Social Networking Website Users and Privacy Concerns: A Mixed Methods Investigation

Stephanie J. Mills

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SOCIAL NETWORKING WEBSITE USERS AND PRIVACY CONCERNS: A MIXED METHODS INVESTIGATION

THESIS

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SOCIAL NETWORKING WEBSITE USERS AND PRIVACY CONCENS:
A MIXED METHODS INVESTIGATION

THESIS

Presented to the Faculty
Department of Systems and Engineering Management
Graduate School of Engineering and Management
Air Force Institute of Technology
Air University
Air Education and Training Command

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Engineering Management

Stephanie J. Mills, BS
Captain, USAF

March 2009

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Abstract

Social networking websites are the fastest growing entity on the Internet. Users of social networking websites post personal information and pictures on these websites. Privacy and social networking websites has been previously studied, however, since those studies were conducted the rules for those websites have changed dramatically.

A mixed methods approach was used in this study to examine what privacy concerns users of social networking websites have, whether it’s regarding information on their accounts or the pictures they have posted. This study also considered if there were common personality traits present in people with those concerns. A comparison of user preferences between MySpace and Facebook was also conducted.

Quantitative data in the form of survey information was used in addition to qualitative data gathered from semi-structured interviews. This study supports that Social Desirability Bias was correlated with a user being selective of what pictures were displayed on social networking website accounts. Few users expressed a preference for one social networking website over the other. Over half of the participants did express concern for their privacy on social networking website accounts, but there were no personality factors that showed to be predictive of that concern.
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SOCIAL NETWORKING WEBSITE USERS AND PRIVACY CONCENS:
A MIXED METHODS INVESTIGATION

I. Introduction

Background

People spend a lot of time using social networking websites. Users spend an average of 10-30 minutes on them each day and have 150-200 people on their friend lists (Ellison, Steinfield, & Lampe, 2006). In 2006 the top ten social networking websites experienced 47 percent growth compared to the previous year and attracted 45 percent of all Internet users (Nielsen/NetRatings, 2006). However, there are often negative side effects to using social networking websites. For example, users may not want certain people, such as potential employers or those who might do them harm, to view the information on their accounts. In some situations, users might not even realize the negative side effects to using social networking websites due to the recent advent of social networking websites (Ahern, Dwyer, Fogel, Green, Gross). This lack of awareness has been supported in research of social networking site users, especially studies that compare users of social networking websites to non-users. For example, users of social networking websites have greater risk taking attitudes than people that do not use social networking websites (Fogel, 2008).

As a result, this study will explain the concerns users of social networking websites have related to their account information, in the form of the pictures and the information displayed. Additionally, this study will determine the antecedents of those concerns, specifically, what individual differences might relate to those concerns.
Finally, a comparison between two popular social networking websites, MySpace and Facebook, will be conducted.

**Purpose and Significance of the Study**

The need for users to be concerned for this privacy on social networking websites is significant to the Air Force. Users display pictures that may compromise operational security, allowing terrorists or other groups wishing to do harm to the base more access than they would otherwise have. By learning what makes users more sensitive to their account privacy and what feelings users currently hold, it will be easier to educate users in a way that will promote operational security at all times, rather than waiting until an inappropriate picture has been posted and punishing the offender.

There are significant privacy related issues that revolve around social networking site user account information. Often employers will conduct Internet searches on prospective employees. These searches will return MySpace and Facebook accounts, where the user’s personal life is on display, often including pictures or messages. It is not just job seekers affected; beauty queens, trial defendants, and current employees are often punished or fired based on pictures shared online, either in their own accounts or other users’. One DUI defendant was asked by her lawyer if she had a MySpace page, when she said yes, he told her to take it down right away. She didn’t, and incriminating pictures from her account were presented in the trial, blindsiding her defense (Associated Press, 2008).

Privacy concerns of Internet users are important for many reasons. Research on social networking website users is important because there can be negative consequences to posting too much information, or the wrong kind of information on their accounts. By
understanding what social networking website users are thinking, it will be easier to warn them of the dangers or understand how social networking websites may negatively influence the company that the user works for, especially in the case of an Air Force employee. A recent example of this risk can be seen in the case of Vincent Barnett, a 21 year old man facing numerous rape charges after meeting an 18 year old female through MySpace (U.S. Marshals, 2009). To further emphasize the danger of communicating through social networking sites is a report covering human trafficking. This report stated that many minors involved in commercial sex rings are initially contacted through websites like MySpace and Facebook (Charrier-Bots, 2009). This study is an indicator of where social networking members stand in realizing the risks and even dangers of sharing too much personal information with strangers.

Users may share personal information with complete strangers that intend to use that information to stalk or harass users. Pictures may be pulled from accounts and spread or labeled in a way that embarrasses the original poster. This recently happened in Wisconsin. Eighteen year old Anthony Stancl posed as a female on Facebook to lure male students into sending nude photos. Once he had possession of the nude photos Stancl coerced seven of the 31 male students that sent photos into sex acts (Jones, 2009).

Social networking site members have even gone to jail due to evidence found on their MySpace or Facebook account which was incriminating, or demonstrated a lack of remorse. Joshua Lipton is one such user. In 2006 he was sent to jail after a picture of him drinking, while wearing a jailbird costume surfaced on his Facebook account just weeks after being charged in a drunken-driving crash, severely injuring Jade Combies. The picture was used during the trial, with the word remorseful and a question mark
written along the bottom (Fitzpatrick, 2008). The repercussions of that photo didn’t end there, as Lipton was denied parole in January 2009 (McKinney, 2009). During the initial sentencing Judge Procacinni said, “For this defendant to think of mocking and joking about his irresponsible, reckless and life-altering dangerous behavior…is sick, depraved and disgusting” (Fitzpatrick, 2008).

Not only is there a risk of potential employers and courts finding inappropriate things on social networking sites, but also family members. A greater risk may be had in complete strangers finding accounts and using the information to harass or stalk users. Additionally, other users may not be what they seem, as was demonstrated in the case of the teen girl that committed suicide after dealing with a fictitious personality on MySpace.

As a result, the purpose of this research was to determine if users of social networking websites are concerned by those risks. Furthermore, this research examined the attitudes users of social networking sites have toward those risks and what they do to mitigate them. Additionally, this research looked at reasons why some users have more concern with privacy on online social networking websites, whether it is personality driven or due to some other factor that users concerned, or not concerned with privacy, have in common.

This study is important as social networking sites are still a fairly new phenomenon. In the beginning, users did not have many options and many of the websites available today are very similar. The results of this study will be of significance to website developers in creating social networking websites and knowing what criteria are important to users on a security and privacy basis. It will also help them to see what
kind of users may be attracted by various settings. The Air Force has good reason to be concerned with what users are saying, or not saying, on social networking sites. In September 2006, Kunsan-based agents of the U.S. Air Force Office of Special Investigations were told by their OSI counterparts at Sheppard Air Force Base, Texas, that a video clip had been posted on a personalized MySpace page showing “an individual throwing a frog into a running F-16 engine intake” (Fisher, 2007).

Additionally, the Air Force discontinued its user account on the social networking Web site MySpace.com after concerns that association with inappropriate content might damage the service's reputation (Air Force Link, 2006). Taking the concern one step further, is a troubling article in 2007, reporting that the Air Force’s Office of Special Investigations is warning airmen to exercise caution when using the popular Internet social networking site MySpace.com. The warning comes after OSI Special Agent Ryan Amedure investigated several airmen who were solicited “specific information” via MySpace.com about RAF Lakenheath in the past several months (Mitchell, 2007).

**Research Questions**

Two social networking websites, Facebook and MySpace, were examined for this study. They were selected for this study because they are the two most popular social networking websites used on the Internet today (Fogel, 2008). Literature regarding Facebook or comparisons between Facebook and MySpace are easy to find, but because they often occurred before Facebook was opened to the general public, the relevancy of that research, even if said research was done just one or two years ago, may be out of date due to changes in the websites being study. For example, Dwyer (2007) found that users of Facebook had more trust in the accuracy of user accounts when compared to the
trust MySpace users had in accounts found on that site. However, MySpace users found it easier to meet new people than Facebook users through their respective sites. MySpace users were also much more likely to meet fellow users face to face and to chat over instant messenger or email. These findings were consistent with Lampe’s (2006) results which determined that Facebook was used primarily to manage relationships initiated offline. Because of this, Facebook users displayed more trust in other users and account content.

