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#### **Learning to Like Facebook?**

### Effects of Cultural and Educational Capital on the Use of Social Network Sites in a Population of University Students

by

#### Randy Lynn

B.A., Ancient Studies, Washington University in Saint Louis, 2005

A Thesis Submitted to The Graduate School at the University of Missouri – St. Louis in partial fulfillment of the requirements for the degree

Master of Arts in Sociology

May 2009

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Nancy Shields, Ph.D. Chairperson

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#### Learning to Like Facebook?

## Effects of Cultural and Educational Capital on the Use of Social Network Sites in a Population of University Students

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(See: Appendix 3)

#### **Abstract**

Learning to Like Facebook?

Effects of Cultural and Educational Capital on the Use of Social Network Sites in a Population of University Students

by

#### Randy Lynn

Master of Arts in Sociology

University of Missouri - St. Louis

Dr. Nancy Shields, Chair

This study explores the reasons why university students prefer to join or participate frequently in one social network website (SNS) over another. Drawing from previous research into motivations and environmental factors influencing SNS behavior, a theoretical model of SNS selection and frequency of use is constructed and evaluated. Random sampling methods are used to generate a population of students from a midwestern, urban, public university with an enrollment of nearly 16,000. Subjects responded to a questionnaire soliciting information regarding personal characteristics and SNS behaviors, and additional data was extracted from a content analysis of SNS profiles. The results show that attachment, age, and educational capital are the primary factors associated with SNS preference, while the effect of cultural capital is minimal. Limitations and implications are discussed.

Lynn, Randy, 2009, UMSL, p.i

This thesis is dedicated to Tom Conran (1956-2008), who departed too soon and believed that academia was my calling even as I was vowing to eschew formal education forever.

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#### **CHAPTER 1: INTRODUCTION**

#### 1.1. OVERVIEW

The Internet is a ubiquitous presence in contemporary American society. Recent data indicates that 93 percent of Americans aged 12 to 17 and 75 percent of adults aged 18 and over use the Internet. 61 percent of these teenage users and 72 percent of all adults access the Internet daily (Lenhart and Madden 2007; Pew Internet and American Life Project 2008a; 2008b).

Among the Internet's most significant features is the social network site (SNS). An estimated 55 percent of Internet users aged 12 to 17 and 67 percent of users aged 18 to 29 participate in one or more of these sites (Lenhart and Madden 2007; The Pew Research Center for the People and the Press 2008). The largest SNSs, such as MySpace and Facebook, boast tens of millions of active monthly users in the United States and hundreds of millions of active monthly users worldwide (Arrington 2009a; 2009b).

This study explores the reasons why university students may prefer to join or participate frequently in one social network site over another. Drawing from previous research into motivations and environmental factors influencing SNS use, a theoretical model of SNS selection and frequency of use is constructed and evaluated by means of a cross-sectional quantitative analysis of two data sources. Random sampling methods are used to generate a population of students from a

midwestern, urban, public university with an enrollment of nearly 16,000. Subjects responded to a questionnaire soliciting information regarding personal characteristics and SNS behaviors, and additional data is extracted from a content analysis of the subjects' SNS profiles. The results are then analyzed using appropriate statistical methods to identify the primary determinants of SNS preference and assess the accuracy of the theoretical model.

The remainder of this introduction defines the social network site and explores its historical context. Although certain component social media features of SNSs have existed for several decades, it has only been in the past ten years that SNSs have evolved into their current form, and scarcely five years since they have developed into a significant social space in American society. Particular attention is paid to the two largest and most culturally significant SNSs in the United States, MySpace and Facebook.

Chapter 2 details the findings of previous scholarly research regarding the SNS, which is necessarily recent yet is increasing at a prodigious rate. Many early findings are encouraging, but methodological limitations and the swiftness with which SNSs and their participants are evolving pose considerable difficulties to researchers in this nascent field. Research regarding environmental factors or motivations for participating in SNSs, in particular, has yielded numerous results, and a theoretical model is hypothesized based upon these previous findings.

Chapter 3 describes the sampling methods and data collection procedures employed to evaluate the theoretical model. Chapter 4 presents descriptive, bivariate, and multivariate results, while Chapters 5 and 6 interpret these findings and discuss the conclusions, implications, and limitations of this research.

#### 1.2. SOCIAL NETWORK SITES

The definition of the social network site is fraught with complications. The SNS is a recent phenomenon consisting of a collection of impermanent entities whose services, uses, and users are constantly evolving. A summative definition will ignore characteristics not unique to all SNSs and fail to account for the diversity of features and functions that these sites offer. Conversely, a definition that describes an ideal type will be subject to considerable malleability as features and functions evolve and are leveraged by users in new ways.

The most significant extant definition is posited by boyd and Ellison (2007: 211), who define the social network site as an electronic social space that "[allows] individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system." This definition is deliberately inclusive, as the authors acknowledge a wide range of additional features offered by many, but not all, social network sites. For similar reasons, the authors reject the popular descriptor,

"social networking site," on the grounds that the connotative properties of the word "networking" are restrictive and imply a false unanimity of function.

Beer (2008), by contrast, argues that boyd and Ellison's definition is so inclusive and reductive as to defeat finer classifications, suggesting that a more descriptive taxonomy should be articulated and the phrase "social networking site" should be retained to describe a digital space in which "making and accumulating friends" is paramount (518).

For the purpose of this study, boyd and Ellison's description of what constitutes a social network site merits expanded consideration, as their defining characteristics are broad enough to include certain social spaces that are not the subject of this study. While the full articulation of a more descriptive classification of online social spaces is beyond the scope of this study, the subsequent discussion will necessarily address this deficiency and propose future directions for this difficult endeavor.

#### 1.2.1. Definition

The phrase, "social network site," is becoming increasingly common in academic research. Its emphasis upon the social network itself rather than the means of acquisition is a useful distinction, as some websites commonly considered SNSs (e.g., LinkedIn) explicitly self-identify as venues for "networking" in the very sense that boyd and Ellison sought to avoid associating

other SNSs. For this reason, this study prefers the descriptor, "social network site," over the more popular "social networking site."

boyd (2008c) situates SNSs contextually as a type of networked public and form of social media. Networked publics are defined as "publics that are restructured by networked technologies," encompassing "(1) the space constructed through networked technologies and (2) the imagined community that emerges as a result of the intersection of people, technology, and practice" (15). Unlike physically located publics, which are bound by tangible architecture and invisible networks, networked publics are bound by bits rather than atoms, and as such the network itself is reified and shapes the nature of the public much as buildings or other tangible architecture (Mitchell 1995). Drawing from Negroponte (1995), boyd (2008c: 27) identifies four "properties" of bits that together compose the structural framework of networked publics and participant behaviors: (1) a permanent or semi-permanent record of interactions (persistence); (2) the ease with which content may be replicated (replicability); (3) the presence or potential of large audiences (scalability); (4) the ease with which content may be sorted or located (searchability). From these properties and their resultant interactions, three "dynamics" become essential to understanding networked publics: invisible audiences, collapsed social contexts, and the alteration of concepts of "public" and "private" (Meyrowitz 1985; boyd 2008c). The articulation, maintenance, and navigation of these four properties and three emergent dynamics, boyd argues, form the basis of much SNS research.

boyd also places SNSs in the category of social media, which she defines as "an umbrella term that refers to the set of tools, services, and applications that allow people to interact with others using network technologies" (2008c: 92). The classification of SNSs as a type of social media is somewhat dissatisfying, since one of the most salient characteristics of SNSs is its collection of many varying and diverse modes of social media—such as instant messages, media sharing, personal messages, forums, and blogs—within its bounded system.

A more progressive classification might distinguish between *social media* and *social media* (*SM*) *applications*, separating the specific modes of media interaction made possible by networked technologies from the applications, programs, or websites that package and deliver these social media for use. E-mail, for example, can be considered a mode of social media, as a means of networked communication with specific transmission and storage protocols distinguishing it from other modes of social media. A SM application, however, may offer multiple modes of social media: GMail, Google's e-mail SM application, includes the ability to send e-mail as well as communicate with contacts via instant messaging.

By this scheme, SM applications may range from dating websites and blogging communities to content-sharing sites and commercial vendors, encompassing any entity that employs one or more modes of social media to enable, encourage, or exploit networked communication within its boundaries. Social network sites are best considered a type of SM application, packaging several modes of social media within a bounded system to enable communication with a networked public. The creation and maintenance of a semi-public profile and the semi-public articulation of friends or favorites, which boyd and Ellison consider the defining characteristics of the SNS, are more properly categorized as modes of social media.

Because SM applications are increasingly offering multiple modes of social media to consumers, the definition of a SNS by the existence of a few component parts has become increasingly problematic. While early SNSs were in fact largely distinguishable by their semi-public profile and friend features, these social media are now common on websites that many would not consider SNSs, such as USA Today or Warner Music Group (O'Hear 2007; Bruno 2009). While these features that propelled early SNSs to popularity are still central to their appeal and use, SNSs in recent years have greatly expanded their social media features, such that the profile and friend features are now merely two of many that the SNS offers.

For the purpose of this study, then, I will consider a social network site to be an *expansive*, Web-based social media application whose manifest function is to provide a social portal to an inclusive networked public. Each of these characteristics will be discussed in turn:

SNSs are expansive, Web-based social media applications. SNSs such as MySpace and Facebook, and competitors such as Friendster, Bebo, and Orkut, provide many modes of social media for users. These include customizable semi-public profiles, the semi-public articulation of friends, public messages ("walls"), private messages, instant messages, group formation, event coordination, media hosting and sharing, compilation of onsite friend activity ("news feed"), blogs, forums, classifieds, games, third-party plugins, widgets, or applications, and unique social media such as Facebook's "poke."

Few social media applications can match the quantity or diversity of social media contained within the system of a SNS. Unlike other SM applications, which are relatively limited in their social media offerings or may emphasize one mode of social media over others, SNSs seek to innovate, add, and integrate as many modes of social media as possible. Rather than restricting or specifying the ways by which users can interact with one another, SNSs provide many options and let users determine which social media they prefer.

SNSs are social portals. Because SNSs offer a wide variety of social tools and are used for a wide variety of purposes, to define the SNS by one or more of these tools or purposes is necessarily imperfect. It is imperative, therefore, that

attempts to classify digital social spaces consider other criteria to distinguish SNSs from other SM applications.

Many of the largest SNSs self-identify as social spaces for friends. MySpace, for example, describes itself as "a social networking service that allows Members to create unique personal profiles online in order to find and communicate with old and new friends" (MySpace 2008). Other descriptions include "a social media network where friends share lives and explore great entertainment" (Bebo 2008), "an online community that connects people through networks of friends for communicating, sharing and making new friends" (Friendster 2009), and "the place where friends meet" (hi5 2008).

The term "portal" has a specific denotation in information technology, referring to a website functioning as "a guide or point of entry to the World Wide Web and usually including a search engine or a collection of links to other sites" (Merriam-Webster 2009). This definition is perhaps deficient, as Web-based software such as Blackboard are often considered portals, functioning as a point of entry to the content of one's academic experience. Similarly, SNSs function as a point of entry to one's social network. As popular portals such as Yahoo! or Blackboard provide a navigable hub for locating websites and academic content, popular SNSs such as MySpace and Facebook provide a navigable hub for locating social agents. SNS users search for and link to friends, acquaintances, and even strangers with whom they wish to engage in social activity, and utilize

social media to interact with these others. Even an SNS user who creates a profile without articulating a social network, or browses profiles with no intention of "friending" their creators, is participating in and consuming acts of self-presentation, which are inherently social (Goffman 1959).

SNSs serve inclusive networked publics. Although it can be argued that the purpose of all social media is to enable networked interaction, SNSs do not employ this ability as a means to any other end. This property contrasts with other social media sites, which may attempt to regulate user behavior by specifying the content of interactions (e.g., gaming sites), encouraging one social medium over others (e.g., video-sharing sites), or appropriating social media in the service of some other goal (e.g., dating sites).

SNSs, by contrast, do comparatively little to regulate behavior. Although minimal restrictions are enforced, such as requiring members to be age 13 or older and banning offensive content, SNSs are open to almost everyone, and users can encounter almost anyone within the network, do or write almost anything, and use almost any feature they wish at no cost. They are also given considerable control over the nature and visibility of their personal content, friendship connections, and interactions. Thousands of optional plugins, widgets, or applications are available to enhance their SNS experience. These considerable freedoms are encouraged and expanded whenever possible by SNS administrators, who are generally receptive to innovation and user feedback. While users of specialized

social media sites may welcome restrictive norms and even help to engage in the social control of user behavior, members of SNSs have usually resisted attempts to regulate user behavior. Despotic attempts to force users to interact in preconfigured ways, for example, has been identified as the primary cause of the decline of Friendster, the most popular early SNS (boyd 2004), and the history of Facebook has been riddled with highly visible user protests.

SM applications that regulate content, favor particular modes of social media interaction, or provide social media features as a means to a clearly definable end are excluded from this study. These sites, which include Flickr, Last.fm, LinkedIn, LiveJournal, Twitter, and YouTube, collectively constitute a significant presence in the digital world, include some of the Internet's largest networked publics, and are sometimes described as social network sites. However, for the purposes of this study, these social media applications will not be defined as SNSs.

SM applications that do meet the criteria of SNSs include MySpace and Facebook, as well as many competitors, such as Bebo, Friendster, Hi5, Orkut, and others. They are among the popular and most-trafficked websites in the world; in June 2008, the number of worldwide unique visitors to these six SNSs was estimated to exceed 400 million (Barker 2008). Their collection of social media features and ability to connect users with others is unparalleled, and rates of use are likely to continue to grow indefinitely.

#### 1.2.2. *History*

The beginnings of SNSs can be traced to the late 1960s and 1970s, when initial modes of social media such as e-mail, instant message, and chat rooms were first instituted. The popularization of the World Wide Web, providing an easily accessible and navigable platform with which to access the Internet, inaugurated a wave of Web-hosted SM applications in the 1990s. SM applications began to implement the features most commonly associated with SNSs in the late 1990s, while the SNS as defined in this study did not originate until the early 2000s. Although no comprehensive histories of this embryonic era exist, much of the content of this section and its successor is drawn from boyd and Ellison (2007), who have synthesized public information and personal communications with many early adopters to present the first attempt at tracing the origin and evolution of the modern SNS.

The social media features most associated with SNSs are semi-public profile creation and semi-public friend articulation. While it is the combination of these features that provides an appealing means of expressing self and connections to others in a networked public, both modes of social media predate the SNS. The former is thought to have originated as a feature of dating websites, whereas the latter may have been inspired by the "buddy lists" that form the basis of instant messaging communication. boyd and Ellison (2007) identify SixDegrees (1997-2000) as the first SM website to combine these central features,

but this site may be preceded by FriendFinder (1996-present). Successive Webbased SM applications in the late 1990s began to incorporate these complementary features into their services, although many of these early sites were content to serve targeted audiences and lacked the diversity of social media present in current SNSs. Several of these early adopters still exist today and continue to serve their original niche communities, such as BlackPlanet (1999-present), a SM application for African-Americans, and LiveJournal (1999-present), a SM application for webloggers. FriendFinder, meanwhile, has expanded to encompass 25 different SM websites, such as Adult FriendFinder and Asian FriendFinder, each serving a different population or subculture.

Other sites, however, attempted to reach larger audiences, such as Cyworld (1999-present). Friendster (2002-present) is frequently considered the most significant early SNS, as it was the first to garner considerable media attention. Although its initial purpose was to create a dating website linking potential romantic partners via shared friends, users innovatively began to leverage the site to socialize with existing friends and meet new friends. Friendster's inability to adjust to its explosive popularity and resistance to now-accepted SNS behaviors, such as the collection of large numbers of friends, are frequently cited as reasons for its decline in the United States (boyd 2004).

The broad appeal of Friendster sparked a new wave of social media websites seeking to replicate its success. A bevy of sites continued to target

specific audiences, such as the initial incarnation of Facebook (2004-present), a SM application for college or university students. Others sought to create value by providing advanced media sharing services, such as Last.FM (2003-present), Flickr (2004-present), and YouTube (2005-present). These Web-based SM applications remain a viable commodity, and nearly as many specialized SM applications exist as populations or subcultures to which to cater. One rapidly growing site, Ning (2005-present), provides users with the social media tools to create their own SM applications for whatever audiences they desire. The potent combination of articulating self through a semi-public profile and articulating social networks through semi-public friends has even been adopted by commercial vendors seeking to leverage these communicative benefits.

Other sites, however, have imitated Friendster more directly by creating generalized social spaces with many diverse social media features. This latter category includes many of the SNSs that remain popular today, such as MySpace (2003-present), Hi5 (2003-present), Orkut (2004-present), and Bebo (2005-present). These few sites attract millions of users, while many other imitators hope to attract a similarly large and inclusive audience.

The meteoric rise of the SNS has attracted the attention of many social commentators, who have offered opinions regarding its influences ranging from adulation (Weinberger 2008) to revulsion (Bauerlein 2008). As teenagers and young adults flocked to SNSs in large numbers, much of this commentary has

centered upon the perils of permitting youth to participate in SNSs. The perceived proliferation of sexual predators, in particular, has inspired extraordinary media coverage (Bahney 2006), legal action against prominent SNSs (Consumer Affairs 2006), and restrictive legislation aimed at curbing access to SNSs (U.S. House of Representatives 2007). Many scholars have argued that this excessive response has been disproportionate to the actual dangers: Lenhart and Madden (2007), for example, found that while 32 percent of teens had been contacted by a stranger while engaged in Internet activity, only 7 percent felt scared or uncomfortable as a result of the interaction. Marwick (2008) concluded that many figures commonly cited by media or law enforcement in support of regulation or restriction were false or misleading, and suggested that this negative attention met Goode and Ben-Yahuda's (1994) criteria for a moral panic.

