audience members existing on a continuum of activity from passive

to active (Rubin, 1994; Ruggerio, 2000). Additionally, the claim has been made that uses and gratifications approach becomes exceedingly valuable when audiences have a choice to make use of media for intended purposes (Ruggerio, 2000). Further, Ruggerio also stated that as technology becomes increasingly interactive in nature, the lines between sender and receiver become blurred. This is indeed the case with Facebook, as members are both senders – posting and maintaining their profiles – and receivers, visiting and reading other's profiles.

The emphasis on viewing audience media choice as a product of biological, sociological, and psychological variables leads uses and gratifications to garner the label of a psychological communication perspective. In the uses and gratifications model as outlined by Rosengren (1974), basic human needs of both higher and lower orders² for example, self-esteem and safety (p. 270), respectively, combined with individual and societal characteristics influence audience members to seek out the available media they believe will alleviate perceived problems. Katz, et.al. (1974) stated that an individual audience member's specific uses of media resulted from the interaction between psychological dispositions, sociological factors, and environmental conditions. Papacharissi and Rubin (2000) labeled uses and gratifications as a psychological communication perspective simply due to the assumption that people seek out communication to gratify needs and wants and, congruent with Rosengren's (1974) paradigm, stated that motives – general dispositions that influence people's actions –

² While Rosengren refers to the first item in Figure 1 of his paradigm as "Certain basic human needs of lower and higher order" (1974, p. 270), he does not provide the reader with an explication of what these needs are, instead stating, "It can hardly be the task of uses and gratifications research to clarify the human need structure at this underlying level." However, he does refer the reader to Maslow's hierarchy of needs as providing an example of basic needs that give structure to his argument. See Rosengren, p. 270 for this reasoning.

result from the desire to fulfill these needs and wants. Despite accounting for psychological and social variables, it remains that uses and gratifications is, as Lin (1996) asserted, “a bona-fide home-grown communication theory” (p. 574) and a valuable tool for scholars wanting to examine media phenomenon.

Criticisms of Uses and Gratifications

Although uses and gratifications approach is fast becoming more popular in research, criticisms of the approach do exist, many of which were voiced during the 1970's (Elliott, 1974) and have since been addressed through research (Rubin, 1994). Critics' qualms with uses and gratifications fell into five main concerns: first, that uses and gratifications research struggled with generalizability beyond the sample. Second, studies using the approach were too compartmentalized, with too many separate typologies and not enough synthesis. Third, clarity among the central concepts was lacking, with scholars defining these concepts differently; further, and fourth on the list, many detractors of uses and gratifications disputed the idea of an active audience, rationally/capable of making media choices. Finally, many disliked the dependence on self-report data (Elliott, 1974; McLeod & Becker, 1974; Rosengren, 1974; Rubin, 1994; Ruggerio 2000).

Rosengren (1974) addressed some of these concerns through the clarification of key terms and the provision of a uses and gratifications paradigm. The concept of a super-rational active audience was also revisited, with audience choice reconceived as existing on a continuum (Ruggerio, 2000). Replication and secondary analysis of data also occurred, as well as comparison of motives across media channels. Further, elements of the uses and gratifications model – including motives, gratifications,

psychological, and social variables – have been explored through research (Rubin, 1994). It is because of these advances that Lin (1996) contends that despite its critics and criticisms, uses and gratifications is a strong and versatile theory that remains one of the most influential theories in communication.

Uses and Gratifications and the Internet.

Many researchers believe that uses and gratifications approach is well suited for studying the internet (Eighmey & McCord, 1998; Johnson & Kaye, 2003; Kaye & Johnson, 2004; Ko, et.al, 2005; Ruggerio, 2000; Stafford & Stafford, 2004). Indeed, many communication scholars have employed the uses and gratifications approach to understand the internet (Charney & Greenberg, 2001; Eighmey & McCord, 1998; Ferguson & Perse, 2000; Kaye & Johnson, 2004; LaRose & Eastin, 2004; Lin, 1999; Papacharissi & Rubin, 2000; Parker & Plank, 2000; Stafford & Stafford, 2004) and the findings from these studies are informative for the present proposed study.

Although focused on different aspects of the internet, user demographics, or internet content, these studies have several similarly-labeled motives in common for use of internet-based applications, including entertainment (Charney & Greenberg, 2002; Ferguson & Perse, 2000; Kaye & Johnson, 2004; Ko et.al., 2005; Papacharissi & Rubin, 2000; Ruggerio, 2000), information seeking (Ferguson & Perse, 2000; Johnson & Kaye, 2003; Kaye & Johnson, 2004; Ko, et.al, 2005; Papacharissi & Rubin, 2000; Parker & Plank, 2000), social interaction/interpersonal utility (Bumgarner, 2005; Charney & Greenberg, 2002; Kaye & Johnson, 2004; Ko, et.al., 2005; LaRose & Eastin, 2004; Papacharissi & Rubin, 2000; Parker & Plank, 2000; Ruggerio, 2000,), convenience (Kaye & Johnson, 2004; Ko, et. al., 2005; Papacharissi & Rubin, 2000;), surveillance (Parker &

Plank, 2000; Ruggerio, 2000), relaxation/escape (Ferguson & Perse, 2000; Parker & Plank, 2000; Ruggerio, 2000), and diversion/to pass time (Bumgarner, 2005; Charney & Greenberg, 2002; Ferguson & Perse, 2000; Papacharissi & Rubin, 2000; Ruggerio, 2000). Many of these similarly-labeled factors can also be seen in the selected uses and gratifications research of other mass medium listed earlier in Table 1. While a number of similarly-labeled factors exist both across and within mediums studied, caution should be used when interpreting them as “identical,” since for the majority of studies, standard items and scales for assessment were not used to determine factors. Despite this, factors discovered in uses and gratifications research, and specifically research applying the approach to a new medium such as the internet, are still valuable for explanation and description. Thus, the main research question is proposed:

RQ1: What are the uses and gratifications of Facebook for students?

Uses and gratifications has grown in its application to the internet over time. As the internet has become more available and popular, multiple uses of the internet have developed. It is important to note that the uses and gratifications approach has provided a theoretical basis for studying these advances and helping scholars understand the vast appeal of the internet. The following reviews of internet uses and gratifications studies detail the application of the approach to various facets of the internet, demonstrating both the versatility of the approach as well as a universal appeal of internet channels as shown through similarly labeled motives and gratifications found in these studies. The sections that follow detail the specific focus, findings, and relevant methods of these studies with similar studies organized together under the appropriate sub-heading.

General Internet Uses and Gratifications

In an early study applying uses and gratifications to the internet, Parker and Plank (2000) sought to determine through factor analysis the gratifications obtained from online sources. Based off of data collected in 1997 from 204 college students and using statements adapted from previous uses and gratifications studies, Parker and Plank found three motivations for using the internet that they called: companionship/social interaction, surveillance/entertainment, and relaxation/escape. Companionship/social interaction explained the most variance (41%), but regression analysis of the factors onto online use found relaxation/escape best predicted internet use. Aside from these factors, Parker and Plank also asked students to rank sources of information and found that in 1997, print media and television were still the number one and two information sources for college students, although the internet did rank just below print media for the purpose of job searching.

This study took a very general approach to studying the uses and gratifications of the internet and used data gathered in the formative years of internet popularity among college students. Further, Parker and Plank did not call for future research to direct attention towards specific web site gratifications. However, this study does demonstrate the application of uses and gratifications to an emerging medium and also provides general internet gratifications that perhaps later evolved as website use became more widespread and specific. It seems some of these gratifications are still applicable: many other more recent studies of the internet site find common motives, such as 'entertainment' or 'escape.'

Charney and Greenberg (2002) produced one of the first studies on uses and gratifications of the internet based on data collected from undergraduate students in 1996, with over 50% of their respondents reporting using the internet for 11 months or less. Following the method of Greenberg's (1974) classic uses and gratifications study of British children and television, Charney and Greenberg initially collected open-ended data regarding uses of the internet from a small sample and following content analysis, created a survey of statements with which respondents indicated agreement or disagreement. Initially, the authors began with 10 gratifications influenced by previous media gratification research. Following analysis, they found what they called eight gratification factors, slightly more than Parker and Plank (2000); among them: keep informed, diversion/entertainment, peer identity, good feelings, communication, sights/sounds, career, and coolness. Frequency of internet activities was also measured with 88% of respondents reporting using the internet for email. In contrast, just 16% of participants reported using the internet for shopping in 1996. Just half of the student participants in this study reported owning a computer, and 60% of the sample reported using the computer less than five hours per week. These statistics illustrate the level of penetration the internet had in the college population in 1996; while these numbers are likely much different today, methods in this study are a good example of how best to utilize uses and gratifications for exploring a new media, such as Facebook. The current study will use the methods put forth by Charney and Greenberg (2001) among others as exemplars.

LaRose and Eastin (2004) took a different approach to their study of the internet and attempted to integrate social cognitive theory and uses and gratifications research

into a theory of media attendance. In an attempt to explain more variance regarding media exposure, LaRose and Eastin construed gratifications as expected outcomes and placed them a priori into social cognitive incentive categories. Further, they looked beyond a college sample and collected data from 172 adult users. Despite these differences, they found results similar to previous internet uses and gratifications studies: the expected outcomes paralleling entertainment, social interaction, information, and 'pass time' motivations all significantly related to internet use. Further, they found monetary and status motivations as well as the independent factor of simple habit were all predictors of internet use. This study, according to the authors, both supported the uses and gratifications perspective and successfully extended it within the social cognitive framework. Additionally, the comparative recency of the study provides updated general internet uses and gratifications that shows similar gratifications as found in earlier works. Thus as the internet has developed, some gratifications of use – such as entertainment – seem to remain, indicating that for Facebook, some of the gratifications found should be congruent with those discovered in previous internet studies.

While not the main focus of their study, LaRose and Eastin (2004) did analyze which factors were predictors of internet use. Determining the predictors of Facebook use may be beneficial to understanding Facebook's wide appeal. Therefore, a research question is proposed in this vein.

RQ2: What uses and gratifications predict time spent on Facebook?

In their 2004 study, Stafford and Stafford asserted that internet uses and gratifications research was incomplete. Using an online survey of America Online (AOL) customers, Stafford and Stafford set forth to fully identify internet-specific gratifications.

Their two-stage research design was comprised of an initial study of open-ended questions designed to gather an inventory of internet use descriptors followed by a survey with factor analysis. This research led them to conclude that three factors of internet gratifications existed: process gratifications, which include items related the movement through the internet such as clicking or searching; content gratifications which encompass items regarding information or learning obtained from the internet; and social gratifications, which consist of items indicating interest in other people accessible from the internet. Stafford and Stafford's set of internet gratifications differ in that they represent what could be conceived of as a macro-level of internet gratifications as compared to other studies, which use as factors what Stafford and Stafford used as items. However, Stafford and Stafford's conclusions regarding the social nature of the internet are similar to those echoed in other studies (Papacharissi & Rubin, 2000; Parker & Plank, 2000). .

Uses and Gratifications of Product Websites

Another study undertaken in the early years of web browsers and the World Wide Web, examined five websites of popular brands in various industries (i.e.: athletic shoes, candy) from the uses and gratifications perspective. Eighmey and McCord (1998) had subjects view the websites on the then-new Netscape 1.0 browser and rate their experiences using statements adapted from previous uses and gratifications studies as well as pre-test interviews. Factor analysis revealed that the majority of variance was accounted for in the entertainment value, personal relevance, and information involvement factors although factors of personal involvement and continuing relationship led Eighmey and McCord to conclude that "information becomes a relationship on the

World Wide Web” (p. 193, 1998). Eighmey and McCord also suggested that the website medium may represent an intersection of entertainment and information, something that may apply to a website such as Facebook.

Like Eighmey and McCord (1998), Ko and his colleagues (2005) were also interested in examining the relationship between interactivity on a product website and consumer motives. Ko, et.al. proposed a structural model wherein motives → time spent at a website → interactivity → attitude toward the site → attitude towards the brand → purchase intention. Using Papacharissi and Rubin’s (2000) set of motives, Ko, et.al., collected data over the internet from 385 Korean and American college students who were asked to view a real website marketing a popular printer. Confirmatory factor analysis provided support for the model and revealed that three of the four motives – information, social interaction, and convenience – influenced the amount of time spent on the web site. Also similar to Eighmey and McCord (1998), Ko, et.al. found that social interaction motives can ultimately effect attitudes towards both the website and the brand, with more human to human interactivity – often in the form of feedback opportunities such as message boards – leading to more positive attitudes towards the site.

Although they examined product or brand websites, findings from the studies by Eighmey and McCord (1998) as well as Ko, et. al. (2005) show motives – such as social interaction, information, and entertainment likely to be reported by respondents in the present proposed study of Facebook.com. Further, these studies report that internet users responded positively to social interaction factors available on these commercial websites, which, in Ko, et.al.’s study, led to more positive attitudes towards the site.

The sites studied by Ko, et. al. (2005) and Eightmey and McCord (1998) were simple commercial websites for the purpose of promoting a product, with a limited amount of human-to-human interactive features. Facebook, on the other hand, is a website created with the stated sole purpose of facilitating human-to-human interaction on the internet and providing an interface for the self-presentation of information; therefore, it could be expected that motives related to human interaction reported by respondents in this survey could predict use of Facebook.

H1: Communication/keep in touch uses and gratifications will predict Facebook use.