Comparisons between MySpace and Facebook were made in order to examine issues specific to each website, and if and why there may be more privacy concerns with one site over the other. For example, MySpace has always been open to people age 13 and older. Facebook, on the other hand, was originally open only to college students with a valid college email address. Facebook has been open to the general public since 2006; however usage of the two websites still differs (Rosmarin, 2006). This study looked at the different perceptions held by users of the sites and if one site is more attractive to users than the other.

The first part of this study was to determine what concerns social networking website users have regarding their social networking website account information. Once those concerns were identified, antecedents to those concerns were determined. Specifically, which individual differences in the participants of the study might relate to those concerns and to what extent. Finally, the data collected for the purposes of the study will be examined in a correlation matrix to determine what relations exist between user demographics, personal information, and the codes created from the interviews.
II. Literature Review and Hypotheses

Introduction

Currently there is limited research on privacy issues as they apply to social networking websites. As Ahern (2007) pointed out in referring to Facebook and MySpace, “privacy and disclosure factors in those systems have not yet been studied in depth” as social networking websites have been in existence for less than a decade. However, some research has been conducted. Dwyer (2007) determined that privacy in online social networking sites is often not expected. Acquisiti and Gross (2006) determined that many Facebook members reveal a lot of personal information in their accounts without being fully aware of available security options or who can actually view the account. Therefore, while social networking website security issues have been studied the numbers of studies examining privacy issues are limited.

Background

For the purposes of this study some terms may benefit from further definition. These terms are social networking websites and privacy. A social networking website is one through which users create accounts and are able to communicate with other users. Facebook and MySpace are two such social networking websites. Users sign up for a social networking website by providing a name and email address. After creating a password the user can personalize their online account with more personal information, like location, age, likes, dislikes, and pictures. When setting up their account users select privacy settings. The settings range from allowing anyone to view the user’s entire account to allowing only people on the user’s “friend” list to view sections of the account like pictures. Users add to their friends list by requesting a person as a friend through a
link on that person’s account. The person requested to be a friend can then either accept or decline the offer. Once accepted, that user’s name is added to the first user’s friend list. It is important to note that while social networking websites request the user input a name upon registration, the user is not required to use their real name. As a result, users might deceive others as to their real identity.

Privacy

One of the earliest cited definitions of privacy is that of “the right to be left alone” (Green, 2008, p 2). For the purposes of this study, a multidimensional conceptualization is more appropriate, which is “the ability to control and limit physical, interactional, psychological and informational access to the self or one’s group” (Green, 2008, p 2). This conceptualization is important as privacy in social networking websites is greatly related to informational access to the user, depending on what the user posts on his or her social networking website account.

A major aspect of interaction on social network sites involves crafting and presenting one’s identity. This means that users of online communities spend a lot of time building their online persona, focusing on how others, strangers and friends alike, view the user. In creating these online personas a user often gives more consideration to others than to himself (Ahern, 2007). This statement is referring to a user adjusting personal settings to be convenient to friends or strangers, rather than to a setting that is more secure and private for the user. In this manner, friends or strangers may see the information or pictures the user posted.

In a similar vein, picture sharing website users typically worry more about the privacy of children or other people. Picture sharing is an important component of social
networking website accounts. Users can display pictures to their social networking website friends or strangers viewing the user’s account. It is important to understand the reasoning behind the pictures users do post and the privacy settings used in posting those pictures. Users post pictures not only of themselves, but also of other people, often tagging those pictures with the name of everyone in the picture. This allows those pictures to be connected to a user not even aware that the pictures were going to be posted to the social networking website. A common theme in posting pictures is considering if those pictured would approve of the picture being available to public view. However, much less consideration is given to how the user themself was portrayed (Ahern, 2007). This may seem to be of little consequence to social networking site users, but there are dangers to posting too much information to the Internet, especially searchable social networking websites.

Research to date seems to suggest that users will add anyone they know to their friends list, unless they dislike the person requesting “friendship” (Gross, 2005). Gross goes on to reveal that “such communities turn out to be more imagined than real, and privacy expectations may not be matched by privacy reality”. Despite this, most social networking site users do not view them as being dangerous (Tufekci, 2008).

Two studies examined online privacy recently. One determined that Internet experience and age are predictors of protection action and privacy concern (Paine, 2007). The other found that user specific experiences can affect online privacy concerns, but there is not a direct correlation of any significance with a user’s Internet experience and privacy concerns (Green, 2008). Surprisingly, even though non-users of social networking websites are concerned with privacy, they do not see such sites as dangerous,
however, the stronger the concerns of an individual regarding privacy the less likely it is that the individual will use a social networking website (Tufekci, 2008). The benefit of revealing oneself online may be perceived as being greater than the cost because of peer pressure and herding behavior, relaxed attitudes towards personal privacy, incomplete information, and faith in the networking service or members (Gross, 2005).

Gross goes on to point out that online social websites often include people that a user would not normally consider to be part of their network, not only that, but many of those listed as “friends” are indeed strangers. This is even more troubling considering information shared on these sites is often personal and sensitive. This study will examine the privacy concerns held by users of social networking websites. It will also examine the effect individual differences have on those privacy concerns.

**Hypotheses**

There were seven hypotheses, including sub-hypotheses, examined in this study. They considered individual personality traits and compared those traits to social networking website privacy concerns. Traits like mavenism, social desirability, and neuroticism were considered in behavior concerning privacy and picture settings.

**Mavenism and Privacy**

Mavenism is one of the individual differences considered in this study because market mavens are more likely to embrace new technology than a non-maven (Geissler, 2005), therefore, they are also more likely to use new technology. This is applicable to a new phenomenon like social networking websites, especially considering the technological aptitude needed to navigate the sites in order to create a account with information and pictures. Mavens have personality traits such as higher need for
cognition and dispositional optimism, leading them to effectively deal with or even look forward to changes in technology (Geissler, 2005). As an end result, non-mavens may be less capable when using these new technologies.

One characteristic of market mavens is that they may anticipate a new product which serves to facilitate social exchanges and conversations (Mooradian, 1996). Because of this, participants in this study may score higher on the mavenism scale than non-mavens to begin with, and will be more open in sharing information on social networking websites and less concerned with privacy. Therefore, it is predicted that there will be a positive relationship and social networking website usage. In this case, participants scoring high on mavenism will be less likely to use privacy settings on their social networking website accounts as they will be more likely to embrace the technology than non-mavens.

Hypothesis 1: A positive relationship exists between mavenism and social networking website account privacy concerns.

Social Desirability Index

Social desirability is a term used to describe a respondent’s likelihood to behave in a way that will be viewed favorably by society (Crowne & Marlowe, 1960). This item is important to the study because creating an account on a social networking website is a means to communicate with people and keep in touch with old and new friends. There are varying levels of information that can be included on a social networking website account and a person’s social desirability index may influence the information posted. In the past, social desirability measures were created to determine what bias social desirability may give to studies. However, more recent studies have examined social
desirability as an entity on its own (Beere, Pica, & Maurer, 1996). There are two dimensions of social desirability. These scales for each dimension are not mutually exclusive, but the differences are quite apparent. One measures the likeliness of a person to try to present themself favorably, and the other considers the likeliness of a person to give socially acceptable answers (Holden & Fekken, 1989). The first dimension is the dimension of social desirability applicable to this study, as the impact of social desirability on what privacy concern may be considerable.

It is a given fact that biases exist in our social perceptions (Perlini & Lippe, 2006). Many studies have been done to determine the best way to remove the effect of social desirability from research. This is especially apparent in trying to heighten self-other correlations (Konstabel et. al, 2006). As social networking websites such as MySpace and Facebook are an opportunity for the user to present himself to the world, it would seem that those seeking social desirability would be more likely to limit what was on the Internet regarding them, even going so far as to untag pictures that may display them in an unflattering way. This is consistent with the finding that people high on social desirability are more cautious than people low on social desirability (Crowne & Marlowe, 1960). Further supporting this theory is the finding that high social desirability individuals have greater communication apprehension than do low social desirability individuals (Chen, 1994). As a result, we can expect that there will be a relationship between social desirability and pictures posted on social networking websites. This relationship exists between limiting pictures posted to social networking websites, untagging pictures posted on social networking websites, and concern with coworkers viewing unflattering items on social networking accounts.
Hypothesis 2a: A positive relationship exists between social desirability and limiting pictures posted on social networking websites.