As SNS participation has continued to increase in popularity and Internet access has become globally available, SNS populations have become increasingly segmented according to region or nationality. Friendster, whose popularity has declined precipitously in the United States, remains one of the most-trafficked websites in the world due to its enormous popularity in Asia. Similarly, Orkut is the preferred SNS of Brazil and India, while Bebo has gained traction in the United Kingdom and Australia. Cyworld dominates the South Korean SNS market, while Hi5 has considerable appeal in South America and Europe. In the United States, however, the two most popular SNSs are MySpace and Facebook.

#### 1.2.3. MySpace and Facebook

MySpace was launched in 2003 as a SNS aimed primarily at young adults. In its first year, the site was able to attract users by forming a close relationship with independent rock bands, allowing advanced customization of profiles, and adding new features in response to popular demand. When adolescents joined in large numbers in 2004 and 2005, MySpace became a cultural phenomenon, to the extent that affiliation with the site became a popular indicator of generational standing (Kelsey 2007). In December 2008, an estimated 76 million unique visitors in the United States and 125 million unique visitors worldwide visited MySpace (Arrington 2009a; 2009b).

Facebook was founded in 2004 as a SM application for Harvard students, requiring a valid Harvard e-mail address to join. Spreading to the rest of the Ivy League and then to other colleges and universities, Facebook established itself as the preferred SNS for college students at the same time MySpace became the preferred site for high school students. In September 2005, the site began to accept high school students by invitation, and in September 2006, Facebook became a SNS open to anyone over the age of 13. Facebook is the largest SNS in the world, with an estimated 200 million unique visitors in December 2008, but its estimated 54.5 million unique users trails MySpace in the United States. However, Facebook's annual growth rate in the U.S. (57 percent) is nearly six

times that of MySpace (10 percent), and at current rates its U.S. patronage will exceed MySpace by the end of 2009 (Arrington 2009a; 2009b).

Although some other SNSs boast millions of users in the U.S., the memberships of these sites are dwarfed by MySpace and Facebook. boyd (2008c), for example, in her ethnographic study of adolescent online behavior, described MySpace and Facebook as the "stable crux of teen participation" in networked publics (64), and patronage of these two sites is similarly dominant among young adults as well (Salaway, Caruso, and Nelson 2008). Because of these two sites' overwhelming share of the SNS market in the United States, this study will focus solely upon the selection and frequency of use of MySpace and Facebook.

Although these two SNSs attract many similar users and offer many identical or comparable features, there are several notable differences between MySpace and Facebook that may contribute to differences among their participating populations. The organizational structures of MySpace and Facebook, for example, vary significantly. Unlike MySpace, where users are not inherently stratified or separated from one another, Facebook users belong to one or more "networks," which include geographic locations, high schools, colleges, businesses, and organizations. With the exception of geographic locations, admission to a network requires confirmation of a valid e-mail address. In March 2009, Facebook began to permit users to make their profiles public; however, before this time, user profiles were only viewable to friends and members of

common networks. As a result, though both sites offer comprehensive privacy controls, the visibility of Facebook profiles at the time of this study was ultimately limited—a policy that projected a veneer of exclusivity while simultaneously appearing "safer."

The two sites also differ drastically with regard to layout and overall appearance. MySpace gives users considerable control over the design of their profiles by allowing them to insert HTML, a common webpage design programming language. As a result, an industry of websites dedicated to providing users with distinctive MySpace appearances has emerged (Perkel 2006), and MySpace profiles often employ bright clashing colors, blinking icons and text, and animations—a style attractive to some but ugly or pretentious to others. Although individual MySpace profiles vary widely in appearance, they have collectively acquired a reputation for garishness.

Facebook, on the other hand, limits the degree to which the users can customize their profiles. Although they can add "applications" and arrange the layout of certain modules, Facebook users are much more restricted than MySpace users. All Facebook profiles employ the same white background and blue banner, and the overall aesthetic is a "clean" or "modern" look more palatable to web designers, bloggers, and young adults seeking to appear more mature and sophisticated. boyd (2007a) vividly likens the Facebook aesthetic to a

"Scandinavian design house," a poignant contrast to MySpace's "Las Vegas imagery."

A third difference concerns the nature of the relationship between users and the sites' administrators. MySpace has always been an inclusive SNS, embracing alienated Friendster users, independent bands, and teens in succession, relying upon user input to refine its product and expand appeal during its early years (boyd and Ellison 2007). As a result, the relationship between users and the site's administrators has been mostly harmonious, based upon ideals of inclusiveness and popular demand.

Facebook, by contrast, was a restricted SM application for the first two and a half years after its inception, and network admission remains restricted. Moreover, Facebook users have loudly protested a number of administrative actions. These include the initial admission of high school students (Bendele 2006), the introduction of a prominent "News Feed" module (boyd 2006), the introduction of "Beacon," an application that tracks consumer behavior (boyd 2007c), the introduction of a new site and profile layout (Perez 2008), and a modification to the site's terms of use suggesting that Facebook owned user-created content in perpetuity (Raphael 2009). Although Facebook has acceded to user opposition in some cases, they also have retained some unpopular changes, and as a result the relationship between Facebook users and Facebook

administrators has been notably more contentious than that between MySpace users and MySpace administrators.

Lastly, the two sites are perceived differently by the public at large, particularly older adults and non-users. MySpace's entrance into mainstream adolescent culture coincided with the "technopanic" concerning sexual predators, and as the nation's most prominent SNS for teens, MySpace was frequently accused of failing to protect minors from predators. Although Facebook has also had its share of security breaches and legal difficulties, it has nevertheless gained a reputation for being "safer" and more tolerable to parents and authorities, due to its later entry into the public consciousness, network-driven structure, and rigorous privacy controls.

#### **CHAPTER 2: LITERATURE REVIEW**

Despite the myriad of variables posited or found to correlate with SNS selection and use, no theory has yet attempted to identify the totality of factors influencing SNS selection. This study will articulate a theory of SNS preference, drawing from extant research and hypotheses.

#### **2.1. SNS USE**

Studies of SNSs, once rare, have proliferated in the past three years.<sup>1</sup> These studies have addressed a wide variety of issues and employed a wide range of methodological procedures. Although much of this research exists outside the scope of this study, many studies have uncovered important findings relating to the dynamics and motivations underlying SNS use.

Several large nationally representative studies have attempted to measure rates of general SNS use, although it is difficult to identify precise rates due to the swiftness at which these rates are increasing. Lenhart and Madden (2007) sampled 935 teenagers between the ages of 12 and 17 and found that 55 percent of Internet-using teens participate in SNSs, while the Pew Internet and American Life Project (2008a) sampled 1,430 adults and reported that 22 percent of adults aged 18 and older participate in one or more SNSs. Rates of use appear to be

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<sup>&</sup>lt;sup>1</sup> For a comprehensive list of electronically available research on SNSs, see boyd, 2008b.

highest among young adults. The aforementioned Pew Internet and American Life Project found that the rate of use among adults aged 18 to 29 was 67 percent, while the most recent edition of the EDUCAUSE Center for Applied Research's longitudinal study of Internet use sampled 27,317 students from 98 colleges and universities and reported that the rate of use among college students in 2008 was 85.2 percent. Among institutions participating in all three years of the study, the rate of use had increased from 74.8 percent in 2006 to 88.8 percent in 2008 (Salaway et al. 2008).

Several studies have also attempted to measure more detailed phenomena, such as frequency of use and motivations for joining and participating in SNSs. A UK Office of Communications (2008) report summarizing the results of several qualitative and quantitative studies attempted to articulate a typology of users based upon preferred SNS activities and motivations of use, with categories such as "alpha socializers," "attention seekers," "followers," "faithfuls," and "functionals." The primary reasons for participation were to share information with friends and create "well-developed profiles as the basis of their online presence." Non-users eschewed SNSs for a number of reasons, such as technical inexperience, concerns about safety, and intellectual derision.

The ECAR study (Salaway et al. 2008) found that the median frequency of SNS use among college and university students was daily, with the percentage of daily users increasing from 32.8 percent to 58.8 percent in the past three years.

Most users only participated in one (52.9 percent) or two (38.4 percent) SNSs, with 89.3 percent identifying as Facebook users, 48.3 percent identifying as MySpace users, and all other SNSs with rates of use under 10 percent. Most users did not update their profiles more frequently than once a month (80.7 percent) and spent less than five hours per week visiting SNSs (55.8 percent), but substantial minorities spent six to ten hours per week participating in SNSs (26.9 percent) and reported over 300 SNS friends (28.4 percent). The most common reasons for use were staying in touch with friends (96.8 percent), sharing media (67.7 percent), finding out more about people (51.6 percent), communicating with classmates (49.7 percent), and coordinating events (48.0). Only 16.8 percent indicated that they used SNSs to make new friends whom they have never met.

Joinson (2008) performed a factor analysis to establish the motives and behaviors of a purposive sample of 241 Facebook users, identifying seven uses and gratifications: social connection, shared identities, photo sharing, content gratification, social investigation, social network surfing, and status updates. Photo sharing, social investigation, and status updates were significant predictors of frequency of Facebook visits, while content gratification was a significant predictor of time spent on Facebook. Content gratification and social investigation, as well as frequency of visits and time spent on the site, were significant predictors of the number of Facebook friends.

Other studies have focused upon more specific aspects of the SNS phenomenon. Much of this research is concerned with exploring and describing the sociological implications of the four properties (persistence, replicability, scalability, searchability) and three emergent dynamics (invisible audiences, collapsed social contexts, alteration of concepts of "public" and "private") of networked publics identified by boyd (2008c) and others (Varnelis 2008).

boyd and Ellison (2007) in their history and literature review of SNS research identify four major foci of extant research: (1) impression management and friendship performance, (2) networks and network structure, (3) online/offline connections, and (4) privacy issues. More recently, an increasing number of studies have examined the social and psychological correlates of SNS users. A series of studies have suggested that Facebook users possess more social capital than non-users, and also report higher levels of psychological well-being and life satisfaction (Ellison, Steinfield, and Lampe 2007; Steinfield, Ellison, and Lampe 2008; Valenzuela, Park, and Kee 2009). By contrast, other studies have suggested a correlation between Facebook use and narcissism (Rosen 2007; Buffardi and Campbell 2008). Tufekci (2008) found that non-users of SNSs had more negative attitudes toward social grooming compared to users. Users tended to participate more heavily in the expressive Internet ("the practice and performance of technologically mediated sociality") than non-users, but both groups participated

equally in the instrumental Internet ("information seeking, knowledge gathering, and commercial transactions").

#### 2.2. TOWARD A THEORY OF SNS PREFERENCE

The model to be evaluated is depicted in Figure 1. The dependent variables, collectively referred to as SNS preference, encompass (1) the selection of MySpace and/or Facebook as a SNS in which the subject is a participant, and (2) the frequency with which the subject participates in the SNS. "Use" or

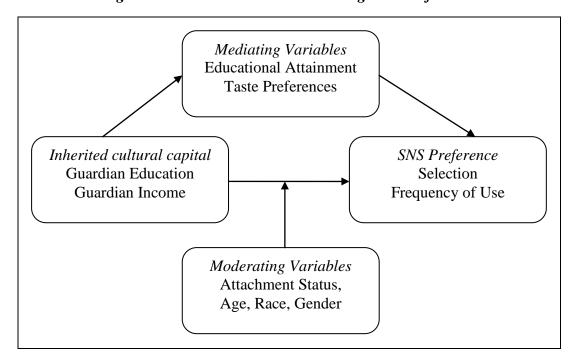


Figure 1: Theoretical Model Predicting SNS Preference

"participation," for the purpose of this study, is primarily defined as logging into the SNS, although data regarding other possible types of use will also be gathered.

#### 2.2.1. Cultural and Educational Capital

The relationship between socioeconomic origin and SNS preference was first hypothesized by boyd (2007a), who speculated on the basis of her qualitative research into SNS use among teens that MySpace's and Facebook's populations were becoming increasingly segregated with respect to socioeconomic status. She argued that Facebook was the preferred site of Caucasian, college-bound, "hegemonic" teens, while MySpace attracted minority racial and ethnic groups, teens not expecting to attend college, and outcasts who reject the hegemonic adolescent culture. Although her essay clearly was not meant to present academic findings, it quickly became an Internet phenomenon, receiving attention from popular online publications (Doctorow 2007) and major print sources (Lafsky 2007), forcing boyd to publish a corrective commentary to counter the sensationalist media coverage (2007b).

In her ethnographic study of social media use among teens, which draws from over two and a half years of qualitative research, boyd (2008c) echoes the conclusions of her preliminary essay, arguing that "the division between MySpace and Facebook is more than a reproduction of preference; it is a reproduction of turf wars that play out as a result of social categories" (209). She found that teens

consistently described the distinction between primary MySpace and primary Facebook users in terms of socioeconomic status, with descriptors such as "higher castes" applied to Facebook participants and "lower class" applied to MySpace users (202).

Quantitative studies have also suggested that socioeconomic origin is correlated with SNS use. Hargattai (2007) used parental education as an indicator of socioeconomic origin in her study of SNS use among university students (N = 1,060) and found that this variable was a significant factor in predicting SNS use. Respondents reporting at least one parent with a college or graduate degree were more likely to use Facebook and less likely to use MySpace, while respondents with parents who did not complete high school were more likely to use MySpace and less likely to use Facebook.

boyd (2007a) also hypothesized that educational capital plays a significant role in determining SNS preference, and several studies have also identified this variable as a predictor of SNS use. The subjects of boyd's ethnographic examination of social media use among teens (2008c) described differences in SNS populations using words indicating intelligence or educational achievement, with "honors kids" or "goody goody kids" preferring Facebook. She also found that joining Facebook was adopted by some groups as a rite of passage between high school and college. Although MySpace has a larger overall user population than Facebook in the United States, this disparity appears to be reversed among

college and university students (Hargattai 2007; Salaway et al. 2008). There is also some evidence that students engaged in more immersive academic environments are more avid SNS users, particularly of Facebook. Salaway et al. (2008) found that students residing on-campus used SNSs more than those off-campus, while Joinson (2008) found a similar result among full-time students versus full-time workers or part-time students. In addition, Lam (2007a; 2007b) and Klein (2007) ranked the academic quality of high schools in the San Francisco and Seattle metropolitan areas, and found that the percentage of students attending these schools with Facebook profiles was positively correlated with high school quality.

Although boyd (2008c) emphasized the role of social categories in determining SNS preference, she also acknowledged that these variables are significant in the context of taste preferences, as the aesthetic disparities between MySpace and Facebook figured prominently in teens' articulations of SNS preference. Most scholarly research concerning taste preferences in SNSs has focused upon cultural consumptive preferences drawn from content analyses of public profiles of one or two SNSs. For example, Liu, Maes, and Davenport (2006) produced a computerized "taste fabric" of user preferences on Friendster and Orkut, composed of "taste neighborhoods" with readily identifiable characteristics. More recently, Liu (2007) analyzed 127,477 MySpace profiles in

an attempt to define further clusters of aesthetic interests. However, no extant study has attempted to assess the role of taste preferences in SNS selection.

There exists a large body of work regarding the determination and cultivation of taste preferences. Veblen (1899) was among the first to develop a sociological theory of taste, arguing that members of the upper classes consciously adopt and cultivate a lifestyle of "conspicuous leisure" as a means of conveying their elevated economic status. Similarly, they adopt a pattern of "conspicuous consumption," procuring and displaying products with exclusive symbolic value even at the expense of functionality. For Veblen, then, taste is an artificial, economically determined phenomenon, driven less by aesthetics or native preferences than the desire to raise social status.

Gans (1974) offered a critique of American culture and tastes in the 1970s, categorizing preferences in terms of "taste cultures" (collections of "values and aesthetic standards") and defining five modern American taste cultures with several subdivisions according to age, race, and political affiliation (92). Although he presents subjective standards and values as the primary selection criteria for a taste culture, ultimately he concludes that class plays a major role in the differentiation of taste cultures by way of education. It is the internalization of a specific strain of cultural values and standards taught in higher education rather than the size of one's bank account or a vain striving for status within one's

socioeconomic stratum, he argues, that is the main cause of different taste cultures among the upper and lower classes.

These interrelated socioeconomic and educational influences are fully developed by Bourdieu (1979) in his landmark work on distinction. He concludes in his analysis of twelve hundred people and their tastes that educational capital and socioeconomic origin are major determinants of taste preferences, with social origin assuming a greater role "as one moves away from the most legitimate areas of culture" (13). These two variables are significantly correlated, with those who have inherited high cultural capital more likely to attain high educational capital, a phenomenon which has the effect of creating a "cultural aristocracy" devoted to a "pure gaze" which it considers superior to the "popular aesthetic."

Bourdieu deviates from Veblen in his contention that conspicuous consumption is subordinate to the pure gaze, but also departs from Gans in his emphasis on social origin. Whereas Veblen and Gans both emphasize the acquired aspect of taste preferences, Bourdieu suggests that taste is to some extent inherited from the economic and cultural environment of one's upbringing. By producing unequal educational achievement and guiding taste preferences, socioeconomic status effectively perpetuates itself as young bourgeoisie acquire the skills and tastes necessary to attain that class distinction themselves, while the young proletariat is discouraged from educational attainment and the pure gaze. When Bourdieu argues that cultural consumption is "predisposed...to fulfil [sic] a

social function of legitimating social differences" (7), he is referring to socioeconomic differences as well.