Individual Differences in Internet Uses and Gratifications

Ko, et. al. (2005) and Eightmey and McCord (1998) studied the internet from one aspect, that of specific websites. Two studies by Kaye and Johnson (2004) and Johnson and Kaye (2003) also examined a niche of internet use, although instead of focusing on product websites, they assessed the internet motives of politically interested individuals. Both studies used data collected online after the 2000 presidential election from a convenience sample of 442 individuals who participated in online political arenas. In the 2004 study, Kaye and Johnson discovered and compared the motives of politically interested individuals for using the World Wide Web (WWW), bulletin boards, and chat forums finding that the four factors of political guidance, entertainment/social utility, convenience, and information seeking of specific political information differed in importance for the three internet-based communication options. This finding reveals that even among a subset of internet users – in this case, politically interested individuals – motives for using different web-based channels (bulletin boards, chat forums, WWW)

differ in importance by channel. It should then be expected that the importance of and motives for using Facebook would be different than other previously studied internet channels, hence the importance of the current study.

In 2003, Johnson and Kaye's study related motives of internet use for political information to use of the web for other purposes, such as shopping or entertainment, and found that politically interested individuals prioritized more 'informational' uses, such as email, news access, bulletin boards, and search for work or school above more 'entertainment' uses such as downloading music or playing games. Although entertainment uses were not highly ranked by politically interested users, entertainment motives were found by Johnson and Kaye (2003) to better predict internet activities than informational motives, a finding which may be especially informative in the study of Facebook motives, thus the following hypothesis is proposed:

H2: Entertainment motives will better predict time spent on Facebook than information motives.

While both of these studies investigated a specific demographic and the motives for seeking political information from particular internet-based sources, the utilization of the uses and gratifications perspective, findings related to the importance of motives, predictive nature of specific motives, and use of a convenience sample method, all help to inform the present study.

Papacharissi and Rubin (2000) also sought to understand the motives for internet use among those with a shared individual difference – in this case, those individuals high and low in unwillingness to communicate, a term defined by Burgoon (1976, as cited in Papacharissi and Rubin, 2000) as being a chronic tendency to avoid or devalue oral

communication. Adapted statements derived from previous computer mediated communication research were placed a priori in categories and, following survey responses from subjects, were then subjected to principal components analysis, which yielded the five motive factors (in rank order) of: interpersonal utility, pass time, information seeking, convenience, and entertainment. Further, correlations revealed relationships between these motives and psychological and social variables, such as unwillingness to communicate, which suggests that individual differences may influence the rank and report of motives.

Results of these correlations led Papacharissi and Rubin (2000) to also infer that individuals who are satisfied with their real-life interpersonal interactions tend to use the internet for more instrumental purposes, such as information seeking. Those who are unsatisfied with their interpersonal encounters in real-life tend to use the internet as a functional alternative and spend more time online engaging with others or passing time. From these findings, Papacharissi and Rubin (2000) contend that the internet could be a functional alternative for individuals who do not find other mass medium rewarding. This postulation by Papacharissi and Rubin (2000) occurred long before the appearance of social networking sites such as Facebook.com and may be even more applicable for individuals high in unwillingness to communicate today. Additionally, exploring whether Facebook, a social networking site that provides opportunity to socially interact without oral communication, is serving as an alternative to other channels of communication may be a valuable in understanding its appeal.

The motives for internet use by individuals high and low in unwillingness to communicate variable reported by Papacharissi and Rubin (2000) are similar to those

reported in other uses and gratifications studies reviewed here. In regard to the correlations between certain motives and the unwillingness to communicate variable however, the findings of Papacharissi and Rubin do suggest to scholars examining other aspects of the internet that motives of use reported by respondents for the channel under investigation may be driven by psychological individual difference variables. It is therefore important to keep this finding under consideration when drawing a sample and inferring conclusions in uses and gratifications studies of the internet, including the present study on Facebook.

Internet as a Functional Alternative

Based on some of their findings, Papacharissi and Rubin (2000) proposed that the internet may serve as a functional alternative to other communication channels. In 2000, Ferguson and Perse did question whether the internet could be a functional alternative to another medium, specifically, television. Ferguson and Perse (2000) examined uses and gratifications of the internet through an online survey comprised of statements adapted from television uses and gratifications research. Ferguson and Perse found three major and two minor motives for internet use; in order they are: entertainment, pass time, relaxation/escape, social information, and learning, with entertainment alone accounting for a large portion (41%) of the variance. Ferguson and Perse compared these motives as well as internet uses reported by respondents to recorded uses and gratifications of television and concluded that television and the World Wide Web have more similarities than differences, thus the internet could serve as a functional alternative for television at that time. Now, however, as the internet has evolved it might be more appropriate to question whether the internet serving as a functional alternative to other communication

channels such as telephones, email, or face to face communication. Perhaps Facebook's interactive platform offers users many ways in which to substitute Facebook communication for other channels, therefore the following research question is proposed:

RQ3: Do Facebook users report using Facebook as an alternative to other communication channels such as email, IM, text, phone, and face to face communication?

Uses and Gratifications of Specific Software

As can be seen from the previously discussed studies, scholars have applied the uses and gratifications approach to various aspects of the internet. In yet another type of application, some scholars have studied aspects of the internet from a uses and gratifications perspective in an effort to understand the popularity of specific software, many with results that suggest that the internet is more interpersonally focused than any other mass medium. Leung's (2001) research found interpersonal gratifications to be more prevalent and influential in his study of college student motives for engaging in ICQ('I seek you') chat. Leung was interested in college student motives for engaging in ICQ chat, one of the first world-wide internet instant messaging programs. His research revealed three instrumental and four intrinsic motives which were: relaxation, entertainment, fashion, and inclusion, affection, sociability, and escape, respectively; and he found that heavy users of ICQ were driven by motives of affection and sociability with light users merely using ICQ to be fashionable. These results led him to conclude that the internet as a communication medium, specifically considering ICQ chat, is more social and interpersonally-communication focused than television. Leung also postulates that once ICQ software develops further and includes more entertainment features, the

medium should begin to represent a blend of mass and interpersonal communication channels.

Recchiuti (2003) also examined an instant messaging system as well as email and online chat rooms and found social antecedents impacted computer mediated communication choices by college students. Similar to Papacharissi and Rubin's (2000) finding regarding individuals' unwillingness to communicate, Recchiuti found that those who were less satisfied with their real-life interpersonal communication spent more time online seeking out interpersonal communication through online chat rooms. Conversely, those students who were involved with on-campus student activities, and, as Recchiuti presumed, more interpersonally involved in real-life, spent most of their time emailing. Thus, the following hypothesis is proposed:

H3: Students who report greater involvement with campus activities will spend less time on Facebook.

In Recchiuti's (2003) study, although motives for use differed between instant messenger, email, and chat rooms, the motives of entertainment, information seeking, and interpersonal utility were shared by all three suggesting that perhaps within computer mediated communication, common motives can be found.

In her 2005 thesis, Li explored the uses and gratifications of blogging with data collected using a two-step method influenced by Greenberg (1974). From her analysis of 288 blogger responses, Li found seven motives for blogging including: self-documentation, improving writing, self-expression, medium appeal (i.e.: blog tools such as hyperlinks), provide information, pass time, and socialization. As Li notes, several of these motives indicate that bloggers write for both intra and interpersonal reasons, and

many bloggers noted that blogging provides information and allows them to interact with friends online.

The aforementioned research illustrates the application of the uses and gratifications approach to study various aspects of the Internet. Much of this research has revealed similar factors, such as entertainment and information seeking and some studies have produced factors unique to the medium studied, as in the case of ‘improving writing’ reported by bloggers. For clarity, Table 2 presents the factors found by the internet studies reviewed here. In all cases, use of the approach has helped scholars understand and explain the popularity of many diverse internet media options, and therefore should be valuable for studying a social networking site such as Facebook.

Uses and Gratifications and Social Networking Sites

Although many studies have applied the uses and gratifications approach to the Internet, few researchers have examined the uses and gratifications derived from specific websites. Even fewer have looked at the uses and gratifications of social networking sites (SNS). As mentioned previously, social networking sites (SNS) are “online spaces where individuals are allowed to present themselves, articulate their social networks, and establish or maintain connections to others” Ellison, et.al. (2006, p. 6). Further, Boyd (in press) states that the elements of profiles, friends, and public comments differentiate social networking sites from other interactive websites.

Table 2
Factors Found in Selected Internet Uses and Gratifications Research

Authors	Year	Terminology	Channel	Uses and Gratifications Factors Found
Eighmey & McCord	1998	Factors	Product website	Entertainment value, personal relevance, information involvement, personal involvement, continuing relationship
Ko, et.al.	2005	Motivations	Product website	Information, social interaction, and convenience
Kaye & Johnson	2004	Motives	Bulletin boards, Chat forums, WWW	Political guidance, entertainment/social utility, convenience, information seeking
Parker & Plank	2000	Motivations	General internet	Companionship/social interaction, surveillance/entertainment, and relaxation/escape
Charney & Greenberg	2002	Gratification Factors	General internet	Keep informed, diversion/entertainment, peer identity, good feelings, communication, sights/sounds, career, and coolness
Papacharissi & Rubin	2000	Motives	General internet	Interpersonal utility, pass time, information seeking, convenience, and entertainment
Ferguson & Perse	2000	Motives	General internet	Entertainment, pass time, relaxation/escape, social information, and learning
LaRose & Eastin	2004	Expected Outcomes	General internet	Entertainment, social interaction, information, 'pass time', monetary, status motivations, and habit
Stafford & Stafford	2004	Gratifications	AOL/General internet	Process gratifications, content gratifications, and social gratifications
Leung	2001	Motives	ICQ Chat	Relaxation, entertainment, fashion, and inclusion, affection, sociability, and escape
Recchiuti	2003	Motives	Instant messaging, Chat rooms, Email	Entertainment, information seeking, and interpersonal utility (for chat room, IM, and email)
Li	2005	Motives	Blogs	Self-documentation, improving writing, self-expression, medium appeal, provide information, pass time, and socialization

Recall that Katz, et.al. (1974) in describing the elements of a uses and gratifications model, stated that ‘the media compete with other sources, both interpersonal and other media, for need satisfaction’. Ironically, in the present-day Internet age, SNS have blended interpersonal interaction and media, perhaps easing competition among these sources and contributing to the vast popularity of such sites. Despite this possibility, and the interesting intersection of SNS and uses and gratifications, research in this area is meager.

One study that does examine SNSs is by Nyland and Near (2007). Nyland and Near (2007) were interested in how religiosity, an individual difference variable, mediated use of social networking software. Drawing their sample from users of a variety of SNSs, they correlated scores on a measure of religiosity with the number of SNS friends, time spent on SNS, and uses of SNS. They adapted 23 uses and gratifications from previous internet studies and used exploratory factor analysis to determine factors. Five factors were found: *to meet new people*, *to entertain*, *to maintain relationships*, *to find out about social events*, and for *media creation*, an element unique to SNS. Overall they found that those who are more religious use SNS to connect with friends or family members rather than to meet new people. Women tended to use SNS more for finding information about social events, and youth (18-24) primarily used SNS to maintain friendships and also to find out about events. While respondents of the online survey in this study could have been members of any SNS, the majority of the 184 respondents were myspace members with a small percent reporting Facebook or other SNS membership. Because of this, Nyland and Near were unable to compare uses and gratifications across social networking sites. Nyland and Near’s study mirrors the uses

and gratifications studies discussed above; the authors studied a subset of the internet, SNS, to determine the uses and gratification factors related to SNS and the individual difference variable, religiosity. While their results are interesting, they can not be extrapolated to the general SNS user, including those who use Facebook.

Baumgarner's 2006 undergraduate thesis similarly focused on SNS uses and gratifications, although like the present study, his study specifically focused on Facebook.com. Using an online survey, University of North Carolina undergraduates ranked statements about Facebook motivations on a 1-5 Likert-style scale. The ranked statements provided were based on a model created from a combination of McQuail's four motivations for uses and gratifications and Reiss' 16 desires proposed by Baumgarner in the literature review. Using principal components analysis, Baumgarner found 8 factors and 9 motivations confirming a proposed model of motivations for using Facebook created from Reiss' Sensitivity Theory, a psychology-based theory of motivation that attempts to explain all human and animal motivation, both intrinsic and extrinsic, in a set of 16 motives that are derived from what Reiss states are 'basic desires' (Reiss, 2004). Reiss claims that deviations in these motivations leads to mental health issues or impairment in cognitive functioning (Reiss, 2004). However, this theory is not specific to media use or selection.

Following confirmation of a created model, Bumgarner examined his data for other information and found that among his respondents, the 'groups' application of Facebook does not rank very highly in importance; the friend and personal information functions however, are highly important, ranking number one and two, respectively.

Baumgarner also concludes that people, mainly white women, use Facebook primarily to gossip.

While this study does examine Facebook.com specifically, it does not follow the methodology of uses and gratifications research as laid forth by Greenberg (1974) and since replicated by researchers such as Charney and Greenberg (2000), Li (2005), Papacharissi and Rubin (2000), and Sherry, et.al. (2006). Instead this study confirms a model created from Reiss' Sensitivity Theory, a psychologically orientated theory not created for the purpose of explaining media use, and void of the key assumptions that make the uses and gratifications approach valuable to studying this new medium and the communication possibilities it presents. It is therefore important to approach the study of Facebook from the method popularized by Greenberg (1974), which in the first stage, allows for contributions from actual users to inform the subsequent typology through the creation of gratification statements.

Rationale

This study proposes to create a typology of Facebook motives following the uses and gratifications methods of Greenberg (1974) and more recently, Charney and Greenberg (2000), Li (2005), Papacharissi and Rubin (2000), and Sherry's (2006) exemplars. Although they have been criticized, it remains that typologies are still important to uses and gratifications research, and further, to media research, as Ruggerio states, "a typology of uses furnished a benchmark base of data for other studies to further examine media use" (Ruggerio, 200, p. 12). Further, scholars (Lin, 1996; Ruggerio, 2000) note it is still the case that typologies of media in general, and certainly new media, remain valuable in inquiry.