Hypothesis 2b: A positive relationship exists between social desirability and untagging pictures on social networking websites.

Hypothesis 2c: A positive relationship exists between social desirability and concern with people from work seeing unflattering items on the user’s social networking site account.

Neuroticism

Guadagno (2007) found that neuroticism is a predictor of blogging, as it allows users to “express their real selves.” In a way, social networking websites are similar to blogging in that they both allow the user to express himself on the Internet and to share experiences with other users. Additionally, McCrae and Costa (1986) determined that individuals high in neuroticism are anxious, insecure, and self-pitying. When it comes to blogging, women high in neuroticism are more likely to blog than men high in neuroticism (Guadagno, 2007).

Because social networking websites are widely used by both men and women there is greater chance of highly neurotic men to use those sites while they may not blog. Therefore, it is proposed that users high in neuroticism are more likely to be concerned with police or other authority figures viewing their accounts and users high in neuroticism will be more likely to untag pictures, or limit what is displayed on their accounts.

Hypothesis 3a: A positive relationship exists between neuroticism and concern with authority figures viewing online accounts, including the police.

Hypothesis 3b: A positive relationship exists between neuroticism and untagging photos.
Facebook versus MySpace

The final hypothesis of this study is an examination of user feelings toward the social networking websites used for this study, Facebook and MySpace. As discussed previously, in the beginning, Facebook was open only to college students and users were more likely to identify themselves by their real name. MySpace has always been open to the general public and often times users created accounts using aliases. In the past, Facebook has been used to communicate with people the user knows in real life, whereas MySpace provides more opportunity to meet strangers (Rosmarin, 2006).

Because of this, it is predicted that users of social networking websites will prefer Facebook over MySpace due to the increased security.

Hypothesis 4: Facebook will be preferred over MySpace in a comparison of the two social networking websites.
III. Methodology

Research Design

This study is a mixed methods study, combining both questionnaires for quantitative data as well as interviews for qualitative data. Content analysis was the qualitative research methodology used to examine and code the data as it is a “systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding” (Stemler, 2001, pg 1). Content analysis was selected because it allows researchers to work with large volumes of data in a systematic manner (Mayring, 2000).

Procedure

Initial questionnaires determined eligibility, ensuring that participants met minimum requirements for Internet usage in order to ensure that participants are familiar with the websites and activities of interest. Once Internet usage eligibility was determined participants were asked to fill out a questionnaire regarding personal information such as gender, location, and race. Additional questions collected information about personality and social desirability.

Sample

Participants were young adults, with 38.8% being age 18-21 and the remaining 61.3% being age 22-25. These participants recruited from the community surrounding a large mid-western city. The race/ethnicity of the participants was African American (27.5%), Caucasian (25.0%), Hispanic (23.8%), and Asian (15.0%), with one choosing not to answer. Most of the participants were from the United States (62.5%) with the others being from the Middle East (6.3%), Western Europe (6.3%), South America
(6.3%), sub-Saharan Africa (3.8%), India (6.3%), and China (6.3%). Due to using young adults some income levels may not have been represented as thoroughly as others. The income ranges were more than $50,000 (42.5%), between $40,000 and $50,000 (22.5%), less than $40,000 (28.8%), with some choosing not to answer (6.3%).

Measures

Three instruments were used as measures for this study. The first was a screener completed by participants to determine if they met minimum Internet usage requirements to be useful in the study. The second was a questionnaire discussing personal information and personal attributes of each respondent. The final instrument used was the semi-structured interview.

Instrument 1-Screener

The screener was successfully pilot tested before being used to determine participant eligibility in this study. It was reviewed by subject matter experts to ensure that the questionnaire was appropriate for the stated purpose and to ensure that the appropriate cut off values for each section of the screener were used. Additionally, things like word usage and question meaning were considered as well as readability of all of the questions.

Once finalized, the screener was used to determine participant eligibility for the study. Screener questions asked if a user had their own blog or website, if they had contacted someone via a social networking website in the last month, searched for media content on video or picture websites, and purchased or reviewed a product through the internet. To be selected, participants needed to answer yes to at least three of those four questions. There were targets required for various activities as well. Users needed to
meet two of the following criteria, two hours contributing to your own website or blog, five hours reading blogs or online forums, six hours visiting social network sites, six hours visiting video sharing sites, two hours searching for and listening to Podcasts, or three hours spent playing games online. The first 80 people meeting the requirements set by the screener were selected to be participants in the study.

**Instrument 2-Personal Information Questionnaire**

Once participants were selected based on Internet usage, they were given a questionnaire to complete prior to the interviews. This form asked participants to provide information on demographics (age, gender, ethnicity, income, etc) as well as personality information. The personality factors considered were the extraversion, neuroticism, openness, agreeableness, conscientiousness, social desirability bias, interpersonal influence, and mavenism.

**Measure 3-Semi-Structured Interview**

Once eligibility for the study was determined, an appointment was made with each participant qualified for the research project to conduct the semi-structured interview. Questions asked related to social networking websites and the participant’s use of those websites. The interviews were conducted at two different locations in corporate offices. The space used was distraction free and interviews were recorded on video as well as audio taped and then later manually transcribed. A consent form was signed before the start of each interview and participants were given $100 for their time.

**Interview Procedure**

The semi-structured interview was scripted (see Appendix A), though interviewers varied the order of questions and interviewers would ask participants
additional questions to elaborate on some points. Questions were open ended and only one topic was addressed in each question. Participants were also asked to clarify comments if the interviewer could not understand what was heard.

Answers to the questions related to social networking websites typically involved a discussion of MySpace or Facebook. MySpace is a social networking website available to users age 14 and over. It was launched to the public in 2004 and surpassed even Google as the number one visited website in 2006. In 2008 Facebook surpassed MySpace in number of visitors. Both websites are very similar in applications and uses. The main differences between the two sites is that MySpace accounts are more customizable than Facebook and Facebook is seen as being more exclusive because it was originally open to only college students and even now most users use their real name as opposed to a made up screen name. MySpace and Facebook are distinctive from the third most popular social networking site, Friendster (Nielsen/NetRatings, 2006) as they allow users to upload pictures to further establish an online personality.

**Data Analysis**

Following the interviews, quantitative data was entered into a statistics computer program. The qualitative, or interview, portion of the study was coded using the Computer-Assisted Qualitative Data Analysis Software (CAQDAS) program ATLAS.ti. Due to the extensive nature of each interview, over 1,000 pages of transcripts resulted. Between the amount of data and the type of answers this data set is ideal for computer coding.

Flexibility is a key feature when considering computer software that can code qualitative data. Changes to the coding method can be made with a few clicks of the
mouse as opposed to adding a new color of highlighter or sticky note while rereading every interview transcript. Data is also easier to organize, even allowing researchers to make memos within the program.

Computer software is inherently useful in supporting inductive approaches to coding. This is because it allows codes to be created that are grounded in the data or codes can be based on the language used in the data. Data segments can be retrieved based on how they were coded and similar codes can be grouped together. Software makes it easier and more efficient to define codes, print lists of codes, and rename codes. Additionally, the amount of data coded can be increased or decreased, or data can even be uncoded. Finally, recoding data is simplified, as well as commenting upon and writing about what is seen in the data.

The first step of content analysis involves breaking the text down into categories that can be easily managed. These are called content categories (Busch et al., 2005). This was done in the preliminary examination of the interviews, breaking comments down into two content categories, accounts and pictures. Once the content categories had been created the level of analysis was decided upon.

The next step was to decide between conceptual analysis and relational analysis in further analyzing the data. Conceptual analysis is the quantification of a concept and the tallying of its presence. Relational analysis looks for meaning and relationships between the concepts found within the text (Busch et al., 2005). For this study, conceptual analysis was selected, as the purpose is to examine the existence and frequency of concepts or ideas. Each concept was then compared to individual personality traits of
participants, as opposed to the other concepts found in the text. This is the most traditional use of content analysis (Busch et al., 2005).

In this case, sets of words were used to develop the content categories into concepts. The preliminary examination of the data had revealed concepts that would be ideal for coding. Concepts were distinguished based on all applicable terms in conducting the computer software searches. The initial examination of the interviews proved useful in this step, as due to the open ended nature of the interview questions not all respondents used the same terms to discuss their secondary concerns.