Solomon and Assael (1987) focus upon the aesthetic effect of consumer products in unison. Their work is derived from McCall and Simmons (1982), who argue that the symbolic meaning of a product is derived largely from its connotative properties in one or more social roles. Therefore, they argue, consumers are motivated to assemble a "product constellation" to "define, communicate, and enact social roles" (194). Solomon and Assael's study supported the hypothesis that products and brands belonging to different categories of utility are significantly correlated with specific occupations and lifestyles.

McCracken (1988) identifies a related phenomenon in his examination of the "Diderot unity" and "Diderot effect." The unity is the desire for a harmonious convergence between consumer products: functionally complementary, yet symbolically similar. McCracken suggests the effect of this desire is to confront the actor with two choices when presented with a product whose symbolic valence diverges from the existing unity. The actor is motivated to resist or reject the product to preserve consistency or, alternately, if (s)he consumes the product, the dissonance pressures the actor to reinvent his or her unity by acquiring additional goods with similar symbolic resonance—as, for example, in Diderot's

eponymous essay, when the gift of a dressing gown compels him to acquire an entirely new set of products for his study.

There are, then, several variables that are postulated to influence taste preferences: (1) Inherited cultural capital (Bourdieu), (2) Acquired educational capital (Gans; Bourdieu), (3) Conformity to social role or class (Veblen; Solomon and Assael), and (4) Symbolic unity (Solomon and Assael; McCracken). Although Liu (2007) groups influences into socioeconomic and aesthetic categories and suggests that these two theoretical orientations compete with one another, a finer reading yields the conclusion that these influences are neither antagonistic nor mutually exclusive. Rather, it is these four influences, collectively and in concert with one another, that determine the aesthetic values and standards that determine taste preferences.

This study will assess the applicability of Bourdieu's theory articulating the relationships between socioeconomic origin, educational capital, and taste preferences to the determination of SNS preference. The independent variables, relating to socioeconomic origin, are collectively considered *inherited cultural capital*, defined by Bourdieu as "a certain *ethos*...each family transmits to its children, indirectly rather than directly...which is the cause of the initial inequality of children" (1966: 32-33). Socioeconomic origin, and to a lesser extent educational capital, are the major determinants of taste preferences and future economic outcomes (1979: 13).

Holmbeck (1997: 600), defining a mediating variable, states that "although one may argue that the relationships among independent variable, mediator, and outcome may not necessarily be 'causal,' the nature of the mediated relationship is such that the independent variable influences the mediator which, in turn, influences the outcome." As such, educational capital and taste preferences are evaluated as mediating variables.

Bourdieu argues that children who inherit cultural capital from parents with higher education and SES have an initial advantage in the educational system, and are taught to place a higher priority on educational achievement (1966: 35). These advantages create an early performance gap which increases over time and leads to students with higher inherited cultural capital acquiring higher educational capital, producing "a dual title to cultural nobility" (1979: 81). Gans (1974) also concludes in his critique of American culture in the 1970s that SES plays a major role in the differentiation of taste cultures by way of education. It is possible that Facebook's initial incarnation as an SM application for college students may have endowed the site with a vestigial aura of educational exclusivity, attracting users with high educational capital while simultaneously repelling users with low educational attainment. As such, acquired educational capital will be evaluated as a mediating variable between inherited cultural capital and SNS behavior.

Bourdieu also contends that cultural capital has a profound impact upon taste preferences. The "cultural aristocracy" of those with high cultural and educational capital distinguishes itself from the "popular aesthetic" by preferring the "pure gaze" (1979: 4-5). Because MySpace and Facebook have very different aesthetics, consideration is given to taste preferences as a potential mediating variable between inherited cultural capital and SNS behavior.

Although socioeconomic origin, educational capital, and taste preferences have frequently been implicated in determining SNS preference, few studies have attempted to articulate the relationship between these variables. Liu (2007), in his study of taste preferences on MySpace, found some evidence for educational capital as a determinant of taste preferences, but was unable to demonstrate conclusively whether cultural capital derived from socioeconomic circumstances was a significant factor in taste preferences. This study will evaluate whether inherited cultural capital is a determinant of SNS preferences, with educational capital and taste preferences as mediators.

## 2.2.2. *Moderating Variables*

In addition to these mediating variables, several potential moderators are evaluated. Holmbeck (1997: 599) defines a moderator variable as "one that affects the relationship between two variables, so that the nature of the impact of the predictor on the criterion varies according to the level or value of the moderator."

Three demographic variables—age, gender, and race—will be considered as moderating variables and controlled during the analysis. A fourth moderating variable, the attachment status, will also be considered.

Internet use varies significantly with respect to age. Whereas 93 percent of Americans aged 12 to 17 and 92 percent of those aged 18 to 29 use the Internet regularly, this statistic diminishes with increasing age, to 85 percent of those aged 30 to 49, 72 percent of those aged 50 to 64, and 37 percent of those aged 65 and older (Lenhart and Madden 2007; Pew Internet and American Life Project 2008b). Moreover, users of different ages are likely to engage in different Internet activities with different goals or practices. For example, some youth have adopted an online vernacular (e.g., "lol" for "laughing out loud") that is eschewed by most adults, while e-mail remains popular with adults as a means of casual communication even as its use for this purpose has been largely abandoned by teenagers (boyd 2008c). Much has been written about this correlation between age and Internet behaviors (e.g., Palfrey and Gasser 2008).

The SNS phenomenon is no exception: while 55 percent of Internet users aged 12 to 17 and 67 percent of Americans aged 18 to 29 use social network sites, only 22 percent of all Americans aged 18 and older identify as users of one or more social network sites (Lenhart and Madden 2007; The Pew Research Center for the People and the Press 2008). Some data suggests that users over 30 are now

joining SNSs at a rate faster than the younger demographics (Facebook 2009c); however, to a large extent the use of SNSs is a youth-dominated activity.

Due to this large disparity, most studies of SNS behavior have only attempted to measure a specific age range, usually choosing to focus upon teens (e.g., boyd 2008c) or young adults (e.g., Joinson 2008). However, even these studies have often found evidence of significant age differences within their narrow ranges. Salway et al. (2008), for example, found in their study of university students that rates of SNS use ranged as high as 95 percent among 18 and 19 year olds and 93 percent among 20 through 24 year olds, but sharply declined to 73 percent among 25 through 29 year olds. They also found that younger users had more friends, disclosed more personal information on their SNS profiles, and were less concerned about privacy and security concerns than older users. Jones et al. (2008), in their content analysis of 1,378 MySpace profiles, corroborated Salaway et al.'s finding that younger users reveal more personal information, but did not find that younger users had more MySpace friends than older users.

Two other demographic categories, gender and race, have frequently been implicated in SNS behaviors. boyd (2008c) identified gender and race, along with class, as two of the three primary social categories by which teens spoke of SNS preference. Hargattai (2007) and Tufekci (2007) both found higher rates of use among females in their respective studies comparing users and non-users. Jones et

al. (2008) reported that females comprised a higher percentage of MySpace users than males and were also more likely to use certain social media features such as blogs, while Joinson (2008) found that females visited Facebook more frequently and had different motivations for using Facebook than males. Several studies have also suggested that females are more likely to use SNS privacy controls or restrict personal information than males (Joinson 2008; Lenhart and Madden 2007; Salaway et al. 2008). Race has been measured less frequently than gender, but has also been found in some cases to be a significant determinant of SNS behavior. Hargattai (2007), for example, found that Hispanics were considerably more likely to prefer MySpace, while Caucasians and Asian-Americans were considerably more likely to prefer Facebook.

A fourth variable, defined in this study as *attachment status*, refers to feelings of allegiance to a SNS resulting from a long period of use or the presence of SNS friends or networks with which the user wishes to continue to interact. This variable has not been frequently assessed in quantitative studies, but has been acknowledged in qualitative research. boyd (2008c: 108) reports in her study of teen social media use that the phrase, "That's where my friends are," was a common refrain when she asked teens why they preferred one SNS over another. This variable of attachment, she argues, has resulted in varying patterns of SNS preference with respect to geographic areas. Regions in which MySpace participation became popular quickly and attracted a critical percentage of users

are more resistant to Facebook, while youths in regions in which MySpace use was minimal or nearly nonexistent were more likely to abandon MySpace for Facebook. Although this variable of attachment is difficult to evaluate empirically, its prominence as a determinant of SNS preference in boyd's research requires its inclusion as potential moderating variable.

## **CHAPTER 3: METHODS**

The previous chapter drew from extant research and hypotheses to articulate a theory of SNS preference. Having delineated the independent, mediating, and moderating variables and their suggested interactions, this chapter describes the methodological procedures employed to assess the accuracy of the theoretical model.

## 3.1 SAMPLE

The sample for this study is drawn from the population of students at the University of Missouri – St. Louis. Descriptive statistics for the entire student population can be found in Table 1 (UM-SL 2008). UM-SL is the largest public university in the St. Louis metropolitan area, with an enrollment of over 15,000 students. The geographic origin of the student population is overwhelmingly local: over 80 percent of students reside in St. Louis City, St. Louis County, or adjacent St. Charles and Jefferson Counties, and the university supports large numbers of commuters and off-campus students enrolled in online classes. The university also supports a relatively large percentage of non-traditional students, with 17.6 percent of all students under the age of 18, and 20.9 percent over the age of 29. Females, white non-Hispanics, and African-Americans are overrepresented among members of the student body.

Table 1: Demographic Characteristics of the UM-SL Student Population, Fall 2007

Location	On-campus	12,147	78.2%
Location	Off-campus	3,396	21.8%
Enrollment Status	Full-time	6,304	51.9%
(on-campus)	Part-time	5,843	48.1%
	Undergraduate	9,173	75.5%
(on-campus) Age	Graduate/Professional	2,974	24.5%
	Under 18	2,740	17.6%
	18-29	9,547	61.4%
Gender	30 and over	3,256	20.9%
	Female	7,173	59.1%
(on-campus)  Race (on-campus)	Male	4,974	40.9%
	White Non-Hispanic	7,562	70.9%
	Hispanic	193	1.8%
	Asian/Pacific Islander	378	3.5%
	Native American	38	0.3%
	African American	1,995	18.7%
	Non-Resident Alien	498	4.7%
	Unknown	1,483	(12.2%)
Total		15,543	

With the cooperation of the UM-SL Registrar, a sampling pool of students enrolled in the fall semester of 2008 was generated. The information provided by the Registrar included the student's name, the student's UM-SL e-mail address, and the number of credit hours in which the student was enrolled at the beginning of the semester. The enrollment level of the student was also included, with possible designations of undergraduate, graduate, and professional; for the purpose of this study, students enrolled in graduate and professional programs were combined to form a single graduate category. This list was stored on a password-protected computer and deleted at the completion of data analysis.

The sampling frame was confined to students between the ages of 18 and 29, for ease of comparison to national statistics regarding SNS use. Because the data collection procedure for guardian income required a U.S. residency, international students were also excluded from the sampling pool. Finally, a small percentage of students who indicated on their student application that they did not consent to the release of their enrollment status were also excluded.

The final sampling pool consisted of 8,155 students, of whom 6,629 were undergraduates and 1,526 were graduate or professional students, representing approximately 52 percent of the student population. As students aged 18 to 29 compose roughly 60 percent and international students roughly 5 percent of the student population in 2007, this result suggests that a small but significant group of 10 to 15 percent of students meeting the age and geographic qualifications for

inclusion did not consent to the release of their enrollment status. This omission is notable, as students who guard the privacy of their enrollment status may demonstrate different SNS behaviors than those who do not.

A random stratified sampling method was employed to select 1,500 students, divided into three samples of 500 subjects. The first two samples each consisted of 250 undergraduate and 250 graduate subjects; the final sample selected 300 undergraduates and 200 graduates to compensate for a higher response rate among graduate students.

An additional complication was the inability to contact a very small group of subjects by e-mail because their e-mail address was no longer valid or their mailbox was full, rendering all incoming e-mails undeliverable. A total of 9 graduate and 18 undergraduate students were unable to receive at least one of the e-mails soliciting their participation in the study. Of these, 2 graduate and 15 undergraduate students were unreachable at all times during the survey portion of the study and removed from the sample. The sampling frame, then, ultimately consisted of 785 undergraduate and 698 graduate students, a total of 1,483 subjects.

## 3.2 DATA COLLECTION

This study employed two means of data collection: questionnaire and content analysis. Nearly all quantitative studies regarding SNS behavior to date

have relied exclusively upon one form of data collection. Questionnaires provide critical information regarding user attitudes and behaviors but may not capture relevant empirical phenomena. Most content analyses, on the other hand, are dependent upon users with public profiles, whose presentations and behaviors may not be representative of the SNS-using population. To mitigate these methodological shortcomings, a questionnaire was supplemented by a limited content analysis of public and private Facebook profiles.

# 3.2.1. Questionnaire

An Internet questionnaire was deemed the most appropriate method of delivery for several reasons. First, the sample was drawn from a population of college students at a university with a considerable technological network, who are not likely to lack Internet access or have difficulty understanding questions. Second, an Internet questionnaire is the quickest and least expensive method of delivery, especially appropriate for questionnaires that do not employ open-ended questions or require interviewer probes. Third, although a high nonresponse rate is a potential limitation of this particular survey method, past Internet questionnaires at this institution have been relatively successful, with response rates as high as 56 percent (Shields et al. 2008). However, as Hargattai (2007) notes, Internet questionnaires regarding online behaviors may be susceptible to

bias if subjects who spend considerable time online are more likely to respond than those who engage in online activities infrequently.

Questionnaire responses from each of the three samples were solicited during a two-week period: the first sample was conducted in late October to early November, the second sample was conducted immediately thereafter into the middle of November, and the final sample was conducted in late November and early December following the Thanksgiving holiday. Subjects were contacted initially via e-mail and informed of their selection to participate in a study about behaviors on social network websites such as MySpace and Facebook, in which respondents would be entered into a raffle to win an iPod Shuffle purchased at the researcher's expense. Reminders were e-mailed to nonrespondents on the fifth, ninth, and twelfth days of each sample's data collection period (Appendix 1).

The soliciting e-mails provided a hyperlink directing subjects to an electronic informed consent statement, which described the nature and risks of the research in greater detail. Submission of the respondent's typed name and procession to the questionnaire affirmed that (s)he consented to participation in the research. Respondents were also asked to provide their UM-SL e-mail address, which was required to ensure that unauthorized subjects did not answer the questionnaire and authorized subjects did not answer the questionnaire more than once. Names and e-mail addresses were stored on password-protected

computers until the conclusion of the data analysis and then deleted to preserve confidentiality.

The questionnaire was composed of four sections: (1) MySpace behavior, (2) Facebook behavior, (3) educational status, and (4) general information. Respondents were permitted not to answer any question(s) that they chose, and could exit the questionnaire at any time. The contents of the questionnaire can be found in Appendix 1.

Two difficult decisions encountered during the design of this study were (1) whether or not to inform respondents that participation in the study involved the collection of data from SNS profiles, and (2) if so, whether permission should be obtained from the respondent. The ethical implications of viewing public SNS data are unclear. On one hand, many MySpace profiles are public, viewable even to observers not participating themselves in the SNS. The visibility of Facebook profiles is somewhat less, due to network-driven structure of the SNS, but members of certain networks (e.g., geographic locations) using default privacy settings in effect possess semi-public profiles viewable to any Facebook member, as these networks pose no barriers to admission. Both SNSs offer open membership and comprehensive privacy controls allowing members to specify in detail what information is viewable and what audiences are permitted to view it. Many content analyses (e.g., Liu 2007) have therefore collected data from public profiles without informing SNS users.

However, the implications of invisible audiences and the alteration of common conceptions of "public" and "private" can cause considerable ethical complications. It is unclear whether the mere designation of profile as "public" is equivalent to allowing researchers to gather data that the owner may intend for friends and other members of the public. Users may, for example, make their profiles public because they want to be visible to peers in their hometown but have no desire for other users, including researchers, to view their profile's contents, a distinction which is not possible using MySpace or Facebook's privacy controls. As a result, some researchers have argued that it is not at all clear that owners of public SNS profiles understand that researchers can view and harvest data from their profiles and that they would consent to such practices (Stern 2004; boyd 2008c).

Although ethical behavior when harvesting public data from the Internet remains a contentious issue, it was ultimately determined to disclose the researcher's desire to view respondents' SNS profile(s) and solicit permission to view these profiles for two reasons. First, the researcher would be exploiting his membership in UM-SL's Facebook network to view profiles that would not be visible to others; therefore, these profiles would be "public" to him only by virtue of his inclusion in an exclusive network. Second, the utilization of questionnaire data such as names and e-mail addresses to locate SNS profiles without disclosure of this intent could be considered deceptive and unethical behavior. This decision,

while uncontroversial, undoubtedly diminished the number of profiles from which content analysis data could be collected. However, one benefit of this disclosure is the opportunity to include users with private profiles, a subset of SNS participants that has rarely been studied using content analysis methods.

Of 1,483 potential respondents, 318 attempted the questionnaire. Fourteen respondents did not indicate informed consent properly or chose to quit the questionnaire before completion, for a total of 304 valid respondents and a response rate of 20.5 percent. Due to the considerable probability of nonresponse error associated with such a low rate, post hoc strategies to minimize and account for error were implemented and are discussed in Chapter 5.

## 3.2.2. Content Analysis

Content analyses of SNS profiles belonging to consenting respondents were conducted during a one-week period in January, following the collection of all questionnaire data. While this time frame has the intended effect of combining the respondents of all three samples into a cross-sectional collection of SNS profile data, the ability to correlate questionnaire responses with content analysis data is somewhat limited, as one to three months had elapsed between the questionnaire and content analysis phases of data collection.