As discussed in the literature review, the uses and gratifications approach has frequently been used in the study of both new and popular media and has been noted as a “cutting edge” approach for studying and understanding the impact of new technologies (Ruggerio, 2000, p. 27). Facebook is a complexly coded website that enables millions to communicate daily in a multitude of ways. Understanding why people choose to use this new media must come before determining the impact of messages available on Facebook. The uses and gratifications perspective could serve to explain what motivates those who use Facebook and in turn, perhaps shed light on Facebook’s immense popularity among college students. As such, the following research questions and hypotheses were proposed in the previous discussion:

Research Questions

RQ1: What are the uses and gratifications of Facebook for students

RQ2: What uses and gratifications predict time spent on Facebook?

RQ3: Do Facebook users report using Facebook as an alternative to other communication channels?

Additionally, in order to further explain student use of the Facebook medium three additional research questions related to the Facebook profile, duration and frequency of Facebook are proposed. They are as follows:

RQ4: What are the most important parts of the Facebook profile?

RQ5: What is the duration and frequency of Facebook use?

RQ6: Does duration and frequency of use differ across demographics of gender and year in school?

Finally, hypotheses previously proposed in the manuscript are reviewed below.

Hypotheses:

H1: Communication/keep in touch uses and gratifications will predict Facebook use.

H2: Entertainment uses and gratifications will better predict Facebook use than information uses and gratifications.

H3: Students with greater involvement with campus activities will spend less time on Facebook.

Following the exemplar of Greenberg's (1974) classic uses and gratifications research, a two-stage method was used.

Preliminary Study Methods

Participants

Students in a basic level communication course at a large Midwestern university completed an in-class self-administered survey on Facebook for course research credit. Respondents' majors represented all university colleges that enroll undergraduate students. Out of the 195 surveys completed, 2 surveys were incomplete and 8 students were not members of Facebook. These responses were not included in this preliminary study. Of those surveyed, 185 students, or 96%, indicated they were members of Facebook and were thus included in this preliminary study.

Measurement

Uses and Gratification Categories

Following the methods of Sherry, et.al. (2006), Greenberg (1974), and Charney & Greenberg (2002), this pre-study attempted to determine the self-reported reasons why respondents like and use the medium in question, Facebook. These reasons will then be

used when creating items and dimensions for the main study. In this pre-study, a combination of one closed-ended and two open-ended questions were asked. The closed-ended question asked respondents to indicate what they have used Facebook for by placing an 'x' on the line next to any of the applicable 13 statements of potential Facebook uses based on observation of student use by other students, the researcher, and university employees, as well as functions inherent in the software (i.e.: "to meet new friends", "to find a date", "add more photos"); this question and the accompanying statements can be found in Appendix A. For the closed-ended questions, summary figures and percentages were calculated and can be seen in Table 3. From the percentage response information, the base statement was either placed in a category created from the open-ended question analysis, for inclusion on the survey, or not.

Table 3
Responses to Closed-Ended Question, "I have used Facebook for the following."

Response Option	Male		Female		Total	
	N	%	N	%	N	%
Find out about a party	32	48%	70	59%	102	55%
Meet new friends	35	53%	61	51%	96	51%
Find out about campus events	24	36%	44	36%	68	36%
Adjust my profile content	47	71%	100	84%	147	79%
Announce a party	22	33%	45	37%	67	36%
Contact someone for an ID	19	28%	30	25%	49	26%
Check facebook friends' profiles	57	86%	113	94%	170	91%
Find a date	5	7%	1	.8%	6	3%
Find other people in my classes	45	68%	83	69%	128	69%
Find people who have taken my class previously	9	13%	19	16%	28	15%
Add more photos to my photo album	40	60%	96	80%	136	73%

Table 3 Continued

Lookup future roommate(s) profiles	19	28%	41	34%	60	32%
Check up on an ex-boyfriend/girlfriend	31	47%	85	71%	116	62%

The open-ended question that followed asked students what might be missing from this list of uses and directed respondents to report other uses for which they have used Facebook that were not already covered in the closed-ended question. The second open-ended question related to liking of Facebook and asked, “What do you like about Facebook?” Responses to these open-ended questions were analyzed following unitization to determine the prevalent themes of Facebook motivations reported by respondents.

Two coders were trained to unitize the open-ended content. Each coder unitized the entire dataset. Rater reliability for this unitization was measured by calculating Guetzkow’s U (1950) and was 0.012. In Guetzkow’s U, numbers closer to zero indicate more agreement among coders, thus, the inter-rater reliability for unitizing was very good, with coders agreeing on 96% of cases.

Categories were created with a method similar to that used by Sherry et.al. (2006) and is as follows: each unit was written onto an index card; following this, a coder independently read and sorted the units into prevalent themes, noting the themes generated on a separate sheet of paper. The index cards were shuffled and the above sorting process repeated by each of the three coders. The thematic lists generated by each individual coder were then compared and inconsistencies were resolved through discussion. Definitions for each proposed category were thoroughly discussed and communally approved. Thus, the categories and their definitions were created. Although

this method is based on the principle of reliability, numerical assessments were not able to be calculated.

Of the two open-ended questions, only 56% , or 105 respondents, provided one or more statements for the first question, “what else do you use Facebook for?” and nearly all of the participants – 98%, or 182 respondents – provided one or more statements to the second question, “why do you like Facebook?” The coder analysis described above was performed for each question separately and revealed that responses for the first and second question were thematically alike. This could mean either that respondents are unable to cognitively separate reasons why they use Facebook from reasons why they like Facebook or that respondents were unable to comprehend the question as it was worded. During coder analysis, responses by individual participants were not, however, mutually exclusive, meaning some respondents could – and did – give the same response for both questions. Due to these concerns, only the responses to the second question, which had a 98% response rate, were used to create categories with the previously described method. Statements from the closed-ended question were coded into these categories based on the percentage of student response.

The resulting categories included directory function, diversion, communicate and keep in touch, connect with network community, fun, surveillance, maintenance, information, and functional replacement. These categories and example responses can be seen in the following table. Definitions follow in the table below.

Table 4
Categories of Self-Reported Facebook Uses.

Directory Function	“It’s convenient if I need to find someone’s contact info.”
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Table 4 Continued

	“Searching for someone you’ve just met, and liked, but didn’t get a chance to get their number or screenname.” “I can search people’s AIM name to find their profile (if I don’t know their name).” “If you can’t remember someone’s name, but you know an organization they belong to or one of their friends.”
Diversion	“It takes me away from studying/” “It wastes my time when it needs to be wasted.” “It gives me something to do instead of being bored.” “To procrastinate on homework or other activities.”
Communication/Keep in Touch	“It lets me keep in touch with people I graduated from high school with or met in class, but don’t see anymore.” “To keep in contact with my loved ones that I’m not around.” “It keeps me connected with friends not just at MSU, but all over the U.S.” “[I use Facebook to] send messages on walls.” “It’s an easy way to contact others without too much commitment.” “Lets me say a quick hello.”
Connect with Network	“It’s a way to grow closer as an MSU community.” “Great way to be connected to students at your school.”

Table 4 Continued

	“Keeps people networked who don’t get to see everyone everyday.” “Helps you meet or see others on campus because of how the six degrees of separation are working.” “See how other people know people you know.”
Entertainment	“It’s ____” ...funinteresting ...entertaining ...cool
Surveillance	“This seems stalkerish ☺ but to see what everyone else is doing and compare my level of fun...to theirs.” “You can see a lot about people’s lives, people who you are curious about, but would never ask.” “To see what my guy friends’ girlfriends are like.” “Checking up on my ex’s new girlfriend.” “I use Facebook to gain a better understanding of who someone really is! By combining what they think of themselves and their pictures, plus their comments, it gives me a close representation of who the individual is.” “To look up people you don’t like to see how bad they are doing. Ex: ‘I don’t like her, good, she’s still single.’” “Seeing how people look from their pictures.”
Maintenance Functions	“Add pictures to my photo album.” “For me, updating my profile is somewhat like trimming a

bonsai tree. Everyone I like knows roughly what I am up to and that relaxes me.”

“Check my messages. I can’t describe the feeling I get when I learn I have new messages.”

Information	“To find out what music everyone is listening to.”
	“Sell tickets.”
Functional Replacement	“I use Facebook in lieu of AOL IM.”

Directory. Many students in the closed-ended question – over 69% – reported using Facebook as it was originally designed to be used: as a way to match faces to names and find contact information of classmates. Facebook may also be a middleman for matchmaking: a few students reported using Facebook to find the name of a cute classmate.

Diversion. Facebook is a way to pass time. It helps many a student (n=31) put off doing their homework for a little while longer. It was also reported by respondents that Facebook can prevent boredom and aids in time wasting.

Communication/Keep in Touch. Keeping in touch with friends, whether they are old, new, long-lost, from high school, middle school, and elementary school, in different states, or at MSU, was overwhelmingly (n=51) the most cited reason for using Facebook. Facebook offers a variety of communication methods, all of them ‘easy’ and ‘effortless,’ for students to use to keep in touch and make new friends.

Entertainment. Some students (n=26) report using and liking Facebook simply because ‘it’s fun,’ ‘interesting,’ or ‘entertaining.’ Facebook seems to provide an engaging

experience that is described by quite a bit as “addicting, like crack.” Entertainment is also a commonly reported factor in previous internet uses and gratifications studies.

Surveillance. The number of students reporting using Facebook for surveillance is second only to keeping in touch. Many students readily volunteer that they use Facebook to ‘check up’ on others – both people they know and those they don’t. In response to the closed-ended questions, over 62% of students report using Facebook to learn more about whom their ex-boyfriend/girlfriend is dating. Facebook allows students to observe what is going on in the lives of those also on Facebook...and 91% of students admit to watching their friends in response to the closed-ended question, “I use Facebook to check up on my friends”.

Maintenance Functions. Many students feel a Facebook profile must be carefully cultivated. In response to close ended questions, nearly 73% of students reported logging onto Facebook to upload photos to their albums and 79% of respondents log on in order to adjust their profile information. Checking new messages was also reported to be a reason for using Facebook.

Information. A few of the closed-ended questions asked whether students used Facebook to find out or provide information such as campus events or party announcements, and several students wrote informational purposes, such as listing items on the classifieds, or finding out the latest book or music selections in their open-ended questions. Over 55% of students reported using Facebook to find out about a party but only 36% are using Facebook to announce their parties.

Functional Replacement. Only one student mentioned using Facebook ‘in lieu of AOL IM’. However, as reviewed earlier, some scholars (Ferguson & Perse, 2000) have used

the uses and gratifications approach to examine how then-new technologies replaced older ones (i.e.: internet replacing television). Thus this response, while unique, was thought provoking and a category to query the functional replacement of Facebook was created.

Students report using and liking Facebook for many diverse reasons, some of which echo categories previously reported in other uses and gratifications studies of the internet such as entertainment, information, diversion, and communication. Some categories found in this pre-study, however, show that Facebook allows students to engage in behaviors previously unavailable to them, such as surveillance of friends, former romantic partners, and family; and maintaining an interactive and public internet profile of themselves. That some of the uses and gratifications reported by students in this pre-study are unique to Facebook emphasizes the importance of studying this new and popular aspect of the internet through a theoretical perspective. The primary study described below seeks to fill the current knowledge gap by explaining how college students are using Facebook; the most common uses for Facebook; and what gratifications are derived from Facebook by invoking the uses and gratifications approach.

Pilot Test Methods and Results

Pilot Test

The uses and gratifications Likert-style questions listed in Appendix B were pilot tested and analyzed with exploratory factor analysis to determine factor structure and item validity prior to inclusion in the online primary survey.

Participants

Students in a large lecture communication course at a big Midwestern university completed an in-class self-administered survey comprised of the Facebook uses and gratifications items listed in Appendix B for course research credit. Respondents' also reported demographics. Of the 189 students surveyed, 27.5% (n=52) were males, and 69% (n=130) were females and 4% (n=7) did not provide their sex. The average age of the sample was 20.03 (SD=1.65), 22% of the sample were Freshmen, 28% Sophomores, 28.5% Juniors, and 20% seniors, 1.5% did not provide their year in school. Communication was cited by 68% percent of students as their major. Finally, the majority of the students surveyed (64.5%) joined Facebook before they were in college.

Exploratory Factor Analysis

Data collected from participants was subjected to exploratory factor analysis using SPSS data reduction. A 9-factor Principal Components Factor extraction method with Varimax rotation was found to be the best fit for the data. Factors retained had Eigenvalues greater than 2.00 and items that loaded two or more times higher on a single factor were retained. There were 48 items that met these requirements; 10 items did not load highly or cleanly and thus were removed from inclusion in the future survey; 10 items loaded moderately on two or more factors and so were re-worded for the future survey.

The nine factors that emerged from this analysis are as follows: pleasurable way to spend time, social information, utilities and upkeep, channel use, marketplace, maintain/establish old ties, social comparison, sexual attraction and interconnectedness. The table below lists the items that loaded on these factors, their means and standard deviations. These factors and item groupings helped inform the primary study and were

considered the a priori factors in analysis discussion. For some of these factors, additional items were created for the future survey in order to ensure four or more items for factor analysis, a complete listing of the items used in the subsequent online survey are listed under their factor in Appendix C.