The next step in content analysis was to make the decision to code for existence or frequency of a concept, in this case, both were considered (Busch et al., 2005). Concepts were coded based on how many times they occurred in addition to if they occurred at all. Coding rules were simple, as the categories were generalized into simple concern with the concepts, whether it is caution with who was looking at online accounts or what pictures that person may be seeing.

While coding the data two issues were kept in mind. One was the most appropriate means by which to generate codes and the other was how different types of codes and coding techniques will benefit the study. Due to the nature of the questions asked during the interviews (open ended questions) some deductive coding methods may be used in the form of question-based coding. This means that each question will be coded separately in order to view and analyze the answers in isolation. Coding only in this manner may be too restrictive, which is why this method will be considered along with the previously outlined method of coding inductively.
Fortunately, with the use of coding software data can be arranged by any known characteristics. In other words, computer software makes it easier to integrate quantitative and qualitative data for research purposes. For this study, the coded data was compiled into a single document where each statement was examined and occurrences were recorded in a separate workbook to be uploaded to the statistical computer program. Once those codes were uploaded the correlation matrixes were run and results analyzed.
IV. Results

Data was analyzed via both qualitative and quantitative methods. The qualitative analysis created dependent variables by converting the interview data into codes grouping similar responses together. The quantitative analysis was a statistical comparison of personal data and the codes. After analyzing the data using these methods the hypotheses were tested using the information that resulted from the data analysis.

Qualitative Results

An initial review of the interviews showed that several respondents seemed to be concerned with privacy when discussing Facebook and MySpace. The semi-structured interviews were coded into five codes; account privacy concern, picture concerns, untagging pictures, concern with superiors, and concern with law enforcement. Each code will be discussed in the following pages of this chapter.

Data Coding

The data was coded using Atlast ti, a computer program used to sort and code qualitative data. The 80 interviews were uploaded to the program, each in a separate file. The interviews were reviewed extensively and free quotations made surrounding statements relating to the study propositions. These free quotations were then reviewed, enabling the selection of key words to use in the search for data supporting or not supporting the study propositions. Enough key words needed to be selected that all relevant statements would be found for each coding sequence.

The first code considered if respondents are concerned with their privacy on social networking websites. This was determined by looking for participants that either kept his or her account private and accessible only to friends or approved viewers or
looking for participants that mentioned limiting the information posted on his or her account due to not wanting strangers to gain access to too much information, or unfavorable information. The search terms used for this data set were profile, private, real name, privacy, stalker, and stalking. Atlas ti reviews every interview, stopping at each occurrence of one of the selected search words. At each stop the quotation was read and “coded” if it did apply to the goal concept. If it did not, the item was skipped. Once all 80 interviews had been examined for the key words an output file was created with all of the applicable quotations that were coded. Those responses were then input into a database as dummy and continuous variables. The dummy variables were created to distinguish between people concerned with the privacy settings of their online social network accounts and people that weren’t. The continuous variables were used in order to examine just how concerned users with high privacy settings are. Twenty five study participants were concerned with their online social networking website accounts and either who was looking at them or what visitors could see.

The second code considered if users were concerned with the prospect of police or other law enforcement officials viewing the social networking accounts and using the information found there against the users. This was done using keywords police, illegal, incriminating, cops, cop, law, and Lansing. The same procedure for coding the data was followed as for the first proposition, and then the positive hits were coded as dummy and continuous variables. Only five respondents were concerned with the legal side of what their accounts represent, but one of those respondents was very concerned with the police and social networking websites.
The third code considered dealt with the concern users had with the pictures they had posted on their online accounts. Those users were concerned by what the pictures portrayed, anyone being able to view the pictures, or the kind of image those pictures might portray. The coding for this code was done using keywords tag, untag, untagged, pictures, picture, photo, and photos. Positive hits were coded as dummy and continuous variables. A total of 41 respondents reported concern for the pictures on their accounts. Comments referring solely to untagging pictures were not coded in this category.

Those hits were then recoded for the fourth code, which looked for users that untagged pictures of themselves on social networking websites. This was done because there was a number of participants that reported being uncomfortable with untagging pictures on social networking websites. The amount of participants was significant, leading to another code to see what, if anything, separated a user from doing more than just monitoring the pictures on their own account. After considering the data solely for untagging pictures uploaded by other people, 24 participants reported untagging a photo they considered inappropriate, or stated that they would do so, should such a photo be posted. This code was chosen because many users expressed concern with the pictures their friends posted of them on the Internet, and more importantly, what they were doing in those pictures or who they were with.

The fifth code looked at the awareness of social networking site users when it came to their employers, future or current, and their online social networking website account content. The coding was done using the keywords boss, coworkers, employers, employer, and supervisor. The results were then coded as dummy and continuous results. Only nine participants reported concern with their employers finding something negative
on their online accounts. However, a third of those respondents mentioned that concern more than once.

The final code examined participant preference for Facebook or MySpace. The coding was done using the keywords MySpace and Facebook. Only five participants expressed a preference for Facebook and only one said they preferred MySpace. However, the remaining 74 participants expressed no preference.

**Coding Example**

The following is an example of a free quotation from Respondent 9’s interview. The bolded words are the words used to conduct the search, in this case, for respondents concerned about what pictures are on social networking website accounts. In this case the respondent turned up as being positive for monitoring what pictures he puts on his social networking website account as well as for untagging pictures.

*I: Have you ever untagged pictures that have been uploaded of you?*

*R: Only one.*

*I: Why was that?*

*R: I was out. I was at a party and I was pretty drunk and I didn’t want people to see...my friends from back home to see because their parents sometimes walk in, and they’re on Facebook and they see the picture and they’re like “Whoa.”*

*I: You didn’t want them to see that?*

*R: Yeah.*

*I: Are you selective about the pictures that you upload of yourself? I know that you mentioned that you untagged a picture of yourself, anything like that?*

*R: No. I upload all my pictures. The way I look at it is, if they see me that night, they know how I look, so there’s no reason to hide. So I just upload them all, but if there’s one that’s really wild, like that one I untagged, then I won’t put it up. I delete them if anything.*
I: That was why you untagged, or deleted that one, was because they way you looked, or what you had with you in the picture.

R: What I had with me in the picture.

I: So you don’t normally have pictures of you with those types of things in the picture?

R: Well, not that type of thing. Not what I had that night. I do have pictures of me and beer. But it’s like whatever. Me and a cigarette, yeah. That’s me, but that picture was more out of it.

Account Privacy Concern

The first code considered for this study was the concern respondents had with their accounts and privacy. Twenty five of the 80 respondents expressed concern with their privacy and their online accounts. For the purposes of this study, concern with account privacy was expressed by respondents through various methods. Some discussed the concern outright, others discussed measures they have taken to ensure privacy, and others discussed situations that had given them cause to be concerned.

They responded by either setting their accounts to private, so that only accepted “friends” could view the information and pictures stored online, or by limiting the information they posted to their online account in the first place, or even using a false name on the site so that strangers couldn’t find the user. Of those 25 respondents, account privacy was more important to 12 of them than the others, as was seen by the amount of time spent discussing account privacy.

This code determined if respondents gave any concern to their social networking website accounts, like respondent three, who said “It’s hard for people to know who I am and to search and find it. Because I’m not under my real name under search.” When asked why, he said “Privacy. I don’t want to be followed.” Respondent 38 felt similarly to respondent three, saying “I have it so you can’t even find me through my name. If you
know my email address you can find me. You can see my account, but you can’t see who my friends are and you can’t see my pictures.” Another respondent, respondent 58, took a similar approach with his social networking website account saying, “Yeah, it’s weird. I don’t have it in my real name and I don’t put stuff in my name, I use my fraternity name for everything.” Respondent 55 said “I don’t want it exposed to everybody” when referring to his social networking website account.

Some respondents were concerned with family members viewing their social networking website accounts. Of those, there were respondents like respondent 35 who were concerned about immediate family members, speaking of her sister said “But now it is more so you have to limit what you put on Facebook”, respondent 35 went on to say that it was necessary to limit what her sister could see when viewing respondent 35’s account. Respondent seven pointed out a problem past the user’s personal relatives, to the relatives of other users “I know people’s aunts and uncles that are on it and parents. It’s just kind of weird, so I made mine private after that. I think it took away from the website when they did that.” In this case, respondent seven was referring to the change Facebook made in allowing anyone with an email address to join the website, as opposed to only people with active college email addresses.