Locating, identifying, and recording data from SNS profiles posed several challenges, and rigorous procedures were followed to ensure the accuracy and

reliability of the data. The study had originally planned to include data from MySpace profiles; however, locating respondents on MySpace proved to be impractical. Unlike Facebook, in which users are identified by the networks to which they belong, MySpace users are identified in most cases only by their geographic location, making it impossible to distinguish the Jane Doe who responded to the questionnaire from other Jane Does residing in the St. Louis area. Although the inability to utilize MySpace data was disappointing, this loss was mitigated by the inclusion of questionnaire items soliciting number of friends and frequency of use on an ordinal scale.

Of 304 respondents, 74 indicated that they did not have a Facebook profile, and 66 did not consent to the use of their Facebook profile data in the study, for a total of 164 possible profiles. Profiles were located in one of two ways: (1) self-reported URL provided by the respondent upon completion of the questionnaire, and (2) manual search.

Manual searches followed a standard procedure. First, all self-reported names and e-mail addresses were matched to data provided by the UM-SL Registrar, ensuring that respondents were enrolled students at UM-SL and had been selected to participate in the study. Next, the name(s) and e-mail address(es) of those with Facebook profiles who had consented to use of profile data were entered into Facebook's user search engine. In some cases, a discrepancy between

the self-reported and Registrar-provided names was helpful in identifying search terms (e.g., a "Katherine" self-reports as "Katie").

Most searches conducted in this manner produced a result belonging to Facebook's UM-SL network matching the name and/or e-mail address entered into the search query. In these instances, two additional procedures were followed to ensure that the search result matched the questionnaire respondent: (1) the age of the profile owner was compared to the self-reported age provided in the questionnaire, and (2) the Registrar's sampling pool was consulted to ensure that only one UM-SL student possessed the name being sought. Only then were search results interpreted as positive proof of identification of the questionnaire respondent.

In some cases, searches for e-mail addresses, names, and possible aliases were unsuccessful. There are a number of reasons for these negative findings, and multiple strategies were implemented to locate these missing respondents:

• The user did not belong to Facebook's UM-SL's network, but belonged to Facebook's St. Louis geographic network and identified as a current UM-SL student within his or her profile. In these instances, the age and name procedures listed above were performed and these results were interpreted as a positive finding. Search results not belonging to the UM-SL network and not identifying as a current UM-SL student within their profiles were not interpreted as positive findings.

- The user employed a different name on Facebook than that provided by the Registrar. In most cases, the association of the Facebook name to the questionnaire respondent was possible using the alias provided by respondent on his or her questionnaire. In other cases, the respondent used his or her middle name, which was included in the Registrar's data and was therefore interpreted as a positive finding. However, at times it appeared that the respondent's first or last name on Facebook was different than the self-reported and Registrar names, and these instances were not included in the content analysis. Possible reasons for these discrepancies include the adoption of a new last name due to marriage or the use of a nickname rather than the respondent's given first or last name.
- In a few cases, the search for a respondent's Facebook profile did not produce a positive identification, but a provided MySpace URL made it possible to identify the correct Facebook profile by comparing the content of his or her MySpace profile (e.g., pictures) to the profiles returned by Facebook's search engine. This result was also interpreted as positive proof of identification.

Fifty-four respondents who were identifiable through Facebook's search engine had private profiles. These subjects were sent a friend request and a personal message using the researcher's Facebook account explaining the reasons for the

request and reminding respondents' of the information to be gathered and its confidentiality (Appendix 1).

Of the 164 Facebook profiles sought, profiles were located and correlated with questionnaire data for 138 respondents. Eighteen of the 54 respondents with private profiles did not respond or responded too late to the friend request, while 8 profiles were not found or could not be positively correlated with questionnaire respondents. These respondents most likely used a different name on Facebook that the one(s) provided to the researcher or UM-SL Registrar, had made their profile invisible to search, or had deleted their Facebook profile since completing the questionnaire.

## 3.3 ANALYSIS

The operationalization of the proposed theoretical model is summarized in Tables 2 and 3. Data from the UM-SL Registrar (R), questionnaire (Q), and content analysis (C) are combined to measure each conceptual component.

Several variables were not altered in preparation for analysis. Guardian education, for example, is directly assessed by responses to question 26 from the questionnaire, which asks the respondent to identify the highest educational level attained by any of the guardians with which (s)he lived prior to age 18. Age and gender (Q28-29) are similarly straightforward, as is the self-reported quality of high school attended as a measure of educational capital (Q19).

Table 2: Summary of Measurements

	Conceptual Level		Observational Level
Independent Variables	Inherited Cultural Capital	Guardian status	Q25
		Guardian education	Q26
		Guardian income	Q24
Mediating Variables	Educational capital		R, Q18-22
	Taste preferences		C, Q17
Moderating Variables	Age		Q28
	Gender		Q29
	Race		Q27
	Attachment status		C,Q4, Q8-9, Q11, Q15-16
Dependent Variables	SNS Selection		Q3, Q10
	Frequency of use		C, Q5-8, Q12-15

Other variables were recoded prior to analysis. Due to the large percentage of respondents who lived with married biological or adopted parents, guardian status (Q25) was recoded into a dummy format. The percentage of respondents who attended a public non-magnet high school or identified their race as exclusively white were similarly high, and so questions regarding the type of high school attended (Q18) and racial identity (Q27) were similarly adjusted. The.

Table 3: Summary of Variables

Independent Variable	Cultural Capital	Guardian Type (two married parents/other) Guardian Education (ordinal) Guardian Income (estimated from HH income)	
Mediating Variables	Educational Capital	Educational Level (undergrad/grad) Educational Commitment (part/full time) High School Type (public non-magnet/other) High School Quality (ordinal)	
	Taste Preferences	Number of Facebook Applications Number of "MySpace-style" Facebook Applications Old/New Facebook Preference (ordinal)	
Moderating Variables	Demographic Characteristics	Age Gender Race	
	Attachment Status	SNS Profile Creation (scale)	
Dependent Variables  Preference  MySpace Profile (yes/no) Facebook Profile (yes/no) MySpace Profile Only (yes/no)		Facebook Profile (yes/no) MySpace Profile Only (yes/no) Facebook Profile Only (yes/no) SNS Visits (scale)	

interpretation of other variables, however, required more complicated procedures.

The independent variable of inherited cultural capital was measured by the direct assessment of guardian education (Q26), the dummy variable of guardian status (Q25), and an ecological estimate of guardian income derived from the respondents' zip codes in which they had lived prior to age 18 (Q24). Because

direct measurement of respondents' guardian incomes was not possible, 2000 Census Data was used to determine the median annual household income of the zip codes provided by respondents. The standard deviations of each zip code's household income were also calculated from grouped frequency data as a means of quantifying the probable error likely to result from such an estimate of guardian income. The implications of this procedure are discussed further in Chapter 5.

To quantify the dependent variable of SNS selection, direct assessment of whether or not the respondent has a MySpace or Facebook profile was used (Q3, Q10). The responses to these two questions were recoded into four binary variables: whether or not the user has a MySpace profile, whether or not the user has a Facebook profile, whether or not the user has a MySpace profile but not a Facebook profile (MySpace only), and whether or not the user has a Facebook profile but not a MySpace profile (Facebook only).

As the frequency of use is a more difficult concept to quantify, several self-reported measures were solicited in the questionnaire: the current frequency with which a user visits the SNS (Q5, Q12), the average frequency with which a user has visited the SNS since (s)he first created his or her profile (Q6, Q13), the frequency with which a user updates his or her SNS profile (Q7, Q14), and the number of SNS friends a user has (Q8, Q15). As discussed in the following chapter, current and average visits were highly correlated with one another, and

profile updates were relatively infrequent, so the current rate of visits and number of SNS friends were favored as estimates of frequency of use. The creation of the two composite variables ultimately utilized as indicators of frequency of use, *SNS visits* and *SNS friends*, is discussed below.

An additional measure, the frequency of wall posts upon a user's profile, was also collected during the content analysis phase of data collection. This calculation was determined by identifying the days elapsed between the date on which the researcher viewed the profile and the respondent's tenth most frequent wall post. However, this measurement should be considered a secondary indicator of frequency of use for three reasons. First, the frequency with which a user receives wall posts is more directly an assessment of how frequently his or her friends use the SNS. While exchanging posts on friends' walls is a common practice among SNS users and is likely to provide some information about a respondent's involvement, a user with a small number of friends may have fewer posts on his or her wall yet use the site as extensively as a user with many friends who post prolifically. Second, wall posts are not generated at a constant rate. For example, it is common for users to post to a friend's wall on birthday occasions, and a user with a low frequency of wall posts may suddenly be deluged with birthday wishes on one day. Finally, Facebook provides users with the ability to control the visibility of their wall posts, and users whose profile is otherwise public may appear to have no wall activity. It is therefore impossible to determine

whether a user does not have any wall posts or whether (s)he has restricted access to this feature.

Selection and frequency of use were combined to create a binary measurement of *SNS preference*, which functions as the primary dependent variable. Respondents who did not have a MySpace profile or currently visited Facebook more frequently than MySpace were coded as preferring Facebook, while respondents without Facebook profiles or visiting MySpace more frequently were coded as preferring MySpace. Respondents with profiles on neither site or who visit both sites with the same frequency were not included in this categorization.

Moderating demographic variables were evaluated by direct assessment of the respondent's age, gender, and race. The moderating variable of attachment status was assessed by two observational variables: how long ago the respondent created the SNS profile (Q4, Q11), and the percentage of SNS friends known in offline settings (Q9, Q16). As discussed in the following chapter, the offline friend variable did not produce a large amount of variability, and therefore measures of profile creation were preferred as an indicator of attachment status.

To quantify preferences or differences in profile creation, friend counts, and frequency of visits, three composite variables—*SNS profile creation*, *SNS friends*, and *SNS visits*—were calculated using questionnaire data. First, MySpace and Facebook data were coded according to Table 4. Next, a composite score for

Table 4: SNS Composite Variable Rankings

	SNS Profile Creation	SNS Friends	SNS Visits
0	No profile No profile		No profile
1	Less than 6 months ago 0-25		Rarely or never (<1)
2	Between 6 and 12 months ago 26-50		A few times per month (1 to 5)
3	Between 1 and 2 years ago 51-100		Several times per month (6 to 10)
4	More than 2 years ago	101-200	Many times per month (11 to 30)
5		201 or more	At least once per day
SNS Profile Creati	ion = (MySpace Profi	le Creation – Faceboo	ok Profile Creation)

**SNS Profile Creation** = (MySpace Profile Creation – Facebook Profile Creation)

**SNS Friends** = (MySpace Friends – Facebook Friends)

**SNS Visits** = (MySpace Visits – Facebook Visits)

each respondent was calculated by subtracting his or her Facebook score from his or her MySpace score. For example, a respondent who created her MySpace profile more than 2 years ago (4) and created her Facebook profile less than 6 months ago (1) would obtain a SNS profile creation score of 3 (4-1). Similarly, a respondent without a MySpace profile (0) and 51-100 Facebook friends (3) obtains a SNS friends value of -3 (0-3), while a respondent who visits both

MySpace and Facebook a few times per month obtains a SNS visits value of 0 (2-2).

These composite variables have the advantage of combining MySpace and Facebook data while emphasizing behavioral disparities between the two SNSs: respondents favoring MySpace obtain positive scores, respondents favoring Facebook obtain negative scores, and respondents who favor both equally obtain a score of zero. Respondents with no profiles on either site are excluded from these analyses.

The quantification of educational capital relies upon the collective results of several variables. The respondent's educational level (undergraduate or graduate/professional) was recorded from the information provided by the UM-SL Registrar, as well as a measure of educational commitment generated from the number of credit hours in which the respondent was enrolled at the beginning of the fall semester of 2008. Undergraduate students committed to 12 credit hours or more and graduate students committed to 9 credit hours or more were designated full-time students, while students enrolled in fewer hours were considered part-time students. It should be noted that many students may enroll in a limited number of credit-hours due to financial limitations, and therefore this measurement of educational commitment may be partially correlated with socioeconomic status.

In addition, two questionnaire responses were used to inform educational capital: the type of high school attended, recoded into a dummy format distinguishing those who attended public non-magnet high schools from those who did not (Q18), and a self-reported ordinal rating of the quality of the high school attended (Q19). Although there were three other questions designed to measure educational capital, these were discarded during analysis for various reasons. While self-reported educational level (Q20) was considered less reliable than the Registrar's official designation of educational level, planned educational attainment (Q21) and a self-reported ordinal rating of the quality of undergraduate institution that graduate or professional respondents attended (Q22) both were rendered ineffective by the considerable lack of variability in subject responses.

The operationalization of taste preferences was a difficult task. Most previous studies concerned with taste have focused upon self-reported "favorites" in user profiles, such as favorite books, movies, music, or television shows (e.g., Liu 2007). However, this method is time-consuming and relies upon the researcher's judgment to classify consumer products into like categories.

For the purposes of this study, a different method of discerning taste preferences was adopted, making use of the Facebook "application." Because Facebook has fewer customization options than MySpace, Facebook profiles provide a more manageable setting for content analysis. The primary means of customization in Facebook is the application, a module that can be inserted into

the profile.<sup>2</sup> Over 52,000 third-party applications have been created, and more than 95 percent of Facebook users have installed at least one of these applications for personal use (Facebook 2009c). Although some applications provide increased functionality, the most popular category of third-party applications is "Just for Fun."

A total of three variables from the questionnaire and content analysis were used to determine taste preference. First, the total number of third-party applications on a user's Facebook profile was counted. It is assumed that users who accrue a large number of third-party applications value MySpace's visual customizability, and are attempting to render their Facebook page as close to the MySpace aesthetic as possible.

Second, a small number of "MySpace-style" applications was determined, and the incidence of these applications was counted. Many popular applications employ a garish aesthetic more suitable to MySpace, and it is assumed that users whose taste preference tends toward the MySpace aesthetic will prefer these applications. To eliminate the necessity of categorizing every Facebook application into a "MySpace" or "Facebook" aesthetic, seven applications were selected on the basis of their popularity and representativeness of a "MySpace" aesthetic, and the incidence of these seven applications was counted for each subject:

<sup>&</sup>lt;sup>2</sup> This use of the word, "application," unique to Facebook, should not be confused with the researcher's earlier use of the phrase, "social media application."

- Top Friends, 16,841,114 users (Facebook 2009a). A notable feature of
  MySpace is the ability to designate a small number of friends as "top
  friends." Top Friends provides Facebook users with this ability, and
  includes customizable layouts and formats ("skins").
- Slide FunSpace, 13,724,614 users, or Super Wall, 13,086,158 users (Facebook 2009a). Although MySpace and Facebook both include a "wall" feature in their profiles to which other users can post public messages, MySpace's feature has long permitted users to post visual media content (photos, videos, etc.), while Facebook's feature was limited until recently to textual posts. Slide FunSpace and Super Wall were created to provide MySpace's media functionality to Facebook's wall. Although their value is diminished now that Facebook's wall feature permits media postings, many users either continue to use these third-party walls or have not removed them from their profiles.
- Bumper Sticker, 7,816,963 users, or Bumper Sticker (New), 1,663,210 users (Facebook 2009a). Bumper Sticker is a visual application that allows friends to stick "bumper stickers" on each other's profiles. Users can create their own bumper sticker, or choose from a pool of previously created stickers. Many bumper stickers use bright, garish colors and are easily recognizable as belonging to the gaudy MySpace aesthetic.

- *Pieces of Flair, 5,479,779 users* (Facebook 2009a). Pieces of Flair provides a visual means of describing one's interests through colorful and expressive buttons. Users can create their own buttons, give buttons to friends as gifts, or select from a number of previously created buttons.
- *Graffiti*, 2,193,899 users (Facebook 2009a). Like Slide FunSpace or Super Wall, Graffiti creates an additional wall on a Facebook user's page. On this wall, however, friends can draw "graffiti" using colorful paints.

While these applications do not represent the entirety of "MySpace-style" applications, they are a selection of the most popular applications that provide a conspicuous degree of MySpace-style customization to a Facebook profile.

In addition to counting the total number of applications and the subset of "MySpace-style" applications, a question soliciting opinions regarding Facebook's recent design changes was asked (Q17). Beginning in July, 2008, Facebook began to implement a new layout that met resistance from a significant minority of users. One of the primary reasons for the new design was to eliminate the cluttered aesthetic of profile pages, which had become more conspicuous as members added more third-party applications. The new design employed a tabbed layout that relegated many of these applications to a secondary tab, while the main profile page regained Facebook's distinctive sparse and orderly appearance. It is possible that many of those who dislike the recent changes may prefer the

cluttered MySpace aesthetic and resist Facebook's attempt to reassert its own aesthetic. Questionnaire respondents were asked to rate their preference for the old or new Facebook designs on an ordinal scale, and the results of this question will also be considered as an indicator of taste preferences.

## **CHAPTER 4: RESULTS**

#### 4.1 **DESCRIPTIVES**

Three hundred and four of 1,493 subjects responded to the questionnaire (20.5 percent). Graduate students were more likely to respond than undergraduates, with 159 of 698 (22.8 percent) completing the questionnaire, compared to 145 of 785 initial undergraduates (18.5 percent). As noted in the previous chapter, the mailboxes of undergraduate students were far more likely to be full than those of graduates, so it is possible that this discrepancy is the result of graduate students checking their e-mail more frequently and maintaining their mailboxes with greater vigilance than undergraduate students.