Table 5
Items' Means, Standard Deviations and Factor Loadings Listed by Factor

		Factor		
	Item	Loading	Mean	SD
FACTOR 1	Pleasurable way to spend time			
	I use Facebook just to waste time.	.690	3.67	1.07
	Using Facebook is enjoyable.	.626	3.77	.987
	I use Facebook because it's interesting.	.655	3.66	1.00
	When I'm using Facebook, I'm entertained.	.648	3.39	1.05
	For me, Facebook prevents boredom.	.673	3.31	1.13
	When I'm on Facebook, time flies by.	.647	3.33	1.09
	I use Facebook because it's fun.	.585	3.73	.976
	I use Facebook when I don't want to study.	.521	3.95	1.10
	I use Facebook to pass the time.	.661	3.86	.985
FACTOR 2	Utilities and Upkeep			
	I log onto Facebook to see my photo comments.	.543	3.51	1.06
	I log onto Facebook to check messages.	.668	3.41	1.12
	I use Facebook to post photos in my album.	.504	3.24	1.36
	I log onto Facebook to add more applications to my profile.	.458	2.13	1.05
	I log onto Facebook to update my profile.	.554	3.06	1.06
	I log onto Facebook to read my wall comments.	.605	3.81	1.07
	I use Facebook to send a message.	.599	3.41	.977
	I log onto Facebook to check my messages from other people.	.686	3.50	1.05
FACTOR 3	Channel Use			

Table 5 Continued

	I use Facebook to keep in touch with family members.	.540	2.54	1.10
	I use Facebook instead of texting.	.633	2.48	1.00
	I use Facebook instead of the phone.	.524	2.40	1.05
	I use Facebook to let people know I'm thinking about them.	.505	2.99	1.10
	I use Facebook instead of email.	.569	2.74	1.09
	Instead of talking to someone face to face, I just use Facebook.	.571	2.62	1.10
FACTOR 4	Maintain/Establish old ties			
	Using Facebook is a great way to contact out-of-state friends.	.653	4.14	.960
	I use Facebook to find out what high school classmates are up to now.	.657	3.34	1.06
	I use Facebook to keep in touch with High School friends.	.720	3.47	1.05
	I use Facebook to keep in contact with old friends.	.661	3.68	1.09
FACTOR 5	Interconnectedness			
	I use Facebook to look at pictures of my friends' friends.	.657	3.24	1.13
	I like to see if my friends and I have friends in common.	.489	3.11	1.06
	I use Facebook to look at the photo albums of people I kind of know.	.499	3.24	1.02
	I use Facebook to help me put faces to names.	.433	3.00	1.07
	I like to see who knows who on Facebook.	.420	2.98	1.02
FACTOR 6	Social Comparison			
	I use Facebook to see if others are doing better than me.	.699	2.32	1.03

Table 5 Continued

	I use Facebook to check up on an ex-boyfriend/girlfriend.	.535	2.80	1.27
	I use Facebook to get gossip about others.	.510	2.94	1.19
	I learn about how much other students drink from Facebook.	.434	2.54	1.18
	I use Facebook to see if others are having more fun than I am .	.641	2.15	1.10
	I use Facebook to see if others are doing worse than me.	.719		
FACTOR 7	Marketplace			
	Through Facebook, I've made new friends.	.543	2.49	1.18
	I use Facebook for the classified ads.	.726	1.55	.938
	I use Facebook to sell stuff.	.709	1.49	.993
	I use Facebook to buy stuff.	.666	1.29	.746
	I use Facebook to collect a large number of "friends", even if they are people I don't know.	.499	1.81	.989
FACTOR 8	Social Information			
	I use Facebook to find email addresses or screennames.	.550	2.88	1.14
	I use Facebook to see who lives by me.	.531	1.98	.928
	I use Facebook to find a classmates' contact information.	.441	2.96	1.08
FACTOR 9	Sexual Attraction			
	I use Facebook to look at the profile of someone I find attractive.	.596	3.44	1.03
	I use Facebook to look at the profile of someone I hooked up with.	.536	2.89	1.20
CROSS-LOADING ITEMS				
	I get ideas about what everyone is watching, reading or listening to from Facebook.		2.28	.995

Table 5 Continued

I use Facebook to look at friends' photo albums.	4.18	.921
I use Facebook instead of IM.	3.10	1.18
I use Facebook to leave a wall comment.	3.95	1.00
Facebook is a good way for me to network with others.	3.22	1.15
I use Facebook to find old friends I've lost touch with.	3.23	1.06
I log on to check my messages from other people.	3.50	1.05
I use Facebook to find out about a party.	3.22	1.08
I use Facebook to know more about people I just met.	3.33	1.19
I keep tabs on my friends through Facebook.	3.19	1.06
REMOVED ITEMS		
I use Facebook to announce a party	2.89	1.18
Facebook makes it easy to contact others without too much commitment.	3.47	.987
I use Facebook to congratulate, wish 'happy birthday' or say 'good luck' to my friends.	3.81	1.02
I use Facebook to leave comments for people I don't see often.	3.26	1.01
I use Facebook to find other people in my classes.	2.74	1.00
Facebook makes it simple to maintain friendships.	3.28	.964
Facebook is an easy way to contact people without much effort.	3.50	1.08
Facebook brings people together.	3.25	1.04
I use Facebook to find out about campus events.	2.96	1.09
Facebook is a good way to connect with others at MSU.	3.50	1.10

Primary Study Methods

Participants

Participants were students enrolled in communication courses at a large, Midwestern university. Participation in the online survey was voluntary and students

were solicited using an online research management program, Experimetrix. This program provided participants with a secure link to the survey hosted by Survey Monkey (www.surveymonkey.com), an online data collection website from which students completed their survey. Online data collection and management software is highly appropriate for this study, as those who are members of an online SNS such as Facebook would be familiar with using an interactive website.

Using this method, 346 responses were collected. Of these responses, 1 respondent indicated they did not grant consent for participation, and 5 respondents had completed less than 15% of the survey questions. As a few students had reported to the researcher issues with internet connection in their initial attempts at the survey, it could be possible that these 5 responses indicated the first failed attempt, followed by a later successful attempt. These responses were therefore not included in the data analysis, bringing the total sample size used in analysis to 340.

Measurement

Uses and Gratifications

Results from the pilot test exploratory factor analysis were used to create the online survey for the primary uses and gratifications study. These items are listed by factor in Appendix C. For each item, respondents indicated how often they use Facebook for that reason on a 5-point scale (1 = not at all, 2 = rarely, 3 = sometimes, 4 = often, 5 = all the time).

Most Entertaining/Informative/Useful Part of Profile

Previous media research has suggested that three overarching motives for media use exist: entertainment, information, and usefulness. In order to determine which parts

of the Facebook profile fit these motives created from conventional media, six total questions were asked of students. Each question asked students to identify the five parts of the Facebook profile that they believe are the “most” entertaining, informative, or useful to them. Three of the questions asked this in relation to their own profile; three asked this in relation to others’ Facebook profiles.

Time Spent on Facebook

To assess the amount of time participants spend on Facebook, four questions were asked: first, an open-ended item requesting participants to estimate the number of times they log onto Facebook within an average day was asked. The second open-ended question asked participants to report the average amount of time spent on Facebook one log-in session. The next question asked participants to report the single longest span of time they have ever spent on Facebook in one session, in order to provide a description of the full range of time that students can and have spent on Facebook. Students selected their answer to this question using a drop down menu for hours and minutes. Possible options for hours were in excess of 25, and minute selections were in 10-minute increments. Finally, students were asked how much time they spend on Facebook during an average day, again using drop-down menus with options for hours (0-15 hours) and minutes (in 15-minute increments).

Involvement with Campus Activities

To determine involvement with campus activities, respondents were first asked to estimate the number of campus activities they participated in during the previous semester. Students were asked to count activities ranging from volunteer groups and research teams to intramural sports clubs and Greek memberships. Two separate

questions using drop-down menus asked students to estimate the time spent, in hours, on their activities and working at a job per week.

Demographic Questions

Demographic questions included year in school, sex, age, major, whether they live in on/off campus housing, and Greek membership.

Results

Demographics

Respondents' majors represented all university colleges that enroll undergraduate students, however more than half of the sample, or 51%, reported a major within the College of Communication Arts and Sciences. The 340 respondents ranged in age from 18 – 32, with a mean age of 20.26 (SD=1.69); 122 (35%) were males and 214 (62%) were females (4 unknown). Table 6 below shows respondents' year in school by their sex.

Table 6
Year in School by Sex

Year in School	Sex		Total
	Male	Female	
Freshman	42	52	94
Sophomore	25	43	68
Junior	31	51	82
Senior	23	66	89
Total:	121	213	333 ⁺

⁺4 “no responses” for sex were not included in this table: 2 juniors, 1 freshman, 1 ‘other’; 3 students did not provide their year in school.

The majority of respondents were not affiliated with Greek organizations (n=288, 84.7%) and lived off campus (n=184, 54%).

All respondents were members of Facebook, with 69% joining before coming to college. The percentage of students who were not members of Facebook before coming to college increased by the year in school, with Freshmen having the lowest percentage (3%) and Seniors having the greatest (75%). The following table shows Facebook membership before college by year in school and sex.

Table 7
Facebook Membership Before College by Year in School and Sex

Before College	<u>Freshman</u>		<u>Sophomore</u>		<u>Junior</u>		<u>Senior</u>	
	Yes	No	Yes	No	Yes	No	Yes	No
Male	39	3	16	9	23	8	4	19
Female	52	0	38	5	42	9	18	47
	97%	3%	79%	21%	79%	21%	25%	75%

n=332

RQ1: What are the uses and gratifications of Facebook for students?

Results for this research question were analyzed in stages following the exemplar of Charney and Greenberg (2002). First, the reliability of the a priori factors found from the pre-test EFA (see Appendix C for item by factor listing) was examined. Reliabilities calculated for the a priori factors were found to create generally reliable groupings, with alpha reliabilities ranging from .83 to .91. In addition, means of these factors and items were examined to determine what participants report most often using Facebook for.

Table 8 below contains the alpha reliabilities for the a priori factors as well as the means and standard deviations for these factors, listed in descending order of factor mean, with the highest being pleasureable way to spend time, ($M=3.87$, $SD=.72$). A complete list of individual item standardized factor loadings, means, and standard deviations listed by factor can be found in Appendix E.

Table 8
A Priori Factor Reliabilities, Means, and Standard Deviations

A Priori Factor	α	M	SD
Time	.917	3.87	.72
Utilities and Upkeep	.871	3.56	.68
Maintain/Establish old ties	.858	3.64	.67
Social Information	.834	3.23	.70
Interconnectedness	.853	3.14	.72
Sexual Attraction	.898	3.06	1.04
Channel Use	.833	2.79	.78
Social Comparison	.863	2.24	.79
Marketplace	.828	1.48	.58

Secondly, these a priori factors were subjected to confirmatory factor analysis in AMOS to confirm whether the items associated best with the factors. The resulting measures of fit for each factor are presented in Table 9 below. The presented measures of fit were based on the suggestions from Klein (2005) who states that chi-square, the Steger-Lind root mean square error of approximation (RMSEA) with 90% confidence interval, Bentler's comparative fit index (CFI), and standardized root mean square residual (SRMR) are the minimal indices that should be reported in CFA. In a lecture on structural equation modeling and CFA, Dr. Alexander Von Eye (lecture, October 20, 2005) recommends reporting additional fit indices: the goodness-of-fit index (GFI, range 0-1.0), adjusted GFI (can range outside 0-1.0, higher values equal better fit), normed fit index (NFI, sample based), and relative chi-square (CMIN/df, values greater than 2 and up to 5 are considered best). As Klein (2005) notes that model fit is often assessed based on the values of multiple measures of fit, all of the aforementioned indices were reported in the table below. As can be seen from this table, some of the a priori factors, such as time, utilities and upkeep, marketplace, old ties, and sexual attraction do not fit the data

very well while others, such as interconnectedness, channel use, and social comparison, have many acceptable indicators of fit. Thus, it was necessary to respecify these factors in an attempt to better fit the data.

Table 9
CFA Fit Indices for A Priori Factors

A Priori Factor	χ^2 (df)	p val.	CMIN/df	GFI	AGFI	NFI	CFI	RMSEA	RMSEA 90% CI
Sexual Attraction	29.27 (5)	.000	5.85	.963	.890	.972	.976	.120	.088-.163
Old Ties	66.03 (14)	.000	4.72	.946	.892	.931	.948	.105	.080-.131
Marketplace	51.89 (9)	.000	5.77	.946	.873	.926	.938	.119	.088-.151
Interconnected	46.33 (20)	.001	2.32	.969	.944	.959	.976	.062	.039-.086
Social Info	145.19 (20)	.000	7.26	.907	.832	.838	.856	.136	.116-.157
Channel Use	34.92 (14)	.002	2.49	.970	.941	.953	.971	.066	.039-.094
Social Comparison	84.94 (20)	.000	4.25	.938	.889	.925	.941	.098	.077-.120
Time	333.08 (27)	.000	12.34	.754	.590	.840	.851	.183	.166-.201
Utilities and Upkeep	150.42 (27)	.000	5.57	.908	.847	.883	.901	.116	.098-.135

In his text, *Principles and Practice of Structural Equation Modeling*, Klein (2005) states that respecification in CFA should be guided more by substantive considerations than by empirical considerations. With the exception of the Utilities and Upkeep factor (new fit statistics: $\chi^2(14) = 47.74$, $p < .00$, CMIN = 3.41, GFI = .961, AGFI = .922, NFI = .951, CFI = .965, RMSEA = .084), factor models were unable to be respecified to more acceptably fit the data as substantive reasoning to make changes suggested by AMOS' modification indices was lacking. Factor models with the poorest fits across many

indices, Time and Social Information, could not be changed as advised by the modification indices without substantive reasoning for the changes. As this is an exploratory study, limited substantive reasoning exists for changing factor structure. It could be that items were incorrectly modeled to their factors.

Thus, to determine item groupings on factors, a 9-factor principal components extraction with Varimax rotation EFA of the data was conducted in SPSS to determine item and factor patterns. All 9 factors had Eigenvalues greater than 1.0, and an item's factor loading must have been at least 1.5 times greater for inclusion on a factor. This criterion resulted in a minimum factor loading of .53 for most items, with three exceptions (two items on Factor 9 and one item on Factor 8) that can be seen in the table below. The factors that emerged from this EFA had generally reliable scales, ranging from .80 - .91, with the exception of the Network factor ($\alpha = .60$) which was excluded from further analysis. Results from this EFA can be seen in Table 10. Klein (2005) notes that it is "not entirely appropriate to conduct a CFA following an EFA using the same data" because of calculation properties of both methods (p. 204), therefore CFA was not run on the factors that emerged from this second EFA.