Some users are concerned about specific people viewing their accounts. If they are concerned about a specific user viewing their account users can do what respondent 71 did, saying he put his account on “limited account.” He continued by saying, “if you’re not on my limited account, you can see everything on my page. But if I limit you, I can say, “You can’t see these pictures that’s tagged. You can’t see my wall. ‘You can’t see my recent activity. You can’t see who my girlfriend is.’” Others, like respondent 78
are worried about the world at large. Respondent 78 said “Besides the pretty part, I think it is so dangerous. If you look yourself up on Google, it comes up as your page. I didn’t know that. There is not a privacy setting for that so I am about to delete my account soon.”

Account privacy was a big concern for participants in this study. Many respond to this concern in different ways. Not all set their accounts to private, allowing only friends to view their information and pictures. Some limit the information they post to social networking website accounts. Others limit the information that can be accessed by the public or do not allow the public to view any account information.

**Picture Privacy**

The second code considered was the concern users had with pictures on social networking websites. More respondents were concerned with the pictures viewable by the outside world, with 41 of the respondents citing this concern. Those respondents acted upon this concern by either limiting what pictures were posted of them on social networking websites or limiting who could view the pictures posted on those social networking websites. Twenty eight of those respondents were overly concerned with the pictures on their social networking websites than compared to the others that expressed some concern. Respondents had varying reasons behind their picture concerns, ranging from wanting to present a good image, worrying about employers or relatives seeing the pictures, or doing something in the picture that was illegal or inappropriate. Many of the respondents expressed concern with reflecting a positive image to account viewers. Respondent eight summed it up with the following statement, “I don’t want a picture online of me looking like an idiot so, yeah, I censor myself.”
Some users don’t like to admit that they are concerned with the image they portray, but in the end, admitted to doing just that. An example of that kind of user was respondent nine, who said, “I upload all my pictures. The way I look at it is, if they see me that night, they know how I look, so there’s no reason to hide. So I just upload them all, but if there’s one that’s really wild, like that one I untagged, then I won’t put it up. I delete them if anything.” Another user that was hesitant in admitting censoring their public image was respondent 45, who said, “Maybe I am. Because I deleted a lot of albums and started over. Yeah, because I wanted to look more…just…conservative.”

Some users choose to keep their accounts open to the public, but maintain a concern for what the public is seeing. These users choose to censor themselves in order to be able to keep their accounts accessible to the public, like respondent 12 stating that she is selective of photos uploaded to her account because, “just because I know anyone can see them.” Respondent 30 was another such respondent, saying “Well, I wouldn’t want to put an ugly picture of myself up because people can see it and, I guess, if I, I don’t really take those pictures, we don’t go out that much anymore, but probably from when I was a teenager I wouldn’t put a picture up in like a little skirt or something risqué because that just doesn’t show very good character.”

Many of the respondents expressed concern that their employer, or future employer, would view an inappropriate picture on their accounts, and choose to censor photos because of that. One of the respondents concerned with an employer seeing her account was respondent seven. She already made her account private due being a student teacher, but she also had to change her account picture, saying “I had to pick an appropriate picture, so it was an appropriate picture that was decent. We can’t have
alcohol or anything in our pictures that would be seen as inappropriate, even if you are 21. I had to change them all.” Another respondent concerned about an employer viewing her account is respondent 16, “I’m really selective of the photos. I hear about all the people getting jobs and they researched your Facebook and “look at the picture we found,” and it’s something inappropriate. I have nothing inappropriate on there at all.” Respondent 41 recognized a similar problem in pictures posted to social networking website accounts, using a friend as an example “she told me her boss had messages from Facebook from girls getting messages on Facebook of girls doing ridiculous poses and almost naked saying, ‘Hello, I see that you work in Loreal. I just wanted to know if you had a job opportunity for me.’” Another participant with similar concerns was respondent 76 who mentioned that “Now, the thing with that is when people start to work places you don’t know who exactly who is going to be looking at those pictures.”

Some respondents admitted that they enjoy seeing pictures of other social networking website users partying, but they weren’t fond of sharing the same type of pictures with themselves as the focus of the picture. Respondent 21 was a good example of that, saying “I don’t put a lot of pictures of myself, I just, the less people have out there about me, I think is probably better, but I like looking to see what other people put up. But I don’t put much pictures of like partying up there.” One respondent, respondent 55, didn’t mind sharing pictures initially, but now regrets it, saying “because I actually watched this commercial that was on T.V. once you post a picture on the Internet, there is no way to get it back.”

Pictures found on social networking websites were by far the biggest concern for participants in this study. As with account settings, respondents reacted to these concerns
differently, some by posting no pictures to social networking websites. Others limited the types of photos posted to their accounts while others made their accounts private to ensure that only approved people could view the pictures.

**Untagging Pictures**

The third code derived for this study looked at respondent attitudes toward untagging pictures. In Facebook users can upload pictures and label the people in the pictures with their names. This links the picture to the labeled person’s Facebook account, allowing others to see a picture posted by a third party of that user. This means that the user has no control over what pictures their friends or acquaintances post and label, with the exception of untagging. By untagging a picture the user removes their name from the picture, meaning that the picture will no longer display in search results for that user, leading fewer people that know the user to view it.

Less than half of the respondents (24) said that they have untagged a picture on a social networking website, or would do so, if an inappropriate picture of that user was posted by someone else. Eighteen of those respondents were very concerned with making sure appropriate pictures were posted of themselves online. Respondents demonstrated a trend of untagging pictures that they, themselves wouldn’t post to the Internet in the first place, for the same reasons why users are concerned about what pictures can be seen on the account. Respondents had similar reasons for untagging pictures as they did for limiting what pictures they post of themselves.

An example of a respondent untagging a picture due to the focus of the picture is a quote from respondent nine, who said, “I was at a party and I was pretty drunk and I didn’t want people to see…my friends from back home to see because their parents
sometimes walk in, and they’re on Facebook and they see the picture and they’re like ‘Whoa.’” Another respondent, respondent 35, said “Because I didn’t like the picture, whether it be for vain reasons or I didn’t want to be associated with what the picture looks like. Sometimes you’re caught in a picture that you didn’t know that picture was taken of you.” A more extreme example came from respondent 36, who said “Yes. There was some illegal activity going on in one of the pictures so I figured it would be best to take it off.” The same was the case for respondent 76, who had two concerns when untagging pictures “Multiple reasons. a) If it was just a really bad picture and b) if there was something illegal going on.”

Other respondents were worried about employers seeing something they wouldn’t like in a picture, like respondent 25 who said, “yeah, I have them but I mostly like un-tag myself, if you could say that, because you know, a lot of different companies will do research about you in different ways.” There were still some respondents that untagged pictures due to being portrayed badly by the picture. One example of this is respondent 80, who said, “Oh, yeah, I would untag it but my friends know better not to put pictures like that on there because I’d untag it for sure. I’d be like, ‘Why.’ Yeah, if it’s not a good picture yeah, I’d take it off.” Respondent 26 is another example of untagging pictures due to not liking the way it portrays her, saying “Cause I didn’t want other people to see them, or I didn’t want them to know that it was me.”

One final respondent was unique in that he untags every photo posted of himself to a social networking website, that was respondent 75. He has no photos posted on his own account and says that he doesn’t have pictures posted because it is too personal. He says “tell them before not to do it and if they do it I untag it. People used to get offended
but I told them there is a reason behind it.”

Respondent 35 sums up the problem of tagging pictures on Facebook the most succinctly, saying “I’m selective. As of right now, the photos that others tag with me, no one can see those photos, if they go to my page, no one can see those photos but me.” His reasoning being that “they tag photos of me throughout the day where I can’t check my Facebook and it’s already out there. I want to be able to see it first. So as of right now no one can see the photos tagged of me.”

Not nearly as many participants admitted to being willing to untag pictures posted by their friends. Some did make tagged pictures private. Others did untag pictures that they didn’t approve of, whether it was due to how they looked in the picture or because there was illegal activity going on in the picture. Many respondents did express reluctance to untag pictures posted by their friends. Some even claimed to not untag pictures in the same sentence where they gave an example of untagging a picture. Only one respondent expressed no remorse at all in untagging pictures posted by friends.

Current and Future Employer Concern

The fourth code covered a category with fewer respondents than the previous codes. This category focused on the concern users have with their current or future employers viewing their social networking website accounts. However, a third of those respondents expressed more than cursory concern with the chance of an employer, future or present, viewing their accounts.