One hundred ninety-three (63.5 percent) respondents were categorized as full-time students, nearly identical to the 63.6 percent of UM-SL students between the ages of 18 and 29 who were identified as full-time in 2007 (UM-SL 2008). The median number of credit hours for the entire sample was 10, with a mean of 10.63 and standard deviation of 4.98. Undergraduates (M = 12.22) were enrolled in more credit hours than graduate or professional students (M = 9.19).

The distribution of age was approximately normal, with a mean of 24.03 and nearly 60 percent of respondents between the ages of 22 and 26. Unsurprisingly, graduate students on average were older (M = 25.26) than undergraduate students (M = 22.68). Nearly three-fourths of undergraduates (74)

percent) were enrolled full-time, compared to about half of graduate students (54 percent).

The percentage of respondents who are female (68.3 percent) was somewhat higher than the percentage of women reported for the entire UM-SL student population (59.1 percent). This may suggest that females were more likely to respond to the questionnaire than men; however, there may be a greater percentage of females in the 18 to 29 age range than the student body as a whole, so it is difficult to identify the extent of any systematic bias. The implications of this result are discussed in Chapter 5.

The percentage of students who identified their race as exclusively white (84.2 percent) was much higher than the percentage of white on-campus students in 2007 (70.9 percent). This percentage increases to 87.8 percent when it includes all respondents who identified at least partially as white non-Hispanics. With such a large disparity, it seems very likely that white students were motivated to respond at a higher rate than non-white subjects. The implications of this result will also be discussed in Chapter 5.

#### 4.1.1. SNS Behavior

SNS selection and frequency of use is summarized in Tables 5 and 6. Of 304 respondents, 230 (75.7 percent) reported having a Facebook profile, and 167 (54.9 percent) reported having a MySpace profile. A considerable amount of

overlap existed between these two groups, as nearly half of the sample (45.1 percent) indicated that they were users of both SNSs. A large minority (30.6 percent) was composed of Facebook users only. Exclusive users of MySpace were relatively rare (9.9 percent), but still significant.

Only 14.5 percent of respondents did not have either a MySpace or Facebook profile. This statistic is significantly smaller than the 33 percent reported by Lenhart and Madden (2007) in their nationally representative sample of Americans aged 18 to 29, but closely aligned with the 14.8 percent of nonparticipants reported by Salaway et al. (2008) in their study of university students.

Facebook users reported a very high level of involvement with the site, with over 75 percent of Facebook users indicating that they visited the site daily or semi-daily. This finding compares well to Facebook's internal data, which

Table 5: Descriptive Results for SNS Profile Incidence

Both SNS Profiles	137	45.1%
Facebook Only	93	30.6%
MySpace Only	30	9.9%
No SNS Profile	44	14.5%
Total	304	100.0%

Table 6: Descriptive Results for SNS Frequency of Visits

	Current Visits				Averag	e Visit	s	
	My	Space	Fac	ebook	MySpace		Facebook	
Rarely or never (<1)	29	17.6%	14	6.1%	21	12.7%	12	5.2%
A few times per month (1 to 5)	50	30.3%	23	10.0%	38	23.0%	19	8.3%
Several times per month (6 to 10)	26	15.8%	18	7.8%	38	23.0%	21	9.1%
Many times per month (11 to 30)	28	9.2%	55	23.9%	43	26.1%	72	31.3%
At least once per day	32	10.5%	120	52.2%	25	15.2%	106	46.1%
Total	167	100.0%	230	100.0%	167	100.0%	230	100.0%

reports that nearly half of all users log into the network daily (Facebook 2009). MySpace use was more variable, as most users visited on average between a few to many times per month, and current rates of use were even more evenly distributed. For both sites, current and average rates of use were highly correlated with one another: 68.5 percent of MySpace users and 80.4 percent of Facebook users provided identical estimates for these two measures. Facebook users were slightly more likely to indicate that their current rate was higher than their average rate (10.9 percent) rather than lower (8.7 percent), but MySpace users were much

more likely to indicate that they were currently using the site less (23.0 percent) than more (8.5 percent).

Because a significant percentage of respondents possessed profiles on both SNSs, profile incidence and current frequency of use were combined to create a variable measuring *SNS preference*, summarized in Table 7. One hundred seventy-two respondents (56.6 percent) with only Facebook profiles or who reported a current frequency of Facebook visits greater than their current frequency of MySpace visits were identified as preferring Facebook; similarly, 43 (14.1 percent) exclusive MySpace users or those who currently visit MySpace more frequently than Facebook were identified as preferring MySpace. An additional 43 respondents (14.1 percent) were users of both SNSs and visited both sites with same frequency, and these respondents were not included in the analysis of this variable. This combined statistic was adopted as the primary dependent variable.

Other data collected regarding SNS behavior includes how long ago respondents created their SNS profiles, how often respondents update the information in their SNS profiles, the number of SNS friends, and the percentage of SNS friends known from offline settings. Nearly identical percentages of respondents have been users of MySpace (60.8 percent) and Facebook (60.4 percent) for at least two years (Table 8); however, a greater percentage of Facebook users (21.8 percent) had created their profiles in the past year than

Table 7: Descriptive Results for SNS Preference

Facebook	172	56.6%
No Preference	43	14.1%
MySpace	43	14.1%
No Profile	44	14.5%
Total	304	100.0%

Table 8: Descriptive Results for SNS Profile Creation

	MyS	pace	Face	book
Less than 6 months ago	4	2.4%	22	9.6%
Between 6 and 12 months ago	10	6.0%	28	12.2%
Between 1 and 2 years ago	51	30.7%	41	17.8%
More than 2 years ago	101	60.8%	139	60.4%
Total	166	100.0%	230	100.0%

MySpace users (8.4 percent), a finding consistent with Facebook's higher overall growth rate.

Over a third of Facebook users indicated that they update their profiles often or very often, while over a fourth of users rarely or never update their

Table 9: Descriptive Results for Frequency of Profile Updates

	MyS	pace	Facebook		
Rarely or never	84	50.6%	59	25.9%	
Sometimes	71	42.8%	86	37.7%	
Often	10	6.0%	58	25.4%	
Very Often	1	0.6%	25	11.0%	
Total	167	100.0%	230	100.0%	

Facebook information (Table 9). Conversely, over 90 percent of MySpace users in the sample infrequently updated their profiles. Although profile updates were significantly correlated with frequency of use (r = .54 for both SNSs), notable disparities between use and updates existed. Twenty-seven of 32 (84.4 percent) daily MySpace users and 56 of 120 (46.7 percent) daily Facebook users, for example, did not update their profiles often or very often. This finding has significant consequences for content analyses of public profiles that often presume their samples contain current information.

As with frequency of use and profile updates, Facebook users exhibited a greater involvement with the site in their friend totals, with 62.6 percent claiming over 100 friends and 40 percent claiming over 200 (Table 10). These results are comparable to Facebook's internal data, which claims that the average Facebook user has 120 friends (Facebook 2008). MySpace users again displayed greater

Table 10: Descriptive Results for Number of Friends

	MyS	pace	Face	book
0-25	32	19.3%	20	8.7%
26-50	34	20.5%	26	11.3%
51-100	53	31.9%	40	17.4%
101-200	31	18.7%	52	22.6%
201 or more	16	9.6%	92	40.0%
Total	167	100.0%	230	100.0%

diversity, with most reporting between 51 and 100 friends. Large percentages of users reported that the majority of their SNS friends were known from offline settings. Only 15.6 percent of MySpace users and 10.5 percent of Facebook users knew less than half of their SNS friends, and 68.7 percent of MySpace users and 74.8 percent of Facebook users indicated that they knew almost all of their SNS friends from "real life."

In preparation for bivariate and multivariate analyses, the three composite variables described in Chapter 3—SNS profile creation, SNS friends, and SNS frequency of use—were calculated, and the descriptive results of these variables are summarized in Table 11. Only respondents with profiles on both SNSs were included in these calculations. A majority of respondents had created their

Table 11: Descriptive Results for SNS Composite Variables

		Profile ation	SNS VI		SNS F	riends
-4			12	8.9%	5	3.7%
-3	2	1.5%	30	22.2%	15	11.0%
-2	5	3.7%	24	17.8%	31	22.8%
-1	20	14.7%	13	9.6%	25	18.4%
0	71	52.2%	43	31.9%	37	27.2%
1	17	12.5%	4	3.0%	11	8.1%
2	13	9.6%	5	3.7%	8	5.9%
3	8	5.9%	3	2.2%	4	2.9%
4			1	0.7%	0	0.0%
Total	136	100.0%	135	100.0%	136	100.0%

MySpace and Facebook profiles at the same time (52.2 percent), while most of the remaining respondents had created their MySpace profile first (28.0 percent), and a lesser percentage had joined Facebook first (19.9 percent). However, a majority of respondents participating in both SNSs visit Facebook more frequently (58.5 percent) and have more Facebook friends (55.9 percent) than MySpace. A significant minority reports that they currently visit both sites at about the same rate (31.9 percent) and have about the same number of friends at

each site (27.2 percent), while only a small number of respondents visit Myspace more frequently (8.9 percent) or have more MySpace friends (16.9 percent).

## 4.1.2. Other Variables

Taste preferences were primarily measured by a content analysis of 138 Facebook profiles, and these results are summarized in Table 12. Eighty-eight percent of users displayed at least one third-party application on his or her profile, and 67.2 percent of users had added at least one of the seven "MySpace-style" applications selected in this study. Both variables evidenced considerable positive skew: although as many as 72 applications were found on one profile, Seventy-five percent of users had 8 total applications or fewer. Similarly, although as many as 6 of 7 MySpace-style applications were found on a single profile, 86.9 percent of users had 2 or fewer.

Facebook users' preferences regarding the site's new layout provided an additional measure of taste, and these results are summarized in Table 13. Over 43 percent of all Facebook users reported that they had no opinion or indicated that they liked both layouts about the same. Among those respondents who had a preference, the old layout (38.8 percent) was preferred two to one over the new layout (17.6 percent).

Table 12: Descriptive Results for Number of Facebook Applications

	Min.	Max.	Median	Mean	Standard Deviation
"MySpace-Style" Applications (N = 138)	0	6	1	1.25	1.24
Total Applications (N = 138)	0	72	5	6.99	8.78

Table 13: Descriptive Results for Facebook Layout Preference

Strongly preferred old layout	27	11.9%
Preferred old layout	61	26.9%
No preference	57	25.1%
Preferred new layout	34	15.0%
Strongly preferred new layout	6	2.6%
No opinion or not applicable	42	18.5%
Total	227	100.0%

Table 14: Descriptive Results for High School Type

Public, non- magnet	216	71.1%
Public, magnet	6	2.0%
Private, religious affiliation	75	24.7%
Private, no religious affiliation	7	2.3%
Total	304	100.0%

Table 15: Descriptive Results for High School Quality

Poor	2	0.7%
Below Average	15	4.9%
Average	83	27.3%
Above Average	124	40.8%
Excellent	80	26.3%
Total	304	100.0%

Educational capital was evaluated by high school type and quality, summarized in Tables 14 and 15. The majority of respondents attended a public, non-magnet high school, with a significant minority attending a religious high

school, and a negligible amount attending magnet or non-affiliated private schools. Although the number of respondents attending religious high schools may seem surprising, this statistic is likely explained by the fact that a considerable majority of UM-SL students originate from the St. Louis metropolitan area, where most private high schools are religiously affiliated (UM-SL 2008). Most respondents thought rather highly of their high school's academic quality, with nearly 95 percent considering their high school to be of average or higher quality, and two-thirds of respondents considering their high school to be above average or excellent.

Inherited cultural capital was evaluated by three variables: guardian type, guardian education, and guardian income, summarized in Tables 16 through 18. Most respondents (74.3 percent) grew up in households with two married or adopted parents, while significant minorities lived with a single parent (14.8 percent) or a parent and stepparent (9.2). Over half of the sample (54.5 percent) reported at least one parent with a Bachelor's or more advanced degree, with an additional fourth (25.6 percent) reporting at least one parent with some college.

Ecological estimates of guardian incomes revealed a wide range of socioeconomic origins, with incomes ranging from \$10,491 to \$126,471 and a median household income of \$45,179. To quantify the potential error of such general estimates of guardian income, the standard deviation of each zip code's median household income was calculated using grouped frequency data. Standard

Table 16: Descriptive Results for Guardian Type

Married biological/adopted parents	226	74.3%
Biological/adopted parent and stepparent	28	9.2%
Single biological/adopted parent	45	14.8%
Grandparent(s)	1	0.3%
Other family member(s)	3	1.0%
Other non-family member(s)	1	0.3%
Total	304	100.0%

Table 17: Descriptive Results for Guardian Educational Attainment

Less than high school	5	1.7%
High school	54	17.9%
Some college	77	25.6%
Bachelor's degree	68	22.6%
Advanced degree	97	31.9%
Total	304	100.0%

Table 18: Descriptive Results for Guardian Income

	Min.	Max.	Median	Mean	Standard Deviation
1999 Median Household Income (N = 282)	\$10,491	\$126,471	\$45,179	\$49,370.2	17,084.4

deviations ranged from 28,758.7 to 179,312.6, with a median of 50,229.5, mean of 54,559.4, and standard deviation of 19,801.9. The implications of such wide variability will be discussed in Chapter 5.

To assess the representativeness of the sample's socioeconomic origins to the general population, national data from the 2000 Census were obtained and compared to observed results (U.S. Census Bureau 2000). The national median household income in 1999 was \$41,994, an amount exceeded by the incomes of 61.3 percent of valid respondents. National statistics regarding educational attainment of Americans aged 25 and older are available; however, these figures are not as directly comparable, as respondents were asked in this study for the highest educational attainment level of any one guardian. Table 19 compares the observed percentages for each level of educational attainment with the estimated probability that a two-guardian household in the United States in 1999 would report at least one member to have achieved that level of educational attainment.

Table 19: Comparison of Observed Guardian Education to National Estimates

	Observed	Estimated Probability of Educational Attainment for a Two-Guardian Household in 1999
Less than high school	1.7%	3.8%
High school	17.9%	19.4%
Some college	25.6%	33.9%
Bachelor's degree	22.6%	25.9%
Advanced degree	31.9%	16.9%

These two comparisons suggest that members of this sample tended to have guardians with considerably higher income and educational attainment than the national population.

#### 4.2 **BIVARIATE ANALYSIS**

Pearson correlation coefficients were calculated as appropriate to identify significant bivariate relationships between variables. Table 20 displays the Pearson correlations for the three independent variables—guardian type, guardian educational attainment, and guardian income—and seven dependent variables: SNS preference, users of MySpace, users of Facebook, users of MySpace only, users of Facebook only, and the composite variables of SNS visits and SNS friends.

Table 20: Pearson Correlations between Cultural Capital and SNS Use

	Guardian Type	Guardian Education	Guardian Income
SNS Preference	.09 (N = 215)	.05 (N = 214)	<b>01</b> (N = 199)
MySpace	08	10	06
	(N = 304)	(N = 301)	(N = 282)
Facebook	.02	.00	09
	(N = 304)	(N = 301)	(N = 282)
MySpace Only	03	.00	.04
	(N = 304)	(N = 301)	(N = 282)
Facebook Only	.08	.11	01
	(N = 304)	(N = 301)	(N = 282)
SNS Visits	12	05	04
	(N = 135)	(N = 133)	(N = 125)
SNS Friends	21*	12	22*
	(N = 136)	(N = 134)	(N = 126)

<sup>\*</sup> Sig. < .05

Guardian education was significantly correlated with guardian type (r = .26) and guardian income (r = .18) at the .01 level, although guardian type and guardian income were not significantly correlated with one another. Guardian education was not significantly correlated with any of the seven dependent variables at the .05 level, but was nearly so with having a MySpace profile ( $\rho$  = .10), having a Facebook profile only ( $\rho$  = .07), and SNS friends ( $\rho$  = .17). Guardian type ( $\rho$  = .02) and guardian income ( $\rho$  = .01) were both significantly

correlated with SNS friends, but not with any other dependent variables. In other words, although respondents with two married parents and high guardian incomes did not select SNSs differently than other respondents nor visit Facebook any more frequently than MySpace, they did accumulate significantly more Facebook friends than MySpace friends.

Next, Pearson correlations were calculated between dependent variables and the postulated mediating variables (educational capital and taste preferences). The results of this analysis are summarized in Table 21. Graduate students were less likely to be full-time students than undergraduates (r = -.20,  $\rho < .01$ ), attendees of public, non-magnet high schools were less likely to rate the academic quality of their high school highly (r = -.32,  $\rho < .01$ ), and users with many Facebook applications were significantly more likely to have more "MySpacestyle" applications (r = .74,  $\rho$  < .01), but otherwise educational and taste variables were not correlated with one another. Educational level and high school type were not significantly correlated with any of the dependent variables, but full-time students were more likely than part-time students to use Facebook only and to have more Facebook friends than MySpace friends. High school quality was significantly correlated with three of the seven dependent variables: respondents who rated the academic quality of their high schools highly were more likely to have a Facebook profile, not to have a MySpace profile, and to prefer Facebook.