The first and largest factor, *Pass Time*, had an eigenvalue of 21.85, explained 32.61% of the variance, and had a reliability of .91. This factor had 6 items with an average loading of .759. The mean score for items on this factor was 3.84 on a 5-point scale with items ranging from 3.55 (make time fly by) to 3.88 (don't want to study, to pass time). All items originally comprised the a priori factor, *pleasurable way to spend time*, but since items indicating "fun", "enjoyment", and "interesting" were dropped in the EFA, the factor was relabeled *Pass Time*.

Connection was the second strongest factor, with an eigenvalue of 5.27 and accounted for 7.87% of the variance. This grouping had 7 items with an average loading of .628 and an alpha reliability of .90. The mean score for items on this factor was 3.21, with items ranging from 3.05 (see where people know each other from) to 3.67 (know more about people I just met). The majority of items on this factor came from the a priori Interconnectedness factor, with 2 items coming from the a priori Social Information factor.

Romantic and Sexual Attraction was the next strongest factor, with an eigenvalue of 3.36 accounting for 5.01% of the variance. Six items comprised this factor, with an average loading of .683 and an alpha reliability of .90. The average score for items on this factor is 2.99, making it just below the scale midpoint of 3. Item means for this factor ranged from 2.43 (look at the profile of someone I'd like to make out with) to 3.50 (look at profile of someone attractive). All but one item: to check up on an ex-boyfriend/girlfriend, were part of the a priori Sexual Attraction factor.

The fourth strongest factor in terms of eigenvalue (2.17) and percent variance explained (3.24%) was *Utilities and Upkeep*. This factor was comprised of 5 items, with an average loading of .559 and a reliability of .80. Most items on this factor came from the a priori factor of the same name, the exception being an item coming from the a priori Channel Use factor. The mean score for items on this factor is 3.06, and item means ranged from 2.25 (add more applications) to 3.50 (see my photo comments).

To Establish/Maintain Old Ties was the fifth strongest factor with an eigenvalue of 1.97 and accounting for 2.94% of variance. This factor however, had the second highest mean score, $M=3.67$, with item averages ranging from 3.51 (track down old

friends) to 3.81 (contact out-of-state friends). The *Establish/Maintain Old Ties* factor is consists of 6 items with an average loading of .682 and with $\alpha=.82$. All items from this factor came from the a priori grouping of the same name.

Accumulation was the sixth strongest factor, with an eigenvalue of 1.77 and accounting for 2.65% of the variance, however this factor had the lowest mean score across all 5 items, $M=1.46$, with individual item means differing little from this number. On a 5-point scale, this mean score indicates that students do not use Facebook very frequently for *Accumulation* reasons but that their scores identify it as a coherent factor in their minds. The average loading for the items on this factor was .703 and alpha reliability was .83. All items on this factor came from the a priori grouping of the same name.

The seventh strongest factor, *Social Comparison*, accounted for 2.52% of the variance and had an eigenvalue of 1.69. This factor contained 5 items with an average score for items on this factor of 2.04, ranging from 1.96 (see if others are doing worse than me) to 2.33 (see if others are looking better than I am). Average factor loading for the items on this factor was .677 and reliability for this factor was .83. With the exception of one item which came from the a priori Marketplace grouping, all items on this factor were from the a priori grouping of the same name.

Channel Use was the eighth strongest factor, with an eigenvalue of 1.35 and accounting for 2.02% of the variance. This factor consisted of 5 items, with the mean score for items on this factor of 3.08, and individual item means ranging from 2.45 (instead of the phone) to 3.19 (instead of email). The average factor loading for items on

this factor was .624 and reliability for this factor was .88. All items on this factor were from the a priori grouping of the same name.

As mentioned previously, a ninth factor, *Network* emerged with an eigenvalue of 1.20 and accounting for 1.78% of the variance. The 3 items that comprised this factor had an average score for items of 3.08 but had a low reliability of .599, excluding it from regression analyses in future RQ2, H1, and H2. A correlation matrix of these 9 factors can be seen below.

Table 10
Correlation Matrix of Facebook Uses and Gratifications Factors

	Connect.	Attract.	Util. & Upk.	Old Ties	Accum.	Social Comp.	Channel Use	Network
Time	.539 **	.483 **	.482 **	.375 **	.074	.329 **	.416 **	.328 **
Connection		.622 **	.628 **	.504 **	.352 **	.557 **	.529 **	.524 **
Attraction			.492 **	.370 **	.305 **	.592 **	.406 **	.505 **
Utilities & Upkeep				.515 **	.287 **	.511 **	.563 **	.472 **
Old Ties					.214 **	.328 **	.471 **	.481 **
Accumulation						.463 **	.322 **	.356 **
Social Comparison							.476 **	.443 **
Channel Use								.465 **

Thus 8 factors emerged as the basic uses and gratifications for Facebook use. The research questions and hypotheses that follow further explore Facebook use.

Table 11
EFA Results for Online Survey Data

Factor	Item	Mean	Loading	α	Eigen	% Var
Factor 1	Pass Time	3.84		.905	21.85	32.61
Pl. Time	... to pass the time		.872			
Pl. Time	... to make time fly by.		.793			
Pl. Time	... just to waste time.		.777			

Table 11 Continued

Pl. Time	... when I'm bored.		.760		
Pl. Time	... when I don't want to study.		.757		
Pl. Time	... to be entertained.		.595		
Factor 2	Connection	3.21	.899	5.27	7.87
Interconn	... to see how everyone is connected.		.690		
Interconn	... to see where people know each other from.		.664		
Interconn	... to see if my friends and I know the same people.		.659		
Interconn	... to see who knows who.		.612		
Interconn	... to see who my friends and I have in common.		.610		
Soc. Info	... to know more about people I just met.		.590		
Soc. Info	... to help me put faces to names.		.576		
Factor 3	Sexual Attraction	2.99	.898	3.36	5.01
Attract	... look at the profile of someone I'd like to date.		.756		
Attract	... to look at the profile of someone I think is hot.		.754		
Attract	... to look at the profile of someone I'd like to make out with.		.726		
Attract	... to look at the profile of someone I hooked up with.		.687		
Attract	... to look at the profile of someone I think is attractive.		.617		
Soc.Comp	... to check up on an ex-boyfriend/girlfriend.		.563		
Factor 4	Utilities and Upkeep	3.06	.800	2.17	3.24
U & U	... to update my profile.		.649		
U & U	... to add more applications to my profile.		.554		
U & U	... to see my photo comments.		.538		
Channel	... to let people know I'm thinking about them.		.532		
U & U	... to post photos in my album.		.525		
Factor 5	Establish/Maintain Old Ties	3.67	.817	1.97	2.65
Old Ties	... to keep in touch with High School friends.		.817		
Old Ties	... to keep in contact with old friends.		.810		

Table 11 Continued

Old Ties	... to maintain old friendships.		.679		
Old Ties	... to track down old friends.		.612		
Old Ties	... to contact out-of-state friends.		.596		
Old Ties	... to find out what high school classmates are up to now.		.581		
Factor 6	Accumulation	1.46	.828	1.77	2.65
Market	... to list or buy used textbooks.		.824		
Market	... to sell stuff.		.780		
Market	... to find a place to live.		.653		
Market	... for the classified ads.		.646		
Market	... to buy stuff.		.615		
Factor 7	Social Comparison	2.04	.825	1.69	2.52
Soc.Comp	... to see if others are doing worse than me.		.752		
Soc.Comp	... to see if others are doing better than me.		.729		
Soc.Comp	... to see if others are having more fun than I am.		.644		
Soc.Comp	... to see if others are looking better than I am.		.639		
Market	... to "friend" people I don't know, just to have a large number of Facebook friends.		.622		
Factor 8	Channel Use	3.08	.878	1.35	2.02
Channel	... instead of the phone.		.696		
Channel	... instead of texting.		.680		
Channel	... instead of Instant Messenger.		.675		
Channel	... instead of email.		.630		
Channel	... instead of talking to someone face to face		.439		
Factor 9	Network	3.08	.599	1.20	1.79
Interconn	... to make new friends		.609		
Interconn	... to network with others.		.503		
Soc. Info	... to find a party.		.432		

RQ2: What uses and gratifications predict time spent on Facebook?

The 8 factors from the EFA with reliable scales were used in multiple regression analyses to determine which, if any, factors predict time spent on Facebook. Items within each factor were summed to create 8 individual scales. These 8 factors were regressed onto the dependent variable of average time spent on Facebook per day ($r = .441$) and the model was significant, $F(9)=9.52$, $p<.00$, $R^2 = .194$. Tolerance and VIF statistics were within an acceptable range for all variables, indicating no issues with multicollinearity among the independent variables. Results shown in the regression table below indicate that frequency of Facebook use for the purposes of simply passing time ($\beta=.130$) and exploring social connection ($\beta=.213$) have significant influence on the amount of time, in minutes, spent daily on Facebook. Both frequency of Facebook use for *Channel* selection ($\beta=.128$) and the purpose of using utilities or updating profile, *Utilities and Upkeep* ($\beta = .128$), are close to significant influences on time spent daily.

Table 12
Summary of Regression Analysis for Predicting Average Daily Time on Facebook from Uses Factors

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Pass Time	2.07	1.03	.130	2.01	.045*
Connected	2.92	1.09	.213	2.67	.008*
Sexual Attr.	-1.27	.924	-.098	-1.37	.172
Utilities and Upkeep	2.62	1.37	.139	1.90	.058
Old Ties	-.520	1.16	-.028	-.450	.653
Accumulation	-.258	1.52	-.010	-.170	.865
Soc. Compare	.601	1.21	.036	.498	.619
Channel	2.30	1.20	.128	1.92	.056

* indicates significance

RQ3: Do Facebook users report using Facebook as an alternative to other communication channels?

Chi-square analysis was used to determine if a difference existed between the number of users reporting frequent use of Facebook instead of other communication channels and the number of users who reported rare or no use of Facebook instead of other channels. For each of the five “functional alternative” uses items (“I use Facebook instead of ...” text, phone, instant messenger, email and face to face communication), responses indicating “often” and “all the time” use of Facebook for the item were combined into a “frequent use” category. Responses indicating that Facebook was used “rarely” or “not at all” as an alternative to the specified channel were combined into a “rarely” category. For each item, the number of students reporting frequent or rare use was compared using Chi-square tests.

As can be seen in Table 13 below, Chi-square analysis revealed that respondents rarely replaced text messaging, phone calls, Instant Messenger or face to face communication with Facebook (see table for χ^2 values). However, a Chi-square analysis indicated that the difference between the number of students reporting frequent and rare use of Facebook instead of email was significant, $\chi^2(1, N=239)=11.75, p<.00$, such that students report frequently using Facebook instead of email.

TABLE 13
Chi-Square Analysis of the Difference in Reported Channel Use

Channel	n	Rarely	Frequently	df	χ^2
Text	232	176	56	1	62.01*
Phone	223	171	52	1	63.50*
Instant Messenger	230	138	92	1	9.20*
Email	239	93	146	1	11.75*
Face to Face	209	127	82	1	9.69*

* indicates significance at $p < .05$

RQ4: What are parts of others' Facebook profiles do students consider most entertaining, informative and useful? Conversely, what parts of their own profiles do students consider most entertaining, informative, and useful?

To determine which parts of their own and others' profiles students considered most entertaining, informative, and useful, six separate questions in the survey asked students to indicate as answer choices the five sections of a Facebook profile they found to be "most" entertaining, informative, or useful for both their own and others' profiles. See Appendix D for these six questions. In the online survey program, it was not possible to prevent students from choosing duplicate responses within one question. Therefore, in the online survey, it was possible for a respondent to have provided the same response choice (for example, "the Wall") five times for one question (for example, "On others' profiles, what five sections do you find most entertaining?"). In order to provide a clear picture of the data it was important to ensure that no duplicate responses on a question by an individual were calculated in the frequencies. Before frequency counts were calculated, data were combed and duplicate responses for an individual

respondent on a question were removed. The number of duplicate responses removed ranged from 6-15 for the six questions. In this manner, the remaining responses from those individuals were able to be retained without losing respondents' other answer choices. Frequencies for the number of people selecting sections as one of the "most" across the qualities of entertainment, informative, and usefulness and profile ownership (others', own) as well as percentage of cases can be seen in Tables 14-16 below.