Respondent 35 sums up the problem of tagging pictures where future employers can view them the most succinctly, saying “My account picture is me with a shirt, a tie, and a suit. So I guess I’m trying to maintain a professional look. Because from what I
hear, I guess employers look at Facebook now-a-days and stuff like that.” Respondent 50 had similar concerns, saying “They always say… if there was photos of me at a party I’d untag that because they say your not to have it business appropriate because sometimes your employers—I’ll be graduating in May—and they said not to have crazy party photos online.”

Other respondents were also considering the prospect of a future employer reviewing their social networking website accounts. Respondent 67 said “Like a future employer or if my boss was to just jump on my Facebook you wouldn’t want them to look at all these pictures and look at all of these horrible posts on your wall and look at stuff in your account and go, ‘What the hell?’” Another respondent, respondent 76, had a similar concern, saying “So if your employer goes on it would be like, ‘Oh, you got f----- up this one night.’ And there’s a picture of it on the Internet. Then what are you going to say?”

Quite a few respondents were concerned with employers seeing their social networking website accounts. Those that were concerned limited the pictures and information posted on their accounts. Some went so far as to make their accounts private or delete complete albums of pictures once they got closer to graduation.

**Law Enforcement Concern**

The fifth and final code considered user concern with law enforcement using social networking accounts against the user. Only five respondents expressed concern with their online social networking information being used against them in being arrested or court cases. Only one of those users expressed more concern than the others with law enforcement using social networking websites against users.
The most common concern with participants in the study was that a picture or information posted to a social networking website would portray the user doing something illegal, leading to trouble with law enforcement. Typical responses reflecting this were similar to respondent 37, so said “There was some illegal activity going on in one of the pictures so I figured it would be best to take it off.” Respondent 43 also mentioned law enforcement viewing social networking website accounts, saying “I know for a fact you know that people are surfing them whereas it be professors or police or those kinds of thing and I just want to keep myself more respectable.”

The most notable respondent concerned with law enforcement viewing social networking website users was respondent 14. When asked why he didn’t have any privacy settings active on his account he said “Cause I’m not a fool, I’ve got nothing incriminating on there, you know what I’m saying?” His concerns did not end there, he went on to say “I think the police made Facebook, you know, just like the police made MySpace. Cause they know these young dummies are gonna be on there with, you know, look at me, I found a pound of weed, you know what I’m saying?”

While some users were more concerned with law enforcement seeing social networking website accounts, they seemed to be users that may have had a reason to be concerned. Respondent 14 especially was determined to not give law enforcement anything to view on his account. Quite a few respondents had knowledge of social networking website accounts being used against users by law enforcement. Some had this experience through reading news stories or knowing that it happened to friends. No matter where the experience came from, it has given many users of social networking
websites reason to be worried about what they post being seen by law enforcement officials.

**Facebook versus MySpace Preference**

Due to Facebook’s history of only being available to college students and the tendency of user’s to provide their real names it was predicted that participants would prefer Facebook to MySpace. This prediction was supported, in that five participants expressed a preference for Facebook and only one said they preferred MySpace. However, the remaining 74 participants expressed no preference. The respondents that did report a preference did not suggest a strong preference, an example of this is respondent three who said, “right now Facebook. No particular reason” when asked which social networking website she preferred. Another respondent, respondent nine gave the following reason for preferring Facebook, “yeah. More with the people from Facebook, because it’s more of a daily thing that I see them. We still get on Facebook. Most of my friends from MySpace and MiGente, they’re in Florida.” The only person preferring MySpace said that the main reason she prefers MySpace is, “like I said, ‘I talk to my friends more.’”

**Hypothesis Testing**

Biserial correlations were used to test the hypotheses. They were calculated by inputting the data into SPSS, a statistical computer software program, to calculate the Pearson’s correlation. This information was then used to calculate the biserial correlations as well as the significances. Biserial correlations were used to express that the variables were a continuous dichotomy. More importantly, biserial correlations are a measure of the strength of the relationship between the variables. For the purpose of
testing the hypotheses a 1-tailed test was used. A 1-tailed analysis was done due to the specificity of the research questions.

Table 1. Hypothesis Biserial Correlations

<table>
<thead>
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</thead>
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<td>0.231*</td>
<td>0.081</td>
<td>0.024</td>
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<td>Amt Times Untag</td>
<td>0.058</td>
<td>-0.122</td>
<td>-0.009</td>
<td>0.031</td>
<td>-0.031</td>
<td>0.058</td>
<td>0.080</td>
<td>0.043</td>
<td>0.174</td>
</tr>
<tr>
<td>Boss Concern</td>
<td>-0.323*</td>
<td>-0.135</td>
<td>-0.020</td>
<td>0.152</td>
<td>-0.152</td>
<td>-0.030</td>
<td>0.158</td>
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<tr>
<td>Mult Boss Concern</td>
<td>-0.514</td>
<td>-0.256</td>
<td>-0.028</td>
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<td>0.135</td>
<td>-0.092</td>
<td>-0.050</td>
<td>0.139</td>
<td>0.079</td>
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<tr>
<td>Amt Boss Concern</td>
<td>-0.381</td>
<td>-0.172</td>
<td>-0.022</td>
<td>0.066</td>
<td>-0.066</td>
<td>-0.049</td>
<td>0.096</td>
<td>0.167</td>
<td>0.099</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (1-tailed).

N=80

**Hypotheses Testing Discussion**

The first correlation table used the independent variables and dependent variables relevant to the hypotheses presented in Chapter 2 of this study. The results are displayed in Table 1.

The first hypothesis considered was Hypothesis 1: A positive relationship exists between mavenism and social networking website account privacy. Results from the correlation matrix reflect that concern with keeping information private on one’s account
is negatively related to mavenism (-0.091). In developing the hypothesis it was considered that users high in mavenism would be interested in maintaining a positive image to people they were influencing. However, this positive relationship is not significant. **Hypothesis 1 was not supported.**

The next hypothesis examined was Hypothesis 2a: A positive relationship exists between social desirability and limiting pictures posted on social networking websites. Hypothesis 2a was supported in that participants scoring high in social desirability bias were more likely to be concerned with the pictures posted on social networking websites with a biserial correlation of 0.262. This correlation was significant. **Hypothesis 2a was supported.**

The next hypothesis examined was Hypothesis 2b: A positive relationship exists between social desirability and untagging pictures on social networking websites. The correlation matrix supports that social desirability bias is positively related to a participant being more likely to untag pictures on social networking websites (0.093). However, this relationship was not significant. There is even less of a relationship between feeling strongly about untagging pictures and social desirability bias. **Hypothesis 2b was not supported.**

The next hypothesis examined was Hypothesis 2c: A positive relationship exists between social desirability and concern with people from work viewing the user’s social networking site account. The correlation matrix did not support that a positive relationship exists between social desirability and concern with people from work seeing the user’s social networking website account. Instead, there was a negative relationship (-.323) that was significant. This may be because people high in social desirability bias
were more likely to be concerned with the types of pictures posted of them on the internet. Because of this concern and limiting of pictures those users may feel that there is nothing inappropriate to be seen by visiting their social networking website accounts. **Hypothesis 2c was not supported.**

The next hypothesis examined was Hypothesis 3a: A positive relationship exists between neuroticism and concern with authority figures viewing online accounts, including the police. Overall, there was a negative correlation (-0.142) between concern with authority figures viewing social networking website accounts and neuroticism, though that correlation was not significant. There was a correlation (0.438) between participants that were very concerned with authority figures viewing social networking website accounts and neuroticism, though this correlation was not significant either. **Hypothesis 3a was not supported.**

The next hypothesis examined for this study was Hypothesis 3b: A positive relationship exists between neuroticism and untagging photos posted on social networking websites. The correlation matrix does support a minimal positive relationship (0.015) between neuroticism and untagging pictures on social networking websites. However, this relationship is not significant. Even users very willing to untag pictures did not demonstrate a significant correlation (0.039). **Hypothesis 3b was not supported.**

The final hypothesis examined if participants had a preference for one social networking website over the other. It was determined that five of the participants did prefer Facebook while only one participant preferred MySpace. The rest of the participants did not express a preference for one social networking website over the
other. There was not enough data to run a correlation matrix for further examination.