Table 21: Pearson Correlations between Mediating Variables and SNS Use

	Ed. Level	Ed. Commit.	H.S. Type	H.S. Quality	Facebook Layout	Total FB Apps	"MySpace" FB Apps
SNS Preference	.12 (N= 215)	.06 (N=215)	.03 (N= 215)	.14* (N= 215)	.15 (N=149)	.01 (N= 107)	.05 (N=106)
MySpace	02 (N= 304)	06 (N=304)	.05 (N= 304)	04 (N= 304)	<b>07</b> (N=185)	.20* (N= 138)	.18* (N=137)
Facebook	.07 (N= 304)	.11 (N=304)	.03 (N= 304)	.18** (N= 304)	NA	NA	NA
MySpace Only	08 (N= 304)	.02 (N=304)	06 (N= 304)	09 (N= 304)	NA	NA	NA
Facebook Only	.03 (N= 304)	.18** (N=304)	06 (N= 304)	.15** (N= 304)	.07 (N=185)	20* (N= 138)	18* (N=137)
SNS Visits	07 (N= 135)	<b>02</b> (N=135)	.01 (N= 135)	07 (N= 135)	14 (N=110)	13 (N= 82)	<b>09</b> (N=81)
SNS Friends	10 (N= 136)	05 (N=136)	.08 (N= 136)	10 (N= 136)	09 (N=111)	-20 (N= 83)	28* (N=82)

Note: Pearson correlations between taste preference variables and the incidence of a Facebook profile and the incidence of a MySpace Profile Only were not calculated, as all respondents from whom taste preference data was gathered had a Facebook profile.

<sup>\*</sup> Sig. < .05 \*\* Sig. < .01

Taste preferences were also correlated with a few SNS behaviors. Facebook users with MySpace profiles were more likely to make use of Facebook's customization options, adding more "MySpace-style" applications and more total applications than exclusive users of Facebook. Users with more "MySpace-style" applications also tended to have more Facebook friends than MySpace friends. Facebook layout preference was not significantly correlated with any dependent variables.

Pearson correlations for postulated moderating variables and SNS use are displayed in Table 22. Older respondents (r = .24,  $\rho < .01$ ) were more likely to have created MySpace profiles earlier than Facebook profiles, but otherwise moderating variables were not significantly correlated with one another. Gender was not correlated with any dependent variables, but race was correlated with having only a MySpace profile, as white non-Hispanics were somewhat more likely to use MySpace but not Facebook. This correlation, which is in the opposite direction as expected, is likely explained by the fact that only 1 of the 48 respondents who did not identify as a white non-Hispanic was an exclusive user of MySpace. White respondents were also more likely to have more Facebook friends than MySpace friends.

Table 22: Pearson Correlations between Moderating Variables and SNS Use

	Age	Gender	Gender Race	
SNS Preference	24** (N = 215)	.08 (N = 215)	<b>01</b> (N = 215)	<b>43</b> ** (N = 92)
MySpace	01 (N = 304)	11 (N = 303)	08 (N = 303)	NA
Facebook	23** (N = 304)	.01 (N = 303)	10 (N = 303)	NA
MySpace Only	.13* (N = 304)	08 (N = 303)	.11* (N = 303)	NA
Facebook Only	11 (N = 304)	.07 (N = 303)	07 (N = 303)	NA
SNS Visits	.13 (N = 135)	<b>05</b> (N = 135)	14 (N = 135)	.35** (N = 135)
SNS Friends	.22** (N = 136)	03 (N = 135)	25** (N = 136)	.47** (N = 136)

Note: Pearson correlations for SNS profile creation and individual SNS incidence were not calculated because non-SNS users and SNS users who had created their MySpace and Facebook profiles at the same time were not included in the calculation of the SNS profile creation variable.

<sup>\*</sup> Sig. < .05 \*\* Sig. < .01

Age was significantly correlated with four of the seven dependent variables. Younger respondents were more likely to have a Facebook profile, not to have a MySpace profile, to have more Facebook friends than MySpace friends, and to prefer Facebook in general.

The most striking result of these bivariate correlations is the high correlation between SNS profile creation and SNS preference, SNS visits, and SNS friends. Respondents who joined MySpace earlier than Facebook were more likely to prefer MySpace over Facebook, to visit MySpace more frequently than Facebook and to have more MySpace friends than Facebook friends. The magnitudes of these SNS profile creation correlations were the strongest of all independent/mediating/moderating and dependent bivariate correlations.

In preparation for the evaluation of SNS profile creation as a potential mediating variable, Pearson correlations were calculated for SNS profile creation and all other independent/mediating/moderating variables, and the results of this analysis is summarized in Table 23. Three of 13 independent/mediating/moderating variables were significantly correlated with profile creation. Older respondents were more likely to create MySpace profiles before Facebook profiles, while respondents who had two married parents and who rated their high

Table 23: Pearson Correlations between SNS Profile Creation and Other Variables

Guard. Type	Guard. Education	Guard. Income		Age	Gender	Race
26** (N=136)	05 (N=134)	13 (N=126)		<b>.24</b> ** (N=136)	05 (N=135)	<b>09</b> (N=136)
Ed.	Ed.	H.S.	H.S.	Facebook	Total FB	"MySpace"
Level	Commit.	Type	Quality	Layout	Apps	FB Apps
05	21*	.11	04	.02	.04	.01
(N=136)	(N=136)	(N=136)	(N=136)	(N=111)	(N=83)	(N=82)

<sup>\*</sup> Sig. < .05

school quality highly were more likely to create Facebook profiles before MySpace profiles.

In sum, the bivariate analyses show that profile creation is the variable most significantly correlated with measures of SNS preference and frequency of use, while age and high school quality were also strongly correlated with several dependent variables. Guardian type, guardian income, educational commitment, race, and taste preference variables were significant determinants of a few measures of SNS behavior, but guardian education, educational level, high school type, and gender were not correlated with any dependent variables.

<sup>\*\*</sup> Sig. < .01

## 4.3 MULTIVARIATE ANALYSIS

Multiple regression models were constructed to assess the combined effects of proposed independent, mediating, and moderating variables upon SNS preference, selection and frequency of use. A summary of major statistics and significant independent factors is presented in Table 24.

## 4.3.1. Without SNS Profile Creation

Regression analyses included all proposed independent variables (guardian type, guardian education, and guardian income), all proposed educational capital variables (educational status, educational commitment, high school type, and high school quality), and all demographic variables (race, gender, age) as independent factors. Taste preference variables and SNS profile creation were excluded to increase the sizes of the models; however, because of the latter's unique significance, a regression model was constructed for SNS profile creation in addition to each of the seven dependent variables.

Multicollinearity diagnostics were calculated for each regression model, and tolerance levels for independent factors in all eight models did not decrease below .65. Overall regression F tests were calculated for each of the three linear regression models (SNS profile creation, SNS visits, and SNS friends), while omnibus tests of model coefficients were conducted for each of the five binary logistic regression models (SNS preference, MySpace, Facebook, MySpace Only,

Table 24: Multiple Regression Models and Significant Independent Factors

*Independent Factors:* Guardian Type, Guardian Education, Guardian Income, Educational Level, Educational Commitment, High School Type, High School Quality, Age, Race, Gender

SNS Preference $N = 198$ , $\chi^2 = 34.44**$ , $r^2 = .16$ Age (Wald = 18.75) Educational Level (Wald = 9.13) High School Quality (Wald = 5.48)	SNS Profile Creation $N = 126$ , $F = 2.53**, r^2 = .11$ Guardian Type (t = -2.43) Age (t = 2.36)
MySpace Profile N = 277, $\chi^2 = 11.47$ , $r^2 = .04$	Facebook Profile $N = 277, \chi^2 = 52.75**, r^2 = .17$
No significant independent factors	Age (Wald = 19.47) High School Quality (Wald = 18.21) Educational Level (Wald = 12.84) Guardian Income (Wald = 4.94) High School Type (Wald = 4.16)
<b>MySpace Profile Only</b> $N = 277$ , $\chi^2 = 29.51**, r^2 = .10$	Facebook Profile Only $N = 277$ , $\chi^2 = 25.56**$ , $r^2 = .09$
Age (Wald = 12.28) Educational Level (Wald = 6.75) High School Quality (Wald = 4.95) High School Type (Wald = 4.06)	Educational Commitment (Wald = 5.00) High School Quality (Wald = 4.47)
SNS Visits N = 125, F = 0.87, $r^2 = .01$	SNS Friends N = 126, F = $3.32**, r^2 = .16$
Age (t = 2.09)	Age (t = 3.61) Educational Level (t = -2.48) Race (t = -2.41) Guardian Income (t = -2.21)

<sup>\*\*</sup> Sig. < .01

Facebook Only). Six of the eight regressions yielded significant goodness-of-fit ratios; however, the logistic regression predicting MySpace incidence yielded an insignificant chi-square value of 11.47, and the linear regression predicting SNS visits yielded an insignificant F ratio of .87. The results of these regressions are displayed, but will not be considered in the analysis. Full tables for each of the eight regression models can be found in Appendix B.

Age was the most significant determinant in a majority of the regression models. Educational level, which was not correlated with any of the dependent variables during the bivariate analyses, was the second most significant factor overall. Though age and educational status were positively correlated with one another—with younger respondents more likely to be undergraduates and older respondents more likely to be graduate students—these variables had opposite influences upon SNS behavior. Graduate students and younger respondents exhibited a clear preference for Facebook, while undergraduate students and older respondents preferred MySpace.

High school quality was a significant factor in a majority of regression models, while high school type and educational commitment played important roles in certain SNS selection models. Race was a significant predictor of SNS friends, with white respondents reporting more Facebook friends than MySpace friends, but gender was not a significant predictor in any of the models. Guardian education was not a significant predictor of any SNS behaviors, but guardian type

was the most significant predictor of SNS profile creation. Guardian income was a significant factor in the opposite direction as expected for having a Facebook profile, with respondents with low guardian income more likely to have a Facebook profile. Respondents reporting high guardian incomes were also more likely to have more Facebook friends than MySpace friends.

## 4.3.2. With SNS Profile Creation

Because SNS profile creation was found to have such a significant correlation among the three dependent variables of SNS preference, SNS visits, and SNS friends, these regression analyses were recalculated with SNS profile creation included among the independent factors. Table 25 displays the differences in explained variance and goodness-of-fit results for each of the relevant dependent variable regression models when SNS profile creation is added. In all cases, the explained variance increases with the addition of SNS profile creation, while two of three goodness-of-fit scores increase. Most notably, the inclusion of SNS profile creation as an independent factor generates enough predictive power to salvage the regression model for SNS visits. Moreover, when included in the SNS preference model (Table 26), age, educational level, and high school quality become insignificant factors, due to the overwhelming influence of SNS creation. The effect of SNS profile creation suggests that the question of why

Table 25: Inclusion of SNS Profile Creation in Regression Models

Model	r <sup>2</sup> without Profile Creation	r <sup>2</sup> with Profile Creation	$\Delta r^2$	Goodness of Fit without Profile Creation	Goodness of Fit with Profile Creation	ΔF
SNS Preference	.16 (N = 198)	.28 (N = 85)	.12	$\chi^2 = 34.44**$	$\chi^2 = 28.03**$	-6.41
SNS Visits	.01 (N = 125)	.08 (N = 125)	.07	F = .87 (N = 125)	F = 2.00** (N = 125)	1.13
SNS Friends	.16 (N = 126)	.29 (N = 126)	.13	F = 3.32** (N = 126)	F = 5.54** (N = 126)	2.22

<sup>\*\*</sup> Sig. < .01

SNS users join one site before another is closely related to the question of why SNS users prefer or use one site over another.

Table 26: SNS Preference Regression Model (with Profile Creation)

N = 85		$\chi^2 = 28$ $(\rho < .0$			& Snell = .28	Nagelkerke $r^2 = .50$
Factor		В	S.	E.	Wald	Sig.
SNS Profile Creation		-1.21	.3	39	9.75	.00
Age		32	.2	22	2.26	.13
Race		1.19	.9	96	1.56	.21
High School Quality		.64	.5	54	1.44	.23
Guardian Income	2	.91 x 10 <sup>-5</sup>	4.21 x 10 <sup>-5</sup>		.50	.48
Guardian Type		70	1.03		.46	.50
Educational Commitment		62	1.05		.35	.56
Educational Level		.63	1.18		.28	.60
Gender		.46	1.0	09	.18	.68
High School Type		.51	1.24		.17	.68
Guardian Education		.09	.39		.06	.82
Constant		5.82	5	21	1.25	.27

# **CHAPTER 5: DISCUSSION**

The composition of the sample compared favorably to available statistics regarding UM-SL's population, with two exceptions. The sample consisted of a significantly higher percentage of females (68.3 percent) than the percentage reported for the entire UM-SL student population (59.1 percent), and a significantly higher percentage of white non-Hispanic respondents (84.2 percent) than the percentage reported for UM-SL's on-campus population (70.9 percent).

Several important contextual considerations may account for these discrepancies. Studies have shown that females are more likely to join and use SNSs than males, and therefore the subject of this study may have been more relevant and interesting to females. Similarly, there is some evidence to suggest that races and ethnicities participate in SNSs at different rates. Hargattai (2007), for example, found that African-Americans and Native Americans were significantly less likely to use SNSs than Asian-Americans, Hispanics, and white non-Hispanics. Because African-Americans compose the vast majority of the non-white population at UM-SL, deflated interest among this group may have increased the relative percentage of white, non-Hispanic respondents.

The limitations of UM-SL's race and ethnicity data, which only includes on-campus students and in which data were missing for 12.2 percent of students, may also partially account for this difference. Off-campus students (i.e., those

only enrolled in distant learning classes) comprise 21.8 percent of the student body and were eligible for inclusion in this study, but no race and ethnicity data are available for this group. It is likely that many off-campus students are residents of outlying rural areas, whose racial composition is overwhelmingly white in this geographical region; therefore, the overall percentage of white non-Hispanics in the UM-SL population may be somewhat higher than the on-campus data indicates.

The most troubling aspect of the sample is its low response rate, with 304 valid respondents of 1,493 contacted subjects (20.5 percent), which occurred in spite of preventive measures such as a high coverage rate (98.9 percent, or 1,493 of 1,500 subjects, received e-mails soliciting participation), repeated reminders, and the incentive of winning an iPod. Although some practical researchers consider a response rate of 20 percent acceptable for an electronic questionnaire, the validity of inferences may be jeopardized in questionnaires with response rates as high as 60 percent (Babbie 1990).

Sivo et al. (2006) suggest a number of post hoc strategies to account for non-response error, including a comparison of demographic and socioeconomic differences and a comparison of differences between early and late respondents. Racial discrepancies between the sample and overall UM-SL population suggest that the study's results may overestimate the percentage of UM-SL students using SNSs. The study did not find race to be a very large factor in SNS selection or

frequency of use, but the measurement of this variable is greatly complicated by the small percentage of non-white respondents (15.8 percent). Race was significantly correlated with the incidence of a MySpace profile only (r = .11) in the opposite direction predicted by the theoretical model; however, upon closer inspection, this correlation was significant because only 1 of 48 non-white respondents was an exclusive user of MySpace, compared to 29 of 255 white respondents. The combined effects of a lack of representativeness and the small number of non-white respondents render these conclusions somewhat questionable.

To identify possible errors resulting from non-response, respondents were classified into two categories. Early respondents consisted of those who completed the questionnaire without having received a reminding e-mail, and composed 56.6 percent of the sample (N = 172). Late respondents were those who did not complete the questionnaire until they had received one or more reminding e-mails, and accounted for the other 43.4 percent (N = 132). Pearson correlations were calculated for response time and all proposed independent, mediating, moderating, and dependent variables, with the intention of extrapolating possible sampling errors from significant differences between early and late respondents (Sivo et al. 2006). The only variable in which early and late respondents varied significantly was race (r = .15,  $\rho$  = .01), with white respondents more likely to be early respondents. This finding supports the previously suggested assertion that

non-white students were not adequately represented in the sample, and therefore results regarding the impact of race on SNS use in this study are not likely to be representative of the UM-SL population. Conversely, the finding that no other variables were significantly correlated with response time may suggest that the overall effect of non-response upon the reliability of the study's results is minimal.

Over 85 percent of respondents had profiles on one or more SNSs. This statistic is significantly larger than the 67 percent reported by Lenhart and Madden (2007) in their nationally representative sample of Americans aged 18 to 29, but closely aligned with the 85.2 percent of participants reported by Salaway et al. (2008) in their study of university students. It is also worth noting that UM-SL students (75.7 percent) were somewhat less likely to use Facebook than the university students sampled by Salaway et al. (89.3), while UM-SL students (54.9 percent) were somewhat more likely to use MySpace than the university students sampled by Salaway et al. (48.3 percent).

These findings suggest that university students participate in SNSs at a much higher rate than the overall population, which may be explained by a number of factors, including a higher representation of whites, the well-educated, and those with elevated socioeconomic origin, groups which are likely to have greater Internet access, to use the Internet more frequently, and to participate in social activities that have acquired mainstream popularity. Students at residential

colleges and universities may also be especially likely to participate in SNSs, due to elevated proximity and social interaction with their peer group.

It is worth noting, however, that Lenhart and Madden's statistic originates from a study conducted in 2006, and SNS use has continued to grow at a prodigious rate since that time. Facebook's membership in the United States grew from 35 million to 55 million during the calendar year of 2008 alone, while MySpace membership during the same period grew from 69 million to 76 million (Arrington 2009a). With such volatile growth, it is probable that the percentage of Americans aged 18 to 29 using MySpace or Facebook has increased significantly during the past 30 months, and as such, the considerable gap between rates of use among university students and the overall population is likely to be narrower than the results indicate.

The UM-SL population strongly preferred Facebook over MySpace. Fifty-seven percent of respondents were exclusive users of Facebook or visited Facebook more frequently than MySpace, while the remainder of the sample was split evenly between users who preferred MySpace, users who participated in both sites equally, and respondents who did not use either site. Over 75 percent of respondents had a Facebook profile, and 75 percent of these Facebook users visited the site daily or semi-daily, representing 57 percent of the entire sample. Facebook users also updated their profiles more frequently and reported more friends than MySpace users. A particularly notable finding is the early date at

which many respondents had created their Facebook accounts. Although Facebook's popularity in the United States has only approached MySpace in the past year, 60.4 percent of Facebook users joined the site more than two years ago, and nearly half of all users with one or more SNS profiles were users of Facebook first.