Table 14
Frequency of Responses for Most Entertaining Profile Sections by Profile Ownership

Section of Profile	<u>Entertaining</u>			
	<u>Others</u>		<u>Own</u>	
	n	% cases	n	% cases
Profile Photo	264	77.9	204	60.4
Status	162	47.8	114	33.7
Networks	12	4.1	16	4.7
Hometown	20	5.9	12	3.6
Rel. Status	148	43.7	34	10.1
Looking For	34	10.0	16	4.7
Groups	35	10.3	88	26.0
Application	51	15.0	135	39.9
Wall	267	78.8	232	68.6
Friends Else	17	5.0	21	6.2
MSU Friend	53	15.6	34	10.1
Photo Album	251	74.0	245	72.5
Mini Feed	73	21.5	73	21.6
Work Info	13	3.8	10	3.0
Ed Info	10	2.9	10	3.0
Activities	21	6.2	62	18.3
Interests	57	16.8	81	24.0
Fave Quote	52	15.3	92	27.2
Fave Books	4	1.2	12	3.6
Fave Movies	8	2.4	19	5.6
Fave TV	5	1.5	13	3.8
Fave Music	17	5.0	32	9.5
About Me	91	26.8	99	29.3

Table 14 Continued

Contact Info	7	2.1	11	3.3
N Cases	339		338	
N Responses	1674		1665	

Table 15

Frequency of Responses for Most Informative Profile Sections by Profile Ownership

Section of Profile	<u>Informative</u>			
	<u>Others</u>		<u>Own</u>	
	n	% cases	n	% cases
Profile Photo	73	21.5	160	47.5
Status	122	36.0	127	37.7
Networks	60	17.7	63	18.7
Hometown	77	22.7	64	19.0
Rel. Status	122	36.0	113	33.5
Looking For	31	9.1	18	5.3
Groups	31	9.1	42	12.5
Application	10	2.9	24	7.1
Wall	132	38.9	154	45.7
Friends Else	8	2.4	7	2.1
MSU Friend	29	8.6	43	12.8
Photo Album	87	25.7	110	32.6
Mini Feed	95	28.0	69	20.5
Work Info	68	20.1	64	19.0
Ed Info	108	31.9	92	27.3
Activities	109	32.2	76	22.6
Interests	148	43.7	134	39.8
Fave Quote	29	8.6	38	11.3
Fave Books	24	7.1	12	3.6
Fave Movies	21	6.2	20	5.9
Fave TV	12	3.5	12	3.6
Fave Music	32	9.4	29	8.6
About Me	174	51.3	122	36.2
Contact Info	80	23.6	77	22.8
N Cases	339		337	
N Responses	1682		1670	

Table 16

Frequency of Responses for Most Useful Profile Sections by Profile Ownership

Section of Profile	<u>Useful</u>			
	<u>Others</u>		<u>Own</u>	
	n	% cases	n	% cases
Profile Photo	133	39.5	110	31.5
Status	128	38.0	116	34.5
Networks	63	18.7	74	22.0
Hometown	43	12.8	41	12.2
Rel. Status	112	33.2	65	19.3
Looking For	46	13.6	19	5.7
Groups	45	13.4	45	13.4
Application	28	8.3	50	14.9
Wall	185	54.9	178	53.0
Friends Else	15	4.5	29	8.6
MSU Friend	60	17.8	72	21.4
Photo Album	110	32.6	103	30.7
Mini Feed	78	23.1	83	24.7
Work Info	60	17.8	70	20.8
Ed Info	75	22.3	95	28.3
Activities	76	22.6	76	22.6
Interests	93	27.6	106	31.5
Fave Quote	17	5.0	20	6.0
Fave Books	12	3.6	16	4.8
Fave Movies	5	1.5	9	2.7
Fave TV	6	1.8	5	1.5
Fave Music	12	3.6	19	5.7
About Me	122	36.2	110	32.7
Contact Info	140	41.5	155	46.1
N Cases	337		336	
N Responses	1664		1662	

As can be seen in Table 14 above, for other's profiles, the Wall (78.8%) was most frequently ranked by respondents (n=339) as one of the most entertaining sections, with profile picture (77.9%), and photo album (74%) coming close behind. In terms of their own profiles, the majority of respondents (72.5%, n=338) named their photo album as one of the most entertaining sections with the Wall (68.6%) and profile picture (60.4%) being nearly as popular responses.

A little over half of respondents selected the “About Me” section (51.3%, $n=339$) as one of the most informative sections on others’ profiles, with the interests section (43.7%) and the Wall (38.9%) being second and third most selected sections. On their own profiles, the profile picture was selected by the greatest number as one of the most informative sections (47.5%) with the Wall being almost as popular as a selection (45.7%) among respondents.

The most useful sections for both one’s own profile and others’ profile had similar frequency of selections. The Wall was the most frequently selected section, with more than half of respondents selecting it as one of the most useful sections for both own and others’ profiles (54.9% and 53%, respectively). Likewise, the contact information section was the second most selected section for usefulness in both own and others’ profiles, with 46% of respondents indicating it as a most useful section in their own profile and 41.5% of respondents noting it as a most useful section in others’ profiles. The “About Me”, profile photo, status, and photo album sections also had similar selection percentages across others’ and own profiles by respondents, with 31 – 40% indicating these were one of the most useful sections.

RQ5: What is the duration and frequency of Facebook use?

Two open-ended questions were used to assess the duration and frequency of typical Facebook behavior. For frequency, students reported logging into Facebook an average 5.56 times per day ($n=339$, $SD=5.45$), with the reported number of log-ins per day ranging from 0-50. See Figure A below for a bar graph illustrating this range. In terms of duration, 17.4 minutes ($n=339$, $SD=16.8$) was the average time spent on Facebook during one log-on session, with responses ranging from 0-180 minutes.

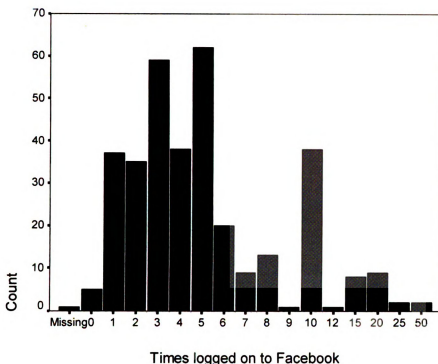


Figure A. Number of times students report logging on to Facebook in one day.

RQ6: Does duration and frequency of use differ across demographics of gender and year in school?

Research question six queried whether the duration and frequency of Facebook use varied by sex and year in school. Results of a between-subjects factorial ANOVA found a significant main effect for duration of Facebook use in minutes during an average day by sex, $F(1,331)=14.66, p<.00, \eta^2=.042$, such that male students report spending less time on Facebook during a typical day, in minutes, ($M=67.75, SD=63.85$) than female students ($M=96.16, SD=79.70$). There was also a significant main effect for year in school, $F(3,332)=4.02, p=.008, \eta^2=.034$, indicating that the amount of time spent on Facebook during a typical day is different for students with different year classifications.

The direction of means seen in Table 13 below shows that time spent on Facebook decreases as year in school advances. Results of the ANOVA did not indicate an interaction effect for year in school by sex, $F(3,332)=.239$, $p=.869$, *n.s.* However, post hoc contrasts in ANOVA showed that students grouped into three different levels of use. Female freshmen, female sophomores, and female juniors were the highest users ($M=105.68$) and differed significantly from the next highest user group consisting of male Freshmen, male Sophomores, and female Seniors ($M=79.81$), $F(1,323)=7.89$, $p<.01$. Male Juniors and male Seniors were the lowest daily users of Facebook ($M=48.91$), with their average daily use differing significantly from the middle group of male Freshmen, Sophomores, and female Seniors, $F(1,323)=5.98$, $p=.015$.

See Table 17 below for means and standard deviations of use by sex and year in school.

Table 17
Time Spent on Facebook During an Average Day in Minutes

	n	<u>Male</u>		n	<u>Female</u>		n	<u>Total</u>	
		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>
Freshman	42	80.71	58.14	52	110.77	100.61	94	97.34	85.24
Sophomore	25	82.80	93.39	43	105.70	71.26	68	97.28	80.19
Junior	31	57.58	46.65	51	100.59	75.67	82	84.33	69.15
Senior	22	40.23	43.27	65	75.92	65.59	87	66.90	62.47
Total	120	67.75	63.85	212	96.16	79.70	332	85.89	75.51

Analysis of Variance was also used to determine if the frequency of daily Facebook log-ons varied by year in school or sex. Results revealed a significant main effect for year in school, $F(3,331)=4.215$, $p<.01$, $\eta^2=.037$. Post hoc Tukey test at $p=.05$ showed that Freshmen have the highest daily Facebook log on rates ($M=6.49$, $SD=6.20$) and Seniors have the lowest ($M=4.06$, $SD=3.42$), and specifically that male Seniors log-

onto Facebook the least of all ($M=2.48$, $SD=1.54$). There was not a main effect for sex, $F(1,331)=3.18$, ns , indicating that overall, males and females do not differ in their frequency of daily log-ons; nor was there an interaction effect between sex and year in school, $F(3,331)=.827$, ns . Table 18 below shows all means and standard deviations for log-ons by sex and year in school.

Table 18
Frequency of Log-ins to Facebook During an Average Day

	n	<u>Male</u>		n	<u>Female</u>		n	<u>Total</u>	
		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>
Freshman	42	6.55	8.05	52	6.44	4.24	94	6.49	6.20
Sophomore	25	5.40	4.78	43	5.88	3.70	68	5.71	4.10
Junior	31	4.81	8.76	51	6.71	4.91	82	5.99	6.64
Senior	23	2.48	1.54	65	4.62	3.73	87	4.06	3.42
Total	121	5.09	6.96	211	5.83	4.22	332	5.56	5.38

Hypotheses:

H1: Communication/keep in touch uses and gratifications will predict Facebook use.

The first hypothesis predicted that communication/keep in touch factor would predict Facebook use, as measured in time spent on the website. Following the EFA, a communication/keep in touch factor did not exist. However, many of the communication and keep in touch items fell into the Utilities and Upkeep or Establish/Maintain Old Ties factors. Therefore, a regression analysis was conducted to determine if these factors predicted average daily time spent on Facebook. Results of this regression showed that the Establish/Maintain Old Ties factor did not predict time spent on Facebook, ($\beta=.070$) but that the Utilities and Upkeep factor was a significant predictor of time spent on Facebook, ($\beta=.333$, $t=5.60$, $p<.000$). The Utilities and Upkeep factor contains items that are more specific than the Establish/Maintain Old Ties factor in describing the sending or

receiving of messages such as “to see my photo comments” or “to leave a wall comment”. Results of this regression analysis suggest that desire to communicate with others influences the amount of time spent on Facebook.

H2: Entertainment uses and gratifications will better predict time spent on Facebook than information uses and gratifications.

The second hypotheses predicted that an entertainment factor would better predict time spent on Facebook than an information factor. From the EFA a clearly entertainment or clearly informative factor did not emerge. Early mass communication research explored messages and mediums where a clear distinction existed between entertainment and information messages. That these factors did not clearly emerge in this study shows that for Facebook, the old conception of entertainment and information does not hold – a clear distinction between these factors does not exist for the mass media channel of Facebook. Therefore, it was not possible to conduct a regression model for this hypothesis in the present study.

H3: Students with greater involvement with campus activities will spend less time on Facebook.

To determine if those students with greater involvement with campus activities spend less time on Facebook, an ANOVA was run following a split of the campus activities variable. The number of activities respondents self-reported involvement in during the past semester were split into high activity and low activity groups using a quartile split. This resulted in the low activity group (n=61) consisting of those reporting

involvement in 0 activities and the high activity group ($n=68$) reporting involvement in 4 or more activities (range: 4-30). An ANOVA showed that the mean time spent on Facebook during a typical day did not differ between those high ($M=90$ minutes, $SD=78.8$) and low ($M=96.95$, $SD=77.58$) in campus activity involvement, $F(1,128)=.254$, n.s. Including the whole sample, the mean time spent on Facebook during a typical day and the number of activities were correlated. The resulting pearson correlation coefficient was small, $r=.073$ and non-significant, indicating that campus activity involvement does not relate to the amount of time spent on Facebook during an average day. Thus, this hypothesis fails to find support from the data, as both the ANOVA and correlation show.

Discussion

This study found 9 factors of Facebook use, with 8 of these factors: *Pass Time*, *Connection*, *Sexual Attraction*, *Utilities and Upkeep*, *Establish/Maintain Old Ties*, *Accumulation*, *Social Comparison* and *Channel Use*; having acceptable reliability and accounting for 57% of total variability. Of these 8 factors, to *Pass Time* accounted for the most variance (33%) and had the highest factor mean score ($M=3.87$). This factor is common to previous internet uses and gratifications studies with Ferguson and Perse (2000), LaRose and Eastin (2004), Li (2005), and Papacharissi and Rubin (2000) all finding a pass time factor for the internet content studied. Likewise, several uses and gratifications of television studies have found a pass time factor (Greenberg, 1974; Perse, 1986; Rubin & Perse, 1987).

Channel Use, Connection, Utilities and Upkeep, and Establish/Maintain Old Ties accounted for 7% or less of the variance but had mean scores above the midpoint of 3, which denotes using Facebook for this purpose “sometimes” on the scale. This indicates that students report using Facebook for these purposes more frequently. Facebook use for *Accumulation, Social Comparison* or *Sexual Attraction* purposes all had means below the midpoint, indicating that in general, students report using Facebook for these purposes “rarely” or “not at all”.

Based on mean scores for factors, students report using Facebook most frequently as a way to spend their time ($M=3.88$) establish or maintain old friendships ($M=3.67$), and connect to others ($M=3.21$). Facebook is far less used by students as a venue to accumulate things ($M=1.46$) or as a manner in which to compare themselves to others ($M=2.04$). The latter information should come as a relief to those concerned with health behaviors of students that are thought to be somewhat driven by perceived norms, specifically drinking or disordered eating. Instead of engaging in more concerning behaviors online, data from this study shows students most use Facebook as a way to pass their time and to perform or initiate relationship maintenance. This can be seen in the individual item mean scores (see Appendix F) where the highest scoring items ($M > 3.70$) referenced using Facebook either for passing time or for communication (i.e.: ‘check messages’, ‘contact friends’). However, it should be noted by those interested in college students’ health behaviors that while the item “I use Facebook to find a party” has a low mean score ($M=2.84$, $SD=1.12$), an ANOVA showed that mean scores on this item varied significantly by year in school, such that those lower in class standing reported using Facebook more for the purpose of finding a party, $F(4,336)=8.56$, $p<.00$, $\eta^2=.094$.

It may be that male and female students report different frequencies of Facebook use for the factors found, as male and female students did differ in the amount of time spent on Facebook. To determine if male and female students differ, a post-hoc ANOVA was run comparing females' mean scores on the factors found to males' mean scores on corresponding factors. The table below shows the mean scores and standard deviations for males and females on each Facebook use factor. As can be seen in the table, females and males differed significantly in their frequency of Facebook use for the purposes of passing time, $F(1,328)=15.59, p<.00, \eta^2=.045$; connection, $F(1,329)=6.29, p<.02, \eta^2=.019$; utilities and upkeep, $F(1,332)=27.31, p<.00, \eta^2=.076$; old ties, $F(1,330)=12.12, p<.00, \eta^2=.036$; and channel use, $F(1,331)=16.91, p<.00, \eta^2=.048$. For all of these purposes, female students reported more frequent use than male students.