**Hypothesis 4 was not supported.**

**Data Exploration Phase**

Biserial correlations were also used for the data exploration phase. This correlation table was created by inputting the data into SPSS, a statistical computer software program to find the Pearson’s correlations in order to calculate the biserial correlations. A 2-tailed test was used for this portion of the data analysis. For this phase a 2-tailed analysis was used due to the non-specificity of the data.

**Data Exploration Discussion**

Table 2 was a correlation between the neuroticism, extraversion, conscientiousness, emotional stability, openness, social desirability, mavenism, social influence and questions asked on the screener concerning internet usage to ensure that the user qualified as a participant. Once the biserial correlations were calculated they were examined for significant positive and negative correlations.

**Table 2. Data Exploration Biserial Correlations**

<table>
<thead>
<tr>
<th></th>
<th>1=Blog</th>
<th>0=No Blog</th>
<th>Made a purchase/rev</th>
<th>Read review in last month</th>
<th>Contribute to own website/blog</th>
<th>Read blogs/online forums</th>
<th>Visited social network sites</th>
<th>Played games online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social desirability bias</td>
<td>-.077</td>
<td>-.012</td>
<td>-.115</td>
<td>-.147</td>
<td>.106</td>
<td>.223</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social influence</td>
<td>-.195</td>
<td>-.340</td>
<td>-.105</td>
<td>.152</td>
<td>-.123</td>
<td>-.018</td>
<td>.267</td>
<td></td>
</tr>
<tr>
<td>Mavenism</td>
<td>-.022</td>
<td>.100</td>
<td>.174</td>
<td>0.414*</td>
<td>.012</td>
<td>.267</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.060</td>
<td>-0.728*</td>
<td>-0.300*</td>
<td>-.250</td>
<td>-0.601*</td>
<td>-0.342*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-.060</td>
<td>0.728*</td>
<td>0.300*</td>
<td>-.250</td>
<td>0.601*</td>
<td>0.342*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>-.108</td>
<td>-.050</td>
<td>-.266</td>
<td>-.175</td>
<td>-0.687*</td>
<td>-.140</td>
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<td></td>
</tr>
<tr>
<td>Openness</td>
<td>-.265</td>
<td>-.298</td>
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<td>-.222</td>
<td>-0.617*</td>
<td>-.147</td>
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<td>Agreeableness</td>
<td>-.173</td>
<td>-.473</td>
<td>-0.309*</td>
<td>-.194</td>
<td>-0.642*</td>
<td>-0.310*</td>
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<tr>
<td>Conscientiousness</td>
<td>-.027</td>
<td>-.145</td>
<td>-.160</td>
<td>-.028</td>
<td>-0.591*</td>
<td>-.026</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*: Correlation is significant at the 0.05 level (2-tailed).

N=80

The first correlation seen in the table is a negative relationship (-0.728) between neuroticism and making an online purchase/product review/read review more than once
in the last month. In other words, the more neurotic a person, the less likely they are to
buy something online or partake in online reviews of some kind just as the more
emotionally stable a user the more likely they are to purchase something online or
participate in reviewing products.

Similar results were seen when considering the effects of neuroticism and
emotional stability on the likeliness of a person to contribute to a website or a blog.
Those high in neuroticism were less likely to do so, with a correlation of -0.300.
Agreeableness was also linked to a negative relationship (-0.309) with a user’s likeliness
to contribute to a website or a blog.

Not surprisingly, mavenism was positively correlated (0.414) to reading blogs and
online forums with. There was a negative relationship (-0.342) between playing games
online and neuroticism. An opposite relationship existed between emotional stability and
playing games online (0.342).
V. Discussion and Implications of Research

As predicted, users high in social desirability bias were more likely to be concerned with the pictures they put on social networking websites. While none of the other hypotheses were supported, it was evident that social networking website users are aware of possible negative implications that could result from social networking website accounts with 31% of participants citing this concern.

Over half (51%) of the participants were concerned with the pictures posted of them on social networking websites, taking action to limit the types of pictures available or limiting who can view the posted pictures. However, only 30% of participants were willing to go so far as to untag a picture posted by a friend of them. Fewer respondents were concerned with people from work viewing social networking website accounts and even fewer were concerned with law enforcement.

Implications

Many of the respondents had specific reasons behind limiting the pictures they post so social networking websites. One mentioned an education campaign highlighting the fact that once a picture is posted to the internet it’s out there forever. Others referred to court cases where pictures from the defendant’s social networking website account were used to incriminate him or her. These respondents are similar to the young men and women now entering the Air Force. The internet, and social networking websites, have played a significant role in many of their lives. It is important that those users are aware of the potential Operational Security implications from posting pictures online. This study shows that while users are aware of possible implications, more education is
needed as every picture posted to the internet should be evaluated for appropriateness prior to being posted in order to protect the user. This is even more important for military members who may be posting pictures taken on the job, or the base, whether it’s stateside or an overseas location.

This research has demonstrated that there is not a profile of social networking website users that can be generalized. Respondents were selected based on their internet usage, yet there were varying correlations between personality traits and visiting social networking websites. However, users high in neuroticism are less likely to use the internet for purchasing products, contributing to a website, or playing online games.

Limitations

One of the limitations of this study was the personality attributes of people volunteering for a study such as this may not be generalizable to the rest of the population. This is because of the minimum internet usage criteria needed to be selected for this study. Some personality attributes may not have been selected for this study due to not having enough internet usage to meet the minimum criteria. Additionally, the participants attracted to this study may have been influenced by the fact that $100 was offered in compensation for their time. The use of time slots to conduct the interviews also limited who was available to participate.

Opportunities for Further Research

This study presented a few opportunities for further research. One area more research could be conducted is in the area of untagging pictures. It would be beneficial to look deeper into the reasons users untag pictures and to examine the social dynamics behind untagging pictures. This could include studying how users feel when they untag
pictures posted by their friends, or when their friends untag pictures that they posted. A study of the impact of peer pressure on untagging pictures would also be beneficial.

This topic would benefit from further study, with participant demographics more closely matching demographics found in the Air Force. Other studies could be conducted by either comparing social networking website users to nonusers or encompassing more social networking website users in order to have a wider variety of personality types represented. A future study could involve educating users with an informational video discussing repercussions of posting pictures to social networking websites, monitoring participant responses concerning social networking websites before the information is given and then responses to those same questions after the information has been shared.
Appendix A – Interview Guide

New Media Depth Interview Guide

Overview:
Over the course of the interviews, we hope to uncover both depth and breadth of information about how and why young users (ages 18 – 25) use new media technologies. Over the course of the 50 domestic and 30 international interviews, we would like a complete picture of the general process of trial → adoption → usage → influence and some preliminary insight into the network effects that drive the diffusion of these technologies and messages transmitted using these new media.

In order to accomplish this, a general interview guide is provided that consists of a series of general questions. In addition to the general questions, probing questions and a series of projective techniques are included that can be used to gather deeper information. It will not be possible to probe for deeper answers for each of the 15 questions included in the interview guide with each participant, so the interviewers will need to be adaptive to probe on the certain questions that each respondent seems most suited to elaborate on. The homework questionnaire should help interviewers form a baseline approach for each interview and after that they should react accordingly based on the disposition and experiences of the respondent.

Based on this guide the interviewers should be able to answer these key questions:
1. Why do users try, adopt, use, and influence others with new media services?
   a. What are the internal, social, network, and product-specific factors that influence these stages?
2. What types of new media services are being used?
   a. In what capacity and for what type of messages are they being used?
   b. What is the frequency and intensity of usage of each new media service?
   c. In what contexts are these new media services being used?
3. What types of messages are being sent and sought out via these new media services?
   a. Which types of messages are most likely to be “shared”?
   b. Which types of messages are most influential?
4. How do messages sent via new media sources influence consumers?
   a. What is the relative effectiveness of these new media services and messages on persuasion (attitude change)?
   b. What is the relative effectiveness of these new media services and messages on compliance (behavior change)?
5. Why do/don’t users for introduce new media services to other users?

In addition to these core questions, the interviewers should be able to inhere some key differences that are likely occur based on culture and demographics, including:
1. How does culture affect the preceding motivations, behavior, and influence?
2. How does ethnicity affect the preceding motivations, behavior, and influence?
3. How do demographics affect the preceding motivations, behavior, and influence?