Over half of the sample (54.9 percent) identified as users of MySpace, but measures of frequency of use indicate that the majority of these users either had effectively abandoned MySpace for Facebook, or participated in both SNSs equally. Less than 10 percent of users with profiles on both sites visited MySpace more frequently than Facebook, compared to 31 percent who visited both sites equally and 58 percent who visited Facebook more frequently. Nearly half of all MySpace users visited the site less than 6 times per month, and only 7 percent of MySpace users updated their profiles often or very often.

A summary of the effects of all proposed independent/mediating/ moderating variables is displayed in Table 27. For convenience, variables are divided into three categories: *primary factors* are those that were found to be among the most significant factors in the majority of analyses, *secondary factors* are those for which there is limited evidence of significance, and *non-factors* are those for which no evidence was found of significance.

Table 27: Summary of Factors Influencing SNS Behaviors

<b>Primary Factors</b>	Secondary Factors	Non-Factors
Profile Creation Age Educational Level High School Quality	Taste Preferences Educational Commitment High School Type Guardian Type Guardian Income Race	Guardian Education Gender

Measurements of cultural capital—guardian type, guardian education, and guardian income—were at best secondary indicators of SNS selection and use. Contrary to the expectations of the theoretical model and the hypotheses or findings of other researchers (Hargittai 2007; boyd 2008a), guardian education was not significantly correlated with any dependent variable. Guardian income was a significant factor in only two multivariate analyses, the regression models predicting the incidence of a Facebook profile and SNS friends, but the direction of this relationship in the former was the opposite of what was expected, as respondents with low guardian incomes were more likely to have Facebook profiles. Guardian income, however, was significantly correlated with SNS friends at both the bivariate and multivariate level of analysis. While there is no evidence that respondents with different guardian incomes select or visit SNSs differently, then, those with high guardian income seem more likely to have more Facebook friends than MySpace friends.

Guardian type was significantly correlated with SNS friends, as respondents with two married parents were more likely to have more Facebook friends than MySpace friends, but this significance was not found at the multivariate level. Guardian type was also found to be the most significant predictor of SNS profile creation, as respondents with two married parents were likely to have created their Facebook profiles before their MySpace profile. However, these bivariate relationships should be interpreted with caution, due to the relatively small percentage of respondents without two married biological or adopted parents (25.7 percent).

Although these results suggest that cultural capital is but a minor determinant of the selection and use of SNSs, two important study limitations may contribute to this finding. The homogenous composition of the population is likely to have impeded the external validity of this study. Respondents were predominantly white, female, reported higher levels of guardian education and income than the national population, and were extremely likely to have grown up within a traditional family setting. The sample was also drawn from a localized geographic area, overrepresenting those from the Midwest and those originating from urban or suburban environments. This is a significant limitation in the context of qualitative research suggesting that adoption rates and popularity of SNSs vary widely according to geographic region (boyd 2008c).

Most importantly, the sample consisted entirely of university students, over half of which were pursuing graduate degrees. Respondents with low socioeconomic origins represented in this study had acquired or were acquiring significant educational capital, and therefore cannot be said to represent adequately this subset of the overall population. An overwhelming number of studies have demonstrated the strong correlation between socioeconomic origin and acquired educational capital (e.g., Salaway et al. 2008) and it is possible that the exclusion of young adults with low socioeconomic origins and low educational capital diminished or even erased a correlation between inherited cultural capital and SNS behaviors. It is also possible that competing theories attempting to articulate the formation of taste preferences and social networks are simply more applicable to the respondents of this study with low socioeconomic origins. For example, these respondents may have acquired values or preferences during their educational process that supplanted their inherited cultural mores (Gans 1974), joined Facebook to emulate the socioeconomic class to which they aspire (Veblen 1899), or joined Facebook because their elevated educational attainment exposed them to a greater number of friends with high socioeconomic origin.

A second limitation is the operationalization of guardian income, which relied upon ecological estimates rather than direct data. The median standard deviation of household incomes within zip codes exceeded \$50,000, and was as

high as \$180,000 in wealthy areas. A considerable amount of measurement error, therefore, is likely to exist for this variable, although there is no way to calculate its magnitude. The means of quantifying guardian income in this study, selected due to ethical and practical considerations, is imprecise at best, and this limitation should be taken into account when considering guardian income's diminished effects.

On the other hand, educational capital was found to be a very significant determinant of SNS behavior. High school quality was a significant factor in nearly all bivariate and multivariate analyses, while high school type and educational commitment (full-time versus part-time) were significant factors in a few cases. Educational level (undergraduate versus graduate) was not significant during bivariate analyses, but emerged as a significant factor in nearly all multivariate analyses. The interaction of age and educational level, in particular, is a noteworthy result of this study: although these two variables are positively correlated with one another, their significant effects upon SNS preference, selection, and use are negatively correlated.

While age was one of the most significant factors associated with SNS behavior, race was only significantly associated with SNS friends, and gender was not found to be significantly associated with any measure of SNS behavior. The diminished influence of these two demographic variables should be interpreted with caution, however, due to possible sampling error.

There is some evidence to suggest that taste preferences may play a role in SNS behavior. MySpace users were significantly more likely to customize their Facebook profiles with third-party applications, including those applications with a "MySpace" aesthetic, than users of Facebook only. Users with more "MySpace-style" applications were also likely to have more Facebook friends than MySpace friends. However, these results should also be interpreted with caution, as the number of total applications and "MySpace-style" applications were very highly correlated with one another. The significant inclination of MySpace users to take greater advantage of Facebook's customization features, therefore, may be a product of a general desire for customization rather than a desire to cultivate a specific aesthetic.

The most powerful predictor of SNS behavior, however, was profile creation. As the multivariate analyses show, users tend to prefer the SNS at which they created their profile earliest. The effect of this variable upon SNS preference dwarfed the effects of other independent, mediating, and moderating variables, and this study presents strong evidence that attachment status should be evaluated in future studies of SNS preference.

A revised theoretical model depicting the general results of this study is displayed in Figure 2. Older respondents possessed more educational capital and were more likely to become attached to MySpace, while younger respondents possessed less educational capital and were more likely to become attached to

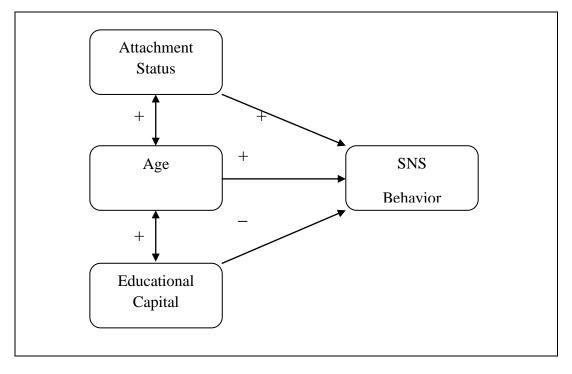


Figure 2: Revised Theoretical Model

Facebook. Respondents who became attached to a particular SNS before the other were most likely to prefer that SNS. Older respondents and undergraduates were more likely to prefer MySpace, but younger respondents and graduate students were more likely to prefer Facebook.

### **CHAPTER 6: CONCLUSIONS**

This study attempted to determine the primary factors associated with SNS selection and frequency of use. Using Bourdieu's theory of cultural capital, a theoretical model of SNS preference was constructed and evaluated by means of a questionnaire and limited content analysis.

The results suggest that socioeconomic origin plays a limited role in determining SNS preference, in contrast to the results of Hargattai (2007) and boyd (2008c). However, the methodological limitations of this study jeopardize the generalizability of this finding, as the homogeneity of the sample and ecological operationalization of guardian income may have contributed to this negative result.

The study did find that three variables were consistently implicated in SNS preference. Many studies have suggested that age is a primary factor in SNS use; however, this study also showed that younger respondents prefer Facebook over MySpace, a result that bodes well for Facebook's continued growth as the size of its user population approaches that of MySpace.

Educational capital, as expressed by educational level and high school quality, is a primary indicator of SNS preference. The latter confirms the findings of Klein (2007) and Lam (2007a; 2007b), while the former suggests that even among educated populations, increased educational capital is correlated with

Facebook preference, as graduate students preferred Facebook to a greater extent than undergraduate students. In light of this behavioral disparity between undergraduate and graduate students, the lack of less educated subjects in the sample is a significant limitation. Although university students provide a convenient source of human subjects, future studies should make a greater effort to include subjects with lower levels of educational capital as well.

Perhaps the most significant finding of the study is the importance of attachment status, a variable that has not been frequently considered in quantitative studies. SNS users overwhelmingly prefer the SNS they joined first. The formation of attachment or loyalty to a SNS is a phenomenon that deserves attention in further studies, as it is not entirely understood what might motivate a user to join a certain SNS before another, or under what circumstances this attachment can be voided. Users did not hesitate to abandon Friendster (boyd 2004), and the results of this study and others suggest that MySpace is losing users to Facebook among university students, but generally MySpace and Facebook both have been successful at retaining the majority of their users. This study only examined attachment status empirically, without addressing the underlying motivations producing this observation, and this is a possible avenue for future research.

Other variables besides these three primary factors were found to be significant indicators of SNS preference at times, but these positive findings were not consistent. On one hand, these inconsistent findings may be partly explained by Type II errors; however, on the other hand, the methodological limitations of this study may have stifled a correlation in some analyses. Socioeconomic origin is included in this category of secondary factors, as well as guardian type, other measurements of educational capital, and race. Besides the aforementioned imprecise estimate of guardian income, some evidence suggests the sample was not representative of the UM-SL population with respect to race. On the other hand, educational commitment and high school type might be expected to be secondary factors, as these variables do not measure educational capital as directly as educational level or high school quality.

The operationalization of taste preferences was perhaps the most difficult methodological impediment encountered in this study, and while some evidence was found of taste as a determinant of SNS preference, ultimately this variable could not be measured precisely enough to qualify for inclusion as a primary factor. The primary reasons for this result are methodological: the difficulty of locating respondents on MySpace required the abortion of data collection from MySpace profiles; a significant percentage of Facebook users did not grant permission for data collection from their profiles, were unable to be located, or had enabled privacy features preventing the researcher from accessing their profiles.

Only two variables were not found to be significant in any of the attempted measurements of SNS preference: guardian education and gender. These were both found to be significant by Hargattai (2007), but it should be noted that her study's sample consisted entirely of undergraduates, examined a much smaller age range of respondents, and did not consider attachment. It is possible that the inclusion of these variables in this study overwhelmed the significance of guardian education or gender as predictors of SNS preference.

Although many limitations were present in this evaluation of SNS preference, this study provides the most comprehensive examination to date of the factors predicting SNS selection and frequency of use. The considerable challenges inherent in measuring social attributes and motivations are complicated further in SNS research by the rapid rate at which SNSs and their users are evolving; however, these difficulties should not deter researchers from attempting to identify, describe, and explain the social dynamics driving SNS behavior. Future studies will likely benefit from an examination of the challenges encountered in this study, as well as its findings and their implications.

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**APPENDIX 1: SUPPORTING MATERIALS** 

A1.1 E-MAILS TO SUBJECTS

Subject: UMSL Study of MySpace/Facebook Behaviors

Dear UMSL Student,

The University of Missouri - St. Louis Department of Sociology is

sponsoring a study of behaviors on social network websites, such as MySpace and

Facebook. You have been randomly selected to participate in this study.

Your participation in this research is voluntary. We ask that you click on

the hyperlink below, which will direct you to a webpage that will inform you of

the goals, benefits, and risks of this research in greater detail. Please read this

information carefully. If you choose to participate, you will then be directed to an

electronic questionnaire, which will take approximately 5-10 minutes to complete.

At the conclusion of the research, participants will be entered into a raffle,

and one participant will win a new 2 GB iPod Shuffle (value: \$69). You can view

the prize and learn more about its features at http://www.apple.com/ipodshuffle.

If you have any questions or concerns about the research at any time,

please contact the principal investigator, Randy Lynn, a graduate student in the

Department of Sociology, at ...@umsl.edu or (...) ...-....

Click here to learn more about the study and access the questionnaire:

http://...

Subject: Reminder: UMSL Study of MySpace/Facebook Behaviors

Dear UMSL Student,

This is a reminder that you have been randomly selected to participate in a study sponsored by the University of Missouri - St. Louis Department of Sociology. If you wish to participate in this research, you have [9, 5, 2] days remaining to do so.

Your participation in this research is voluntary. We ask that you click on the hyperlink below, which will direct you to a webpage that will inform you of the goals, benefits, and risks of this research in greater detail. Please read this information carefully. If you choose to participate, you will then be directed to an electronic questionnaire, which will take approximately 5-10 minutes to complete.

At the conclusion of the research, participants will be entered into a raffle, and one participant will win a new 2 GB iPod Shuffle (value: \$69). You can view the prize and learn more about its features at http://www.apple.com/ipodshuffle.

If you have any questions or concerns about the research at any time, please contact the principal investigator, Randy Lynn, a graduate student in the Department of Sociology, at ...@umsl.edu or (...) ...-.....

Click here to learn more about the study and access the questionnaire: http://...

Subject: UMSL Study

Hi, I'm the researcher from the UMSL survey of MySpace/Facebook behaviors that you participated in a while ago. You gave permission to view your profile, but since it's private, I would like to add you as a friend. Only data about how many friends you have and the use of certain applications will be recorded. Anything I view will be kept completely confidential. I will remove you as a friend once I've collected this data.

### A1.2 INFORMED CONSENT

You must read the following information and enter your name in the text box below to participate.

# Why am I being asked to participate?

You are invited to participate in a research study about behaviors on social network websites conducted by Randy Lynn, a graduate student in the Department of Sociology, under the supervision of Dr. Nancy Shields, Department of Sociology, at the University of Missouri-St. Louis.

You have been asked to participate in the research because you are a currently enrolled UMSL student between the ages of 18 and 29 and have been randomly selected to participate.

We ask that you read this form and ask any questions you may have before agreeing to be in the research. Your participation in this research is voluntary. Your decision whether to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

## What is the purpose of this research?

This project aims to identify the characteristics or preferences that

influence the selection and frequency of use of two social network websites:

MySpace and Facebook. Data concerning your demographic background and your social network website behavior will be collected and statistically analyzed.

### What procedures are involved?

If you agree to participate in this research, you can expect:

- You will be directed to a webpage where you will be asked to enter your UMSL e-mail address. This is done to ensure that you only complete the questionnaire once and unauthorized participants do not complete the questionnaire. If you choose to volunteer data from your public MySpace or Facebook profile, your UMSL e-mail address will also be used to match your questionnaire responses to your profile data. Neither your UMSL password nor any other identifying data will be required to participate in this study. You must enter your UMSL e-mail address in order to access the questionnaire.
- You will then be directed to an Internet-based questionnaire, which will ask questions regarding your MySpace and/or Facebook behaviors, your educational status, and your demographic characteristics. You are not required to answer any question that you do not feel comfortable answering, and you may exit the questionnaire at any time. The questionnaire will take approximately 5-10 minutes to complete.

- At the end of the questionnaire, you will be asked for permission to view your public MySpace and/or Facebook profiles. This permission is entirely optional and will not affect your chances at winning the iPod. If you choose to grant this permission, the researcher will use your name and MySpace and/or Facebook's search functions to locate and view your profile(s). The researcher will record the number of friends you have, the date of your most recent wall posts, and the use of certain applications (Facebook only). Absolutely no other data will be recorded. Please view the section below entitled "What about privacy and confidentiality?" for more information regarding this aspect of the research.
- Once the data collection is complete, the researcher will collect the names of those subjects who participated in the questionnaire, and randomly select one (1) participant to receive a new 2 GB iPod Shuffle (value: \$69). The odds of winning will depend upon the number of respondents. Refusal to answer all questions or to grant permission to view public MySpace/Facebook profiles will not affect participants' chances of winning. The researcher will contact the winner via his or her UMSL email address, and the winner will have three (3) months to claim his or her prize. Participants who do not win the iPod will not be contacted. Further details about the features of the iPod Shuffle can be viewed at http://www.apple.com/ipodshuffle.

## What are the potential risks and discomforts?

There are certain risks and discomforts that may be associated with this research.

They include:

- You may know the primary researcher (Randy Lynn) from previous or current classes, either as a fellow student or a teaching assistant. All information collected will remain confidential. Furthermore, if you know the researcher from a current class in which he is a teaching assistant, your decision not to participate will not affect your standing in that class. If you are uncomfortable providing this information to the researcher, however, it is recommended that you do not participate in the research.
- The information solicited in the questionnaire is not likely to cause stress. However, if you feel uncomfortable answering any question for any reason, you are not obligated to do so. You may skip any questions and continue with the questionnaire, or you may end your involvement in the research with no questions asked. Submitting an incomplete questionnaire or terminating your involvement in the research after beginning the questionnaire will not affect your chances at winning the iPod.
- At the end of the questionnaire, you will be asked for permission to view your public MySpace and/or Facebook profiles. Depending on the content of your profile(s), you may be uncomfortable allowing the researcher to

view your profile(s). This permission is entirely optional and will not affect your chances at winning the iPod. Under no circumstances will private profiles or public profiles that participants have not granted explicit permission for the researcher to view be accessed or used in this research.

## **Are there benefits to taking part in the research?**

Few academic studies have examined the factors influencing selection of or behavior within social network websites. Previous studies have been subject to various limitations that have impeded the validity and generalizability of their research findings.