Table 19
Factors of Facebook Use by Sex

Factor	Female		Male		η^2
	Mean	S.D.	Mean	S.D.	
Pass Time **	3.94	.771	3.62	.789	.045
Connection *	3.29	.738	3.06	.820	.019
Sexual Attraction	2.93	1.02	3.03	.918	.002
Utilities and Upkeep **	3.24	.733	2.76	.808	.076
Old Ties *	3.75	.657	3.49	.675	.036
Accumulation	1.43	.528	1.49	.534	.005
Social Comparison	2.07	.898	1.98	.910	.003
Channel **	2.68	.812	2.49	.850	.048
Networking	3.01	.813	3.19	.800	.012

* indicates significant at $p < .05$

** indicates significant at $p < .000$

As mentioned earlier, this study found that Facebook use in terms of duration and frequency differs by sex and year in school, with male students spending 30 minutes less than female students on Facebook per day. That Facebook use differs by year in school

indicates that Facebook does play an important role in underclassmen's daily life, which makes sense. Underclassmen are new to the college environment and campus and are typically looking to make friends. As students increase in their year in school, their frequent Facebook use diminishes. This tapering in Facebook use does not result however, from increased commitments. As found in H3, Facebook use did not differ between those high and low in campus activity involvement.

Data from this study shows that while Facebook provides a unique way for students to communicate and connect with others, they are not abandoning other communication channels in favor of Facebook. Based on the means of individual items, students report sometimes replacing email with Facebook communication, but less frequently replacing face to face communication, telephone or text messaging. This information indicates that Facebook is just another facet of interpersonal communication among college students and not a replacement for most other channels.

Facebook does indeed provide unique communication options through the various sections of the Facebook profile. The Wall was categorized by students as being one of the most informative, entertaining, and useful sections on both others and their own profiles. This indicates that not only are students interested in what others are saying to them, they are interested in what is being said about others. Further, Wall communication is perceived by students as being useful, informative, and entertaining. Interestingly enough in terms of the most informative and useful portions of the Facebook profile, more students rated the text-based categories (Interests, About Me) above more visual categories (Photos). Photos, in both album and profile picture, were only the highest category selected when choosing for most entertaining.

During data analysis of this study, a conference paper on Facebook using the uses and gratifications paradigm was publicized in an electronic newsletter. This study by Clark, Boyer, and Lee (2007) also attempts to find uses and gratifications of Facebook through factor analysis. While their sample size is very large and impressive (N=2338), unlike the present study, the measures employed by their study lack in strength. However, similar to the demographics of the present study, one-third of their participants were male (33.5%) and two-thirds were female (66%), but only 91% of their sample were college students unlike the 100% college student sample of the present study.

In order to determine uses and gratifications factors, Clark, Boyer, and Lee (2007) modified the Internet Motives Scale from Papacharissi and Rubin's 2000 internet uses and gratifications study. Although they did not discuss the analysis method used to determine factors found in their study, like Papacharissi and Rubin, Clark, et.al. found five factors of what they label Facebook motives: 1) information seeking and convenience, 2) interpersonal utility, 3) interpersonal utility, 4) entertainment, 5) pass time. These factors were not described further, nor were the differences between the interpersonal utility factors extrapolated. An assessment of the items listed in their appendix for these factors was not able to illuminate possible differences for their interpersonal utility factors. However, it was noted that the three items contained in the pass time factor were very similar to items in the present study's pass time factor. The three items listed in their entertainment factor mimicked the 'pleasurable way to spend time' items that had been eliminated in the present study's EFA due to their moderate loadings on other factors. Aside from the entertainment and pass time factors, items in

the study by Clark, et.al. do not seem to cluster into factors in an interpretable manner. This is likely due to their method of measurement.

That Clark, et.al. simply adapted Papacharissi and Rubin's 2000 internet uses and gratifications items creates many potential problems, one of which is that by using a modified scale taken from previous general internet research, the authors are constrained by the factors found from that research. Secondly, by using such a modified scale, the authors are assuming that factors of Facebook uses and gratifications will not differ from uses and gratifications of the internet. This is not likely, as Papacharissi and Rubin undertook their internet study nearly eight years ago. Much about the internet has changed since 2000, not only technically (i.e.: speed, graphics, number of websites, widespread access, mobile phone access), but also in content. That Facebook, a SNS, exists and is popular is a testament to such changes in the content of the internet. These changes in content as well as technology are so drastically different from the early internet years that warranted a new label in 2004 – that of 'Web 2.0' (O'Reilly, 2005). User-generated content, such as that found on Facebook, is central to Web 2.0. Given these major limitations of the Clark, Boyer, and Lee (2007) study, it cannot be said that the factors found from their Facebook uses and gratifications research are definitive. The present study is far rigorous in its methods and measurement, and as such provides a better picture of Facebook uses and gratifications by college students.

Simply put, Facebook is immensely popular among college students. Similar to previous studies, results from the open-ended pre-study showed that Facebook use among college students is widespread with 96% of students reporting that they are members of Facebook. Data from the online study shows that 97% of Freshmen were members of

Facebook before coming to campus. Facebook is resoundingly popular among college students and ‘facebooking’ others has become as much a part of the college experience as cramming for final exams. As such, it is important that parents, administrators, faculty, and residence life all strive to understand the prominence of Facebook in their students’ lives. It is the author’s suggestion that these groups try to utilize Facebook and refrain from distancing themselves from students through failure to see the relevance of Facebook or by using Facebook in a clumsy manner. Instead, the author points to the findings of Mazer, Murphy, and Simonds (2007), who found teachers who had a Facebook profile and self-disclosed moderate amounts on their profile were seen as more motivating by their students, as an example of positive Facebook use by those who work with college students.

Limitations

This study provides an informative view of a college communication phenomenon from a theoretical perspective. However, there are limitations to this study. First and foremost, the sample data for the pre-study, pre-test, and online survey all came from one university. To gather more generalizable information about college student Facebook use, future studies should use a larger sample across more institutions of higher education. The primary study sample consisted of mostly females and students pursuing a major within the College of Communication Arts and Sciences. It may be that communication-based majors attract students who are more avid users of communication tools. Therefore future studies should represent a balance of majors from all university colleges. The sample was collected in April, towards the end of the school year. With the nearing of finals and commencement exercises, it may be that students’ typical

Facebook behavior is altered during this time of year. A future study is planned to take place during the middle of the Fall semester at the same university in order to compare responses related to frequency and duration of Facebook use.

Second, the method of data collection possibly added some error into the variables in this study. As responses were stripped of identifying information by the online software, duplicate entrants could have occurred. For the online survey, 5 students emailed the researcher with problems related to online survey collection. In the data set, 5 surveys were less than 25% completed. It was assumed for the purpose of removing potential duplicates that these 5 entries were the same as the 5 students who communicated difficulties. Future studies could provide each student with an individual link to attempt to ensure no duplication of responses.

Future Directions

Facebook is embedded in college culture and will not be going away. Further, Facebook is rapidly growing in popularity among those beyond their college years. Facebook active membership increased from 43 million to 80 million users from November 2007 to April 2008 (facebook.com). Facebook is constantly updating, streamlining, and improving their website and outside vendors create new, optional additions to Facebook daily. Studying Facebook use by various groups is important to understanding not only Facebook but also how interpersonal communication is changing in the face of Web 2.0. Possible directions follow below:

As the fastest growing segment of Facebook is the over-25 set, a future study should explore their uses and gratifications to see if and how they differ from college students' use as well as examine possible differences in time/duration of use.

The largest non-US active user group is the U.K. Studying Facebook provides an opportunity for examination of possible cross-cultural differences in social networking software use (facebook.com is a constant; unlike some other Web 2.0 sites, Facebook presents the same interface across various cultures), as well as frequency/duration of use, and point-of-access (computer terminal, mobile technology).

Data in this study showed that as students increased in their year in school, their frequency of Facebook use decreases. Future studies should explore why this shift occurs. It may be that students' Facebook use decreases as a function of age. However, it could be that Facebook use decreases as the number of or quality of face-to-face friendships increase.

It is also important to examine how "in real life" connections impact the amount of time spent on Facebook. The nature of Facebook promotes the transition of offline or "in real life" connections into online "friendships". A future study should address whether more "in real life" connections, and thus more Facebook friends, translates into more or less time spent on Facebook. It could also be the case that less "in real life" connections could lead to more time spent on Facebook to meet social interaction needs. In either case, this information could inform the present study's finding related to frequency of Facebook use and year in school.

Finally, given the outcome of the CFA and the resulting EFA, in the near future the current study should be extended with one more survey using a student sample drawn nationally. This new data would provide an opportunity to CFA the factors found during the second EFA, as Klein (2005) strongly advises against confirmatory factor analysis of data that has already been exploratory factor analyzed.

Conclusion

Based on responses in this study, students seem to see Facebook as a communication tool, an information provider, and entertainment source. Examining Facebook from the perspective of media use theories provides a view of usage; as students have indicated they use Facebook as a channel of interpersonal communication, future studies should explore Facebook from interpersonal frameworks. This website will provide scholars with an opportunity to rethink mass media communication and merge interpersonal and media interests in order to best study future SNS developments.

APPENDICES

Appendix A
Pre-Study Survey

1. There are a number of things that people report using Facebook for. Please place an "X" next to *any* of the following you use Facebook for, and later on, please let me know what I am missing. You may have multiple checkmarks.

I have used Facebook for the following:

- ☐ find out about a party
- ☐ meet new friends
- ☐ find a date
- ☐ find other people in my classes
- ☐ find people who have taken my class previously
- ☐ find out about campus events
- ☐ adjust my profile content
- ☐ add more photos to my photo album
- ☐ lookup future roommate(s) profiles
- ☐ announce a party
- ☐ check up on an ex-boyfriend/girlfriend
- ☐ contact someone for an ID
- ☐ check facebook friends' profiles

What am I missing? What else have you used Facebook for?

Why do you like Facebook?

When you're on Facebook, what do you spend most of your time doing?

Appendix B
Pre-Test of Second Survey
Paper and Pencil

Age: _____ **Sex:** M F **Major:** _____

Year in School (circle one):

Freshman Sophomore Junior Senior Other: _____

When did you first sign up for Facebook? Month: _____ Year: _____

Did you sign up before you attended your first class at MSU? Yes No

DIRECTIONS: The following statements might apply to your Facebook use. In the boxes that follow the statement, please indicate how often you use Facebook for that purpose. Please circle the response that most applies to your use.

1 = not at all, 2 = rarely, 3 = sometimes, 4 = often, 5 = always

I use Facebook to keep in touch with family members.	1	2	3	4	5
I use Facebook to look at the profile of someone I think is attractive.	1	2	3	4	5
I use Facebook to see who lives by me.	1	2	3	4	5
I get ideas about what everyone else is watching, reading, or listening to from Facebook.	1	2	3	4	5
I use Facebook to look at friends' photo albums.	1	2	3	4	5
I use Facebook to check up on an ex-boyfriend/girlfriend.	1	2	3	4	5
Using Facebook is a good way to contact out-of-state friends.	1	2	3	4	5
I use Facebook instead of IM.	1	2	3	4	5
I use Facebook to get gossip about others.	1	2	3	4	5
I use Facebook to leave a wall comment.	1	2	3	4	5
I use Facebook when I don't want to study.	1	2	3	4	5
I log onto Facebook to update my profile.	1	2	3	4	5
I use Facebook to send a message.	1	2	3	4	5
I use Facebook to find out what high school classmates are up to now.	1	2	3	4	5
I use Facebook to keep in contact with old friends.	1	2	3	4	5
I use Facebook to see if others are doing better than me.	1	2	3	4	5
I use Facebook instead of the phone.	1	2	3	4	5
I log onto Facebook to add more applications to my profile.	1	2	3	4	5
Facebook is a good way for me to network with others.	1	2	3	4	5
I use Facebook to buy stuff.	1	2	3	4	5
I use Facebook instead of email.	1	2	3	4	5

I use Facebook to pass the time.	1	2	3	4	5
Facebook makes it easy to contact others without too much commitment	1	2	3	4	5
When I'm on Facebook, time flies by.	1	2	3	4	5
I like to see if my friends and I have friends in common.	1	2	3	4	5
I log on to check my messages from other people.	1	2	3	4	5
Using Facebook is enjoyable.	1	2	3	4	5
I use Facebook to congratulate, wish 'happy birthday', or say 'good luck' to my friends.	1	2	3	4	5
I use Facebook instead of texting.	1	2	3	4	5
I use Facebook because it's interesting.	1	2	3	4	5
I learn about how much other MSU students drink from Facebook.	1	2	3	4	5
I use Facebook to leave comments for people I don't see often.	1	2	3	4	5
I use Facebook to find out about a party.	1	2	3	4	5
I use Facebook to find other people in my classes	1	2	3	4	5
I use Facebook to let people know I'm thinking about them.	1	2	3	4	5
Facebook makes it simple to maintain friendships.	1	2	3	4	5
I like to see who knows who on Facebook.	1	2	3	4	5
When I'm using Facebook, I'm entertained.	1	2	3	4	5
Instead of talking to someone face to face, I just use Facebook.	1	2	3	4	5
Facebook is an easy way to contact someone without much effort.	1	2	3	4	5
I use Facebook to find email addresses or screennames.	1	2	3	4	5
I use Facebook for the classified ads.	1	2	3	4	5
I use Facebook to see if others are having more fun than I am.	1	2	3	4	5
I use Facebook to help me put faces to names.	1	2	3	4	5
Facebook brings people together.	1	2	3	4	5
I use Facebook to know more about people I just met.	1	2	3	4	5
I use Facebook to see if others are doing worse than me.	1	2	3	4	5
I use Facebook to sell stuff.	1	2	3	4	5
Through Facebook, I've made new friends.	1	2	3	4	5
I log onto Facebook to check messages.	1	2	3	4	5
Facebook is a good way to connect with others at MSU.	1	2	3	4	5
I use Facebook to look at pictures of my friends' friends.	1	2	3	4	5
I use Facebook to find out about campus events.	1	2	3	4	5
I use Facebook to keep in touch with High School friends.	1	2	3	4	5

I use Facebook because it is fun.	1	2	3	4	5
I use Facebook to find old friends I have lost contact with.	1	2	3	4	5
I use Facebook just to waste time.	1	2	3	4	5
I log onto Facebook to read my wall comments.	1	2	3	4	5
I use Facebook to post photos in my album.	1	2	3	4	5
I use Facebook to look at the photo albums of people I kind of know.	1	2	3	4	5
For me, using Facebook prevents boredom.	1	2	3	4	5
I use Facebook to find a classmates' contact information.	1	2	3	4	5
I keep tabs on my friends through Facebook.	1	2	3	4	5
I log onto Facebook to see my photo comments.	1	2	3	4	5
I use Facebook to collect a large number of 'friends', even if they are people I don't know.	1	2	3	4	5
I use Facebook to announce a party.	1	2	3	4	5
I use Facebook to look at the profile of someone I hooked up with.	1	2	3	4	5

APPENDIX C
Items for Online Survey

Legend: * = new item
+ = reworded item
++ = item moved from other factor
= item cross-loaded in EFA, moved into this factor for online survey

5-point scale: 1 = not at all, 2 = rarely, 3 = sometimes, 4 = often, 5 = all the time

Question Stem: "I Use Facebook..."