Obviously, tapping into the underlying motivations for these various questions will require varying level of details and approaches during the interview process. While we realize that no single interview will be able to yield substantial insight into all these issues, our goal is to have a complete picture of this process once all the interviews are completed. It is also important to note that we need to try to improve our understanding of all these new media, but a more detailed look at social networking and video sharing sites are the most critical to this research. In some interviews you may be able cycle through the “media-specific” interview questions for multiple types of new media technologies based on the level of customer experience with each type of technology.
**Introduction:**

“Good Morning, I am ____________________________________(introduce self).

This interview is being conducted to better understand why you use new media technologies. When I say “new media technologies,” I am referring to technologies like blogs, personal websites, social networking sites (i.e., MySpace and Facebook), video sharing sites (YouTube and Flickr), podcasts, and online/viral games. I am particularly interested in understanding why you adopted these technologies, how you use them, and how you communicate through these new media.

I will be video and tape recording our conversation. The purpose of this is so that I can get all the details but at the same time be able to carry on an attentive conversation with you. Since the interviews are being recorded I cannot guarantee confidentiality. If you agree to this interview and the recording, please sign this consent form (Provide respondents with consent forms).

I am now going to ask you a series of questions that I would like you to answer to the best of your ability.

**General Questions about Technology**

- Which of the following types of new media that I described earlier (blogs, personal websites, social networking sites, video sharing sites, podcasts, viral games) do you regularly use?
  - **PROBES:**
    - How often do you use them?
    - How long have you been using these technologies?
    - Specifically what sites do you visit for each of these technologies?

- **NOTE:** These questions can be used to establish a general framework of the types of technologies that the participant uses most often, so that future probe questions can be focused on the technologies that the participant is most familiar with.
  - This is a good place to quickly compare these answers to their “screener” assessments and identify focal technologies for the conversation.

Now I want to ask you some more details about your specific experiences with these different new media technologies.

**FOR THE QUESTIONS THAT ASSESS TRIAL, ADOPTION, USE, INFLUENCE, and BEHAVIOR I HAVE DEVELOPED CUSTOM SCRIPTS BASED ON EACH TYPE OF NEW MEDIA TECHNOLOGY. THESE QUESTIONS ARE CONSISTENT, BUT THERE ARE UNIQUE ASPECTS DEPENDING ON THE TYPE OF MEDIA.**
SOCIAL NETWORKING TECHNOLOGIES

Questions about Trial

- You mentioned that you regularly use ________________ (insert one of the social networking sites that is regularly used – Facebook, MySpace, Xanga, hi5).
  - Can you describe the first time you found out about this site?
    - Who introduced this site to you?
      - Why do you think this person introduced you to this site?
      - How did they convince you to try this site?
      - What role did they play in making you try this site?
      - Prior to this experience, did anyone try to unsuccessfully?
        - Why didn’t you try the service this time?
    - What did you think once you first heard about this site? WHY?
  - How long after first being exposed to this site did you start using it?
  - What motivated you to try the service out for yourself?
    - Internal interest?
    - Social pressure?
    - Something Else?
  - Can you describe your first experience as a user in great detail?
    - Did you enjoy your first experience?
    - What activities did you perform during your first interaction with the site?
      - Did you update your profile?
      - Upload photos?
      - Find friends?
      - Leave friends messages?
      - WHY DID YOU ENGAGE IN THESE BEHAVIORS?
  - Have you ever tried other social networking sites?
    - Can you describe how you first reacted to these trial experiences too?
  - Did you like your experience with (insert the focal social networking site name here) better than your initial experience with these other sites?
    - Why or Why Not?

Questions about Adoption

- After your trial, why did you keep using the service?
  - Please elaborate.
- Did anyone else influence your decision to continue using the new service after you first tried it?
  - Did anyone talk to you directly to encourage your continued use?

Questions about Continued Usage

- Why do you continue to visit this site?
  - PLEASE ELABORATE
    - Do you use it for communication? What kind of messages do you send or receive?
    - Do you use it for entertainment? What type of content do you look for?
- Please describe the typical process that you go through when you log into the site?
  - When do you log into the site? WHY?
  - How many times a day do you use the site?
  - When you visit the site…..Do you…
    - Update your Profile?
    - Upload Photos
      - When you upload photos do you tag your friends?
        - Why do you tag them?
• Have you ever untagged photos that others have uploaded of you?
  o What did you do this?
  o Can you give me an example of this?
  ▪ Write on people’s walls?
    ▪ Whose “wall” do you write on?
  ▪ Leave people messages?
    ▪ Who do you leave messages for?
• Have you added any new applications to your Facebook or MySpace page?
  o These include things like weather, horoscope, graffiti, etc.
• In addition to these tasks, how do you use this site as part of your daily life?
  o Do you use it for?
    ▪ Communication (HOW SO? WITH WHO?)
    ▪ Persuasion (HOW SO? WITH WHO?)
    ▪ Entertainment (HOW SO? WITH WHO?)
    ▪ Information (HOW SO? WITH WHO?)
• How has using this technology changed your daily activities?
  o How you talk to people? What people?
  o Who you stay in touch with?
    ▪ What people would you not talk to if not for this site?
• What about you makes you so interested in using the site?
• What about your social network makes you prone to using this technology regularly?
• If your friends stopped using this service would you continue to use it? WHY?
• Do you use any other social networking sites?
  o Which ones?
  o Why do you use these other sites?
    ▪ If (insert the name of the focal site) offered these same benefits (added features, social network, etc.) would you stop using this other site?
  o In what ways is (insert the name of the focal site) superior to these other sites?
• How does the primary site you use compare to others?

Questions about Influence
• Who usually sends you messages on this site?
  o What types of messages do they send you?
  o How do you react when you receive these messages?
    ▪ Tell me about one of these messages that you received recently.
      ▪ Who sent you this message? Why did they send this message to you?
• Who usually write on your wall on this site?
  o What do they write?
  o How do you react when you receive these notes?
    ▪ Tell me about one of these messages that you received recently.
      ▪ Who sent you this message? Why did they send this message to you?
• How have you used these new technologies to influence the opinions of others?
  o Have you tried to enhance other’s opinions of you?
    ▪ Are you selective about the pictures you upload?
    ▪ What about pictures that others tag you with?
  o Have you tried to inform others?
    ▪ Have you recruited others to join different groups?
      ▪ What groups?
      ▪ Who did you recruit?
      ▪ Why did you use this site to reach out to them?
      ▪ Did you also contact them offline?
• What were the benefits of contacting them through this site?
  o When you send these messages do you send them to individuals or broadcast them to groups?

Questions about Behavior
• Have you ever introduced this site to others?
  o Please describe a situation where you introduced other people to this new technology?
  o Why were you motivated to introduce others to the technology?
  o Were these efforts successful? WHY or WHY NOT?
• Which of the social networking sites is easiest to introduce to others? Why?

PROJECTIVE QUESTIONS

• What types of new media technologies does the typical young person use in your hometown?
  o Can you describe these technologies to me?

• Why do people use these new technologies?

• How do people use these technologies to supplement their daily activities?
  o Communication (HOW SO? WITH WHO?)
  o Entertainment (HOW SO? WITH WHO?)
  o Information (HOW SO? WITH WHO?)

• When did you first hear about this new technology?
• What did you think when you first heard about it?
• IF THE RESPONDENT BEGINS TO DISCUSS THEIR EXPERIENCE THEN SWITCH TO THE STANDARD QUESTIONS ABOUT TRIAL

• Do friends from your hometown use this technology?

• If they stopped using this technology would you continue to use it?
  o Why or Why Not?

• How does this technology compare to other similar sites?
  o What are the best features about each site?
Bibliography


SOCIAL NETWORKING WEBSITE USERS AND PRIVACY CONCERNS: A MIXED METHODS INVESTIGATION

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Quantitative data in the form of survey information was used in addition to qualitative data gathered from semi-structured interviews. This study supports that Social Desirability Bias was correlated with a user being selective of what pictures were displayed on social networking website accounts. Few users expressed a preference for one social networking website over the other. Over half of the participants did express concern for their privacy on social networking website accounts, but there were no personality factors that showed to be predictive of that concern.

15. SUBJECT TERMS
Information Technology, Privacy, Social Desirability Bias, Social Communication

16. SECURITY CLASSIFICATION OF:
REPORT U
ABSTRACT U
C. THIS PAGE U

17. LIMITATION OF ABSTRACT
UU

18. NUMBER OF PAGES
58

19a. NAME OF RESPONSIBLE PERSON
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