This research is likely to advance academic knowledge of the factors that influence how young adults aged 18 to 29 select and use social network websites. It incorporates design elements, such as random sampling and a combination of questionnaire and content analysis data, that have been infrequently used in previous studies and will increase validity. Findings could have considerable social implications and contribute significantly to the fields of sociology, communications, and information technology.

Although one (1) participant will receive an iPod Shuffle for his or her participation in the questionnaire aspect of the study (see above: "What

procedures are involved?"), subjects will receive no other direct benefits as the result of their participation in this study.

# Will I be told about any new information that may affect my decision to participate?

During the course of the study, you will be informed of any significant new findings (either good or bad), such as changes in the risks or benefits resulting from participation in the research, or new alternatives to participation, that might cause you to change your mind about continuing in the study. If new information is provided to you, your consent to continue to participate in this study will be re-obtained.

### What about privacy and confidentiality?

The only people who will know that you are a research subject is the primary researcher and the members of his thesis committee. No information about you, or provided by you during the research, will be disclosed to others without your written permission, except:

 if necessary to protect your rights or welfare (for example, if you are injured and need emergency care or when the University of Missouri-St Louis Institutional Review Board monitors the research or consent process); or

# • if required by law.

When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity. Any information that is obtained in connection with this study, and that can be identified with you, will remain confidential and will be disclosed only with your permission or as required by law.

Names, e-mail addresses, and questionnaire responses will be matched and stored on password-protected computers to prevent unauthorized access. At the completion of data collection, names and e-mail addresses will be deleted from questionnaire responses to protect privacy.

If the respondent grants permission for the researcher to view his or her public MySpace and/or Facebook profiles, the researcher will use respondent's name and MySpace's and/or Facebook's search functions to locate and view the respondent's profile(s). Under no circumstances will the profiles of respondents who have restricted access to their profile or the profiles of respondents who have made their profile public but have not explicitly granted permission to the researcher be viewed. The researcher will record the number of friends the respondent has, the date of the respondent's recent wall posts, and the respondent's use of selected applications (Facebook only).

Absolutely no other data will be recorded, and at no time will the respondent's profile be downloaded for permanent storage. The researcher will

only collect data from public profiles using password-protected computers with a secure Internet connection. After the researcher has collected data from public profiles, he will delete his cookies, temporary browser files, and browser history to eliminate all traces of the respondent's profile from the computer.

Data from public profiles will be matched with names, e-mail addresses, and questionnaire responses. This data will be stored on password-protected computers to prevent unauthorized access. At the completion of data collection, names and e-mail addresses will be deleted from questionnaire responses and data from public profiles to protect privacy.

### What are the costs for participating in this research?

There are no research costs for which the participant will be responsible.

### Will I be paid for my participation in this research?

You will not be paid or compensated in any way for your participation in this research.

One (1) participant will be randomly selected to receive a new 2 GB iPod Shuffle (value: \$69). The odds of winning will depend upon the number of respondents. Refusal to answer all questions or to grant permission to view public MySpace/Facebook profiles will not affect participants' chances of winning.

The researcher will contact the winner via his or her UMSL e-mail address, and the winner will have three (3) months to claim his or her prize. Participants who do not win the iPod will not be contacted. Further details about the features of the iPod Shuffle can be viewed at http://www.apple.com/ipodshuffle.

## Can I withdraw or be removed from the study?

You can choose whether to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You also may refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

### Who should I contact if I have questions?

The researcher conducting this study is Randy Lynn, graduate student, Department of Sociology. Please ask any questions you have now before clicking on the link below and agreeing to informed consent. You may contact the researcher by e-mail at ...@umsl.edu, or by phone at (...) ...-.... You may contact him at any time during your participation in the study if unforeseen questions or concerns arise.

## What are my rights as a research subject?

If you have any questions about your rights as a research subject, you may call the Chairperson of the Institutional Review Board at (314) 516-5897.

#### Will my student status at UMSL be affected?

You may choose not to participate, or to stop your participation in this research, at any time. This decision will not affect your class standing or grades at UMSL. You will not be offered or receive any special consideration if you participate in this research.

### What if I am a UMSL employee?

Your participation in this research is, in no way, part of your university duties, and your refusal to participate will not in any way affect your employment with the university or the benefits, privileges, or opportunities associated with your employment at UMSL. You will not be offered or receive any special consideration if you participate in this research.

**Remember:** Your participation in this research is voluntary. Your decision whether to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Lynn, Randy, 2009, UMSL, p.136

Please print out a copy of this form for your information and to keep for your

records.

I have read the above statement and have been able to express my concerns,

to which the investigator has responded satisfactorily. I believe I understand

the purpose of the study, as well as the potential benefits and risks that are

involved. By entering my name in the text box below and clicking on the

"Next" button, I give my permission to participate in the research described

above.

1. Name:

Next

## A1.3 QUESTIONNAIRE

This questionnaire contains a number of questions about your behavior on social network websites, educational status, and general background. All answers will be kept completely confidential. The questionnaire will take 5-10 minutes to complete.

You must enter your UMSL e-mail address to begin. This is to protect against unauthorized respondents, to ensure that you only take the questionnaire once, to match your responses to any profile data that you volunteer, and to enter you into the iPod raffle.

	2. UMSL E-mail Address:	
--	-------------------------	--

Next

Choose the answer that best describes your MySpace behavior.

- 3) Do you have a MySpace profile?
  - Yes, a public one
  - Yes, one with restricted visibility;
  - No.

(If the respondent answers "No," skip to question 10.)

- 4) About how long ago did you create your MySpace profile?
  - Less than six months ago
  - Between six months and a year ago
  - Between one and two years ago
  - More than two years ago
- 5) Currently, how often do you visit MySpace?
  - At least once per day
  - Many times per month (10 or more)
  - Several times per month (5 to 10)
  - A few times per month (1 to 5)
  - Rarely or never

6) On	average	since	you	created	your	MySpace	profile,	how	often	have	you
visited	MySpace	e?									
•	At least	once p	er da	ıy							

• Several times per month (5 to 10)

Many times per month (10 or more)

- Several times per month (5 to 10)
- A few times per month (1 to 5)
- Rarely or never
- 7) About how often do you update your MySpace profile?
  - Very often
  - Often
  - Sometimes
  - Rarely/Never
- 8) Currently, about how many friends do you have on MySpace?
  - 0-25
  - 26-50
  - 51-100
  - 101-200
  - 201 or more

- 9) Of your current MySpace friends, about how many do you know in offline settings ("real life")?
  - Very few (0-20%)
  - Not many (21-40%)
  - About half (41-60%)
  - Most of them (61-80%)
  - Almost all of them (81-100%)

Choose the answer that best describes your Facebook behavior.

- 10) Do you have a Facebook profile?
  - Yes, a public one
  - Yes, one with restricted visibility
  - No

(If the respondent answers "No," skip to question #18.)

- 11) About how long ago did you create your Facebook profile?
  - Less than six months ago
  - Between six months and a year ago
  - Between one and two years ago
  - More than two years ago

- 12) Currently, how often do you visit Facebook?
  - At least once per day
  - Many times per month (10 or more)
  - Several times per month (5 to 10)
  - A few times per month (1 to 5)
  - Rarely or never
- 13) On average since you created your Facebook profile, how often have you visited Facebook?
  - At least once per day
  - Many times per month (10 or more)
  - Several times per month (5 to 10)
  - A few times per month (1 to 5)
  - Rarely or never
- 14) About how often do you update your Facebook profile?
  - Very often
  - Often
  - Sometimes
  - Rarely/Never

15	Currently,	about ho	w many	friends d	lo you l	have on	Facebook?

- 0-25
- 26-50
- 51-100
- 101-200
- 201 or more
- 16) Of your current Facebook friends, about how many do you know in offline settings ("real life")?
  - Very few (0-20%)
  - Not many (21-40%)
  - About half (41-60%)
  - Most of them (61-80%)
  - Almost all of them (81-100%)

- 17) Facebook has recently made changes to its design and layout. What is your opinion of the "new" Facebook?
  - I strongly preferred the "old" Facebook
  - I preferred the "old" Facebook
  - I prefer the "old" and "new" Facebook about the same
  - I prefer the "new" Facebook
  - I strongly prefer the "new" Facebook
  - No opinion or not applicable

Choose the answer that best describes your educational status.

- 18) Which best describes the type of high school you attended?
- (If you attended more than one high school, choose the answer that best describes the high school you attended for the longest time.)
  - Public
  - Public, magnet
  - Private, religious affiliation
  - Private, no religious affiliation
  - Home schooled
  - Other

19) How would you rank the academic quality of the high school you attended?

(If you attended more than one high school, choose the answer that best describes the high school you attended for the longest time.)

- Excellent
- Above Average
- Average
- Below Average
- Poor

20) What is the highest level of education you plan to attain?

- Less than an undergraduate degree
- An undergraduate degree
- An advanced degree
- Other
- Don't know

21) What is your current educational status?

• Full time: undergraduate

• Full time: graduate

• Part time: undergraduate or graduate

Other

22) How would you rank the academic quality of the undergraduate institution you attended?

(This question is for graduate students only. If you are not a graduate student, please select "Not Applicable.")

- Excellent
- Above Average
- Average
- Below Average
- Poor
- Not Applicable

Part 4: Choose the answer that best describes your general background.

- 23) Please enter the zip code where you currently reside. If you don't remember the zip code, please enter the city and state.
- 24) Please enter the zip code *where you lived longest prior to age 18*. If you don't remember the zip code, please enter the city and state.

- 25) With whom did you live for the majority of the time *prior to age 18*?
  - Married biological or adopted parents
  - A biological or adopted parent and a step-parent
  - One biological or adopted parent
  - Grandparent(s)
  - Other family member(s)
  - Other non-family member(s)
- 26) What is the highest level of education attained by *any person you resided with* prior to age 18?
  - Less than high school
  - High school
  - Some college
  - Bachelor's degree
  - Advanced degree
  - Other

- Caucasian or white
- African-American or black
- Spanish, Hispanic, or Latino
- American Indian
- Asian-American or Pacific Islander
- Other

# 28) What is your age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29

29) What is your gender?

- Male
- Female

30) If you have a public MySpace or Facebook profile, do you give permission for the researcher to view these profile(s)?

Only data regarding the number of friends, the dates of recent wall posts, and the use of certain applications (Facebook only) will be recorded. This component of the research is optional. Anything viewed will be kept completely confidential, and profiles will not be saved.

- Yes
- No

Thank you for completing the questionnaire. If you have comments you would like to make about the questionnaire, please enter them here. Your feedback is welcomed.

You may also assist the researcher by entering the URL of your MySpace and/or Facebook profile(s), if you have given permission for the researcher to view your profile(s).

**APPENDIX 2: REGRESSION ANALYSES** 

SNS Preference										
N = 198	$\chi^2 = 34$ $(\rho < .0$		_	& Snell = .16	Nagelkerke $r^2 = .25$					
Factor	В	S.E.		Wald	Sig.					
Age	40	.09		18.75	.00					
Educational Level	1.37	.45		.45 9.13						
High School Quality	.57	.24		5.48	.02					
High School Type	.75	.48		2.45	.12					
Gender	.65	.47		1.91	.17					
Guardian Type	.35	.46		.57	.45					
Educational Commitment	30	.45		.43	.51					
Guardian Income	-5.82 x 10 <sup>-6</sup>	1.32 x 10 <sup>-5</sup>		1.32 x 10 <sup>-5</sup>		.20	.66			
Race	.21	.57		.57		.14	.71			
Guardian Education	01	.19		.00	.95					
Constant	7.65	2.4		9.76	.00					

MySpace Profile										
N = 277		$\chi^2 = .11.47$ ( $\rho = .32$ )		_	& Snell = .04	Nagelkerke $r^2 = .05$				
	·					·				
Factor		В	S.E.		Wa	ıld	Sig.			
Gender		47	.27		3.1	4	.08			
Race		40	.38		1.1	1	.29			
Educational Commitment		30	.29		.29		.29 1.08		)8	.30
Guardian Type		30	.32		.32		.9	1	.34	
Guardian Education		11	.12		.12 .82		.37			
High School Type		.23	.29		.6	1	.44			
Age		03	.06		.23	3	.63			
Guardian Income	-3.0	5 x 10 <sup>-6</sup>	7.49 x 10 <sup>-6</sup>		7.49 x 10 <sup>-6</sup>		.1	7	.74	
High School Quality		.05	.15		.15		.1	1	.74	
Educational Level		.05	.29		.0.	3	.87			
Constant	1	1.85	1.	60	1.3	33	.25			

Facebook Profile										
N = 277		$\chi^2 = 52.75$ ( $\rho < .01$ )		2 & Snell 2 = .17	Nagelkerke $r^2 = .26$					
Factor	В	S.E.		Wald	Sig.					
Age	33	.0	7	19.47	.00					
High School Quality	.87	.20		18.21	.00					
Educational Level	1.35	.37		12.84	.00					
Guardian Income	-2.01 x 10 <sup>-5</sup>	9.02 x 10 <sup>-6</sup>		4.94	.03					
High School Type	.75	.37		4.16	.04					
Race	94	.54		3.01	.08					
Gender	.26	.34		.58	.45					
Guardian Education	06	.15		.17	.68					
Guardian Type	13	.39		.11	.74					
Educational Commitment	.02	.3	6	.00	.96					
Constant	6.67	1.9	96	11.59	.00					

MySpace Profile Only										
N = 277		$\chi^2 = 29.51$ ( $\rho < .01$ )		$\frac{1}{2}$ & Snell $\frac{1}{2}$ = .10	Nagelkerke r <sup>2</sup> = .21					
Factor	В	S.E.		Wald	Sig.					
Age	.32	.09		.09 12.28						
Educational Level	-1.25	.48		.48 6.75						
High School Quality	59	.26		4.95	.03					
High School Type	-1.00	.49		4.06	.04					
Gender	-1.00	.52		3.63	.06					
Race	2.10	1.13		3.41	.07					
Educational Commitment	.76	.50		2.30	.13					
Guardian Type	42	.52		.64	.42					
Guardian Income	9.28 x 10 <sup>-6</sup>	1.27 x 10 <sup>-5</sup>		.54	.46					
Guardian Education	.09	.2	.21		.68					
Constant	-9.24	2.8	80	10.85	.00					

Facebook Profile Only										
N = 277	$\chi^2 = 23$ $(\rho < 1)$	$\chi^2 = 25.26$ ( $\rho < .01$ )		& Snell 2 = .09	Nagelkerke $r^2 = .12$					
Factor	В	S.	E.	Wald	Sig.					
Educational Commitment	.76	.34		.34 5.00						
High School Quality	.37	.1	.18 4.47		.03					
Educational Level	.46	.33		1.97	.16					
Gender	.37	.2	29	1.63	.20					
Age	08	).	.07		.21					
Race	.44	.4	.43 1.03		.31					
Guardian Income	-7.62 x 10 <sup>-6</sup>	8.28	x 10 <sup>-6</sup>	.85	.36					
Guardian Education	.11	.1	.3	.72	.40					
Guardian Type	.14	.36		15	.70					
High School Type	05	.3	32	.02	.88					
Constant	-1.58	1.	83	.75	.39					

SNS Profile Creation										
N = 12	6	I	$F = 2.53 \ (\rho < .01)$	) Adjus	Adjusted $R^2 = .11$					
Factor	В		B S.E.		t	Sig.				
Guardian Type	61		.25	-2.43	.02					
Age	.11		.05	2.36	.02					
Educational Level	43		43 .23		-1.85	.07				
Guardian Income	-9.39 x 10 <sup>-6</sup>		6.00 x 10 <sup>-6</sup>	-1.53	.13					
Educational Commitment	35		35 .24		.14					
High School Type	.20		.24	.82	.42					
Guardian Education	.08		.08 .09		.43					
High School Quality	.08		.13	.65	.52					
Race	10		10 .29		.73					
Gender	08		.22	34	.74					
Constant	-1.52		1.27	-1.20	.23					

SNS Visits										
N = 12	5	$F = .87 (\rho = .56)$	Adjust	Adjusted $R^2 =01$						
Factor	В	S.E.	t	Sig.						
Age	.15	.07	2.09	.04						
Educational Status	52	.37	-1.41	.16						
Race	62	.45	-1.37	.17						
Educational Commitment	.24	.37	.66	.51						
Gender	23	.35	65	.52						
Guardian Type	22	.40	54	.59						
High School Type	27	.40	69	.49						
High School Quality	11	.20	54	.59						
Guardian Income	-9.19 x 10 <sup>-7</sup>	1.00 x 10 <sup>-5</sup>	09	.93						
Guardian Education	01 1 15		06	.95						
Constant	-3.43	2.02	-1.70	.09						

SNS Friends $E = 2.22 (a < 01)$ Adjusted $B^2 = 16$										
N = 12	6	$F = 3.32 (\rho < .01)$	) Adjus	Adjusted $R^2 = .16$						
	·									
Factor	В	S.E.	t	Sig.						
Age	.22	.06	3.61	.00						
Educational Status	76	.31	-2.48	.01						
Race	90	.38	-2.41	.02						
Guardian Income	-1.78 x 10 <sup>-5</sup>	8.00 x 10 <sup>-6</sup>	-2.21	.03						
Guardian Type	36	.33	-1.09	.28						
Educational Commitment	.22	.31	.71	.48						
Gender	.14	.29	.49	.63						
Guardian Education	03	.12	22	.83						
High School Quality	03	.16	18	.86						
High School Type	- 11/1		.13	.90						
Constant	-3.72	1.67	-2.23	.03						

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