Pleasurable way to spend time

- ... just to waste time.
- ... to pass the time
- ... because it is fun.
- ... because it's enjoyable.
- ... to make time fly by.
- ... because it's interesting.
- ... to be entertained.
- ... when I'm bored.
- ... when I don't want to study.

Utilities and Upkeep

- ... to update my profile.
- ... to add more applications to my profile.
- ... to read my wall comments.
- ... to post photos in my album.
- ... to see my photo comments.
- ... to send a message.
- ... to check messages. +
- ... to look at my friends' photos. *
- ... to leave a wall comment. *

Channel Use

- ... to keep in touch with family members.
- ... instead of texting.
- ... instead of the phone.
- ... instead of email.
- ... to let people know I'm thinking about them.
- ... instead of talking to someone face to face.
- ... instead of Instant Messenger. *

Maintain/Establish old ties

- ... to contact out-of-state friends.
- ... to find out what high school classmates are up to now.
- ... to keep in contact with old friends.
- ... to keep in touch with High School friends.

- ... to track down old friends. *
- ... to see where people are at now. *
- ... to maintain old friendships. *

Interconnectedness

- ... to see who knows who.
- ... to look at pictures of my friends' friends.
- ... to see who my friends and I have in common.
- ... to see if my friends and I know the same people. *
- ... to see how everyone is connected. *
- ... to see where people know each other from. *
- ... to network with others. +
- ... to make new friends. ++

Social Comparison

- ... to see if others are doing better than me.
- ... to see if others are doing worse than me.
- ... to see if others are having more fun than I am.
- ... to check up on an ex-boyfriend/girlfriend.
- ... to learn about how much other MSU students are drinking.
- ... to get gossip about others.
- ... to see what music everyone is listening to. +
- ... to see if others are looking better than I am. *

Sexual Attraction

- ... to look at the profile of someone I think is attractive.
- ... to look at the profile of someone I hooked up with.
- ... to look at the profile of someone I think is hot. *
- ... to look at the profile of someone I'd like to make out with. *
- ... to look at the profile of someone I'd like to date. *

Social Information

- ... to see who lives by me.
- ... to find email addresses or screennames.
- ... to find a classmates' contact information.
- ... to keep tabs on my friends. #
- ... to know more about people I just met. #
- ... to find a party. #
- ... to help me put faces to names. ++
- ... to look at pictures of people I kind of know. *

Accumulation

- ... to sell stuff.
- ... for the classified ads.
- ... to buy stuff.
- ... to "friend" people I don't know, just to have a large number of Facebook

friends.

... to list or buy used textbooks.*

... to find a place to live.*

Appendix D
Questions Posted in Online Survey

DEMOGRAPHIC INFORMATION

Age _____ Sex: M F Major: _____

Year in School (circle one):

Freshman Sophomore Junior Senior Grad Student Other: _____

When did you first sign up for Facebook? Month: _____ Year: _____

Did you sign up with Facebook **before** you attended your first class at MSU? Yes No

MOST ENTERTAINING/INFORMATIVE/USEFUL (drop-down menus were provided with options)

When reading others' profiles, what 5 sections are the most entertaining to you?

When reading others' profiles, what 5 sections are the most informative to you?

When reading others' profiles, what 5 sections are the most useful to you?

On your own profile, what 5 sections are the most entertaining to you?

On your own profile, what 5 sections are the most informative to you?

On your own profile, what 5 sections are the most useful to you?

TIME SPENT ON FACEBOOK

For the following questions please consider ALL of your time spent on Facebook, whether you use your computer, cell phone, or iphone to connect to Facebook.

How many times do you log onto Facebook on an average day? _____ (frequency)

On average, how much time, in minutes, do you spend on Facebook during one log-on session? _____

Thinking carefully, estimate the total amount of time (in minutes) you spend on Facebook on an average day. _____

What is the single longest span of time (in minutes) you have spent on Facebook? _____

CAMPUS ACTIVITIES

Please take a moment to think about all the campus activities you may be involved in, including things such as intramural sports, volunteer groups, research teams, work-study jobs, clubs, and Greek memberships.

Now, please report to the best of your ability....

How many activities have you been involved in during the past semester? _____

How much time, in hours, do you spend on your activities, per week? _____

How much time, in hours, do you spend working at a job, per week? _____

USES AND GRATIFICATION ITEMS

Uses and gratification items were those listed in Appendix C above. They were randomly sorted in each participants' survey by surveymonkey.com.

Appendix E
Standardized Factor Loadings, Means, and Standard Deviations for Online Survey Items

Factor	Item	Std. Factor Loading	Mean	SD	N
<u>Pleasureable way to spend time</u>					
	... just to waste time.	.650	3.72	0.96	338
	... to pass the time	.859	3.88	1.00	338
	... because it is fun.	.778	3.90	0.91	339
	... because it's enjoyable.	.667	4.03	0.82	340
	... to make time fly by.	.778	3.55	1.04	338
	... because it's interesting.	.619	3.83	0.88	339
	... to be entertained.	.766	3.83	0.89	340
	... when I'm bored.	.842	4.14	0.91	340
	... when I don't want to study.	.768	3.88	1.04	337
<u>Utilities and Upkeep</u>					
	... to update my profile.	.651	3.07	1.03	338
	... to add more applications to my profile.	.486	2.25	1.01	338
	... to read my wall comments.	.711	4.12	0.86	336
	... to post photos in my album.	.683	3.41	1.20	340
	... to see my photo comments.	.597	3.50	1.06	339
	... to send a message.	.699	3.61	0.92	338
	... to check messages.	.690	3.87	0.89	339
	... to look at my friends' photos.	.775	4.02	0.82	339
	... to leave a wall comment.	.706	3.80	0.88	340
<u>Channel Use</u>					
	... to keep in touch with family members.	.433	2.70	1.10	339
	... instead of texting.	.622	2.50	1.06	339
	... instead of the phone.	.712	2.45	1.07	339
	... instead of email.	.753	3.19	1.18	340
	... to let people know I'm thinking about them.	.593	3.09	1.09	339
	... instead of talking to someone face to face.	.696	2.83	1.01	340
	... instead of Instant Messenger.	.696	2.79	1.18	339
<u>Maintain/Establish old ties</u>					
	... to contact out-of-state friends.	.513	3.81	0.93	339
	... to find out what high school classmates are up to now.	.585	3.56	1.00	340

... to keep in contact with old friends.	.866	3.75	0.88	338
... to keep in touch with High School friends.	.842	3.71	0.90	338
... to track down old friends.	.611	3.51	0.91	340
... to see where people are at now.	.606	3.48	0.93	339
... to maintain old friendships.	.750	3.70	0.87	339

Interconnectedness

... to see who knows who.	.738	3.10	1.03	339
... to look at pictures of my friends' friends.	.561	3.08	1.07	338
... to see who my friends and I have in common.	.776	3.18	1.00	339
... to see if my friends and I know the same people.	.843	3.21	0.99	336
... to see how everyone is connected.	.738	3.09	1.02	339
... to see where people know each other from.	.821	3.05	1.01	340
... to network with others.	.347	3.86	0.91	340
... to make new friends.	.364	2.54	1.13	339

Social Comparison

...to see if others are doing better than me.	.843	2.33	1.12	338
... to see if others are doing worse than me.	.812	1.96	1.10	338
... to see if others are having more fun than I am.	.785	2.24	1.14	338
... to check up on an ex-boyfriend/girlfriend.	.574	2.93	1.24	337
... to learn about how much other MSU students are drinking.	.491	1.83	1.00	338
... to get gossip about others.	.603	2.70	1.19	339
... to see what music everyone is listening to.	.378	1.83	0.89	340
... to see if others are looking better than I am.	.744	2.15	1.12	340

Sexual Attraction

... to look at the profile of someone I think is attractive.	.831	3.50	1.10	337
... to look at the profile of someone I hooked up with.	.722	2.86	1.26	340
... to look at the profile of someone I think is hot.	.918	3.23	1.15	338
... to look at the profile of someone I'd like to make out with.	.758	2.43	1.28	338
... to look at the profile of someone I'd like to date.	.765	2.93	1.19	340

Social Information

... to see who lives by me.	.583	2.63	1.11	336
... to find email addresses or screennames.	.658	3.07	1.08	339
... to find a classmates' contact information.	.581	3.05	1.00	337
... to keep tabs on my friends.	.597	3.57	1.00	336
... to know more about people I just met.	.718	3.67	0.94	340
... to find a party.	.548	2.84	1.21	340
... to help me put faces to names.	.648	3.25	1.03	340
... to look at pictures of people I kind of know.	.677	3.69	0.94	338

Accumulation

... to sell stuff.	.775	1.46	0.75	338
... for the classified ads.	.669	1.56	0.76	340
... to buy stuff.	.627	1.31	0.70	339
... to "friend" people I don't know, just to have a large number of Facebook friends.	.516	1.57	1.00	338
... to list or buy used textbooks.	.763	1.50	0.75	337
... to find a place to live.	.676	1.49	0.83	337

APPENDIX F
Items in Descending Order of Means

Item	Mean	SD
... when I'm bored.	4.14	0.91
... to read my wall comments.	4.12	0.86
... because it's enjoyable.	4.03	0.82
... to look at my friends' photos.	4.02	0.82
... because it is fun.	3.90	0.91
... to pass the time	3.88	1.00
... when I don't want to study.	3.88	1.04
... to check messages.	3.87	0.89
... to network with others.	3.86	0.91
... because it's interesting.	3.83	0.88
... to be entertained.	3.83	0.89
... to contact out-of-state friends.	3.81	0.93
... to leave a wall comment.	3.80	0.88
... to keep in contact with old friends.	3.75	0.88
... just to waste time.	3.72	0.96
... to keep in touch with High School friends.	3.71	0.90
... to maintain old friendships.	3.70	0.87
... to look at pictures of people I kind of know.	3.69	0.94
... to know more about people I just met.	3.67	0.94
... to send a message.	3.61	0.92
... to keep tabs on my friends.	3.57	1.00
... to find out what high school classmates are up to now.	3.56	1.00
... to make time fly by.	3.55	1.04
... to track down old friends.	3.51	0.91
... to look at the profile of someone I think is attractive.	3.50	1.10
... to see my photo comments.	3.50	1.06
... to see where people are at now.	3.48	0.93
... to post photos in my album.	3.41	1.20

... to help me put faces to names.	3.25	1.03
... to look at the profile of someone I think is hot.	3.23	1.15
... to see if my friends and I know the same people.	3.21	0.99
... instead of email.	3.19	1.18
... to see who my friends and I have in common.	3.18	1.00
... to see who knows who.	3.10	1.03
... to see how everyone is connected.	3.09	1.02
... to let people know I'm thinking about them.	3.09	1.09
... to look at pictures of my friends' friends.	3.08	1.07
... to find email addresses or screennames.	3.07	1.08
... to update my profile.	3.07	1.03
... to find a classmates' contact information.	3.05	1.00
... to see where people know each other from.	3.05	1.01
... to check up on an ex-boyfriend/girlfriend.	2.93	1.24
... to look at the profile of someone I'd like to date.	2.93	1.19
... to look at the profile of someone I hooked up with.	2.86	1.26
... to find a party.	2.84	1.21
... instead of talking to someone face to face	2.83	1.01
... instead of Instant Messenger.	2.79	1.18
... to get gossip about others.	2.70	1.19
... to keep in touch with family members.	2.70	1.10
... to see who lives by me.	2.63	1.11
... to make new friends	2.54	1.13
... instead of texting.	2.50	1.06
... instead of the phone.	2.45	1.07
... to look at the profile of someone I'd like to make out with.	2.43	1.28
... to see if others are doing better than me.	2.33	1.12
... to add more applications to my profile.	2.25	1.01
... to see if others are having more fun than I am.	2.24	1.14
... to see if others are looking better than I am.	2.15	1.12
... to see if others are doing worse than me.	1.96	1.10

... to learn about how much other MSU students are drinking.	1.83	1.00
... to see what music everyone is listening to.	1.83	0.89
... to "friend" people I don't know, just to have a large number of Facebook friends.	1.57	1.00
... for the classified ads.	1.56	0.76
... to list or buy used textbooks.	1.50	0.75
... to find a place to live.	1.49	0.83
... to sell stuff.	1.46	0.75
... to buy stuff.	1.31	0.70

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