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College for Professional Studies Graduate Programs Final Project/Thesis

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SOCIAL NETWORKING PRIVACY: A QUALITATIVE STUDY OF THE RISKS AND EFFECTS OF SHARING DATA TO A GLOBAL ENVIRONMENT VIA FACEBOOK

A THESIS

SUBMITTED ON 20 OF JULY, 2010

TO THE DEPARTMENT OF INFORMATION SYSTEMS OF THE SCHOOL OF COMPUTER & INFORMATION SCIENCES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF MASTER OF SCIENCE IN COMPUTER INFOMRATION TECHNOLOGY

OF REGIS UNIVERSITY

BY

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APPROVALS

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Abstract

Young women have placed themselves at risk by disclosing private and sensitive data on their Facebook accounts. Privacy settings which can help prevent unauthorized access of this data exist, but some women choose to ignore them. This study is an attempt to gain an understanding of this phenomenon and answer the question of why young women choose to share personal information. Qualitative interviews of college students were conducted and the results interpreted in this paper. The results of this interview are intended to supply research for future studies which aim to minimize problems caused to individuals who choose to share such private information to a semi-global audience.

Acknowledgements

I would like to thank my advisor, Shari Plantz-Masters, for her patience with me and for her editing skills and guidance.

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Chapter 1 – Introduction

In the ever-evolving world of social networking, Facebook has become a primary tool used to share information online while connecting with friends and re-connecting with past friends. Items commonly published on Facebook include photos, address, phone information, local hangouts, relative information, and tastes in music, literature, and television.

boyd (2009) detailed a virtual timeline of the introduction of SNSs, the information they contain, and the functionality of such sites. She discussed specific sites, including Facebook, Myspace, and Friendster and the demographics of the sites' users. While not giving specific reasons why, boyd suggested there are security and protection issues users need to be wary of when using such sites. She discussed that social networking is here to stay, and it is still early in its evolution. She stated that society must evolve and grow as social networking evolves and grows. The area of privacy is one area that continues to evolve, and boyd hints that research must be carried out in stating that the evolution and emergence of social networking sites "creates all new questions about context and privacy". One of the questions inferred from this suggestion, is that of why young women choose to share information online. This needs to be investigated.

Quan-Haase and Young (2009) began researching this question with a quantitative study in which they examined privacy protection strategies of college aged students. In this study, they identified that gender is one of three ways that audiences differ in choosing to share information; this paper will focus on young women. Quan-Haase and Young focused on particular settings and features available and whether or not these are used. While the conclusions reached are valuable, they quickly became outdated when those privacy features studied were modified or eliminated.

Downey (2009) reported a story of a teacher in Georgia who had utilized a majority of Facebook settings to keep her data private. She did not allow students or parents access to her page, and yet she was forced to resign when a parent complained of the teachers' posting of pictures drinking alcohol on a European vacation. This article details why, even when private, it can sometimes be a bad idea to post data online which may be considered offensive to other individuals. Although this case is currently in court, a looming presumption is that the teacher was unaware of who could access her private data based on her Facebook privacy settings.

Building on the research of Quan-Haase and Young, the purpose of this study is to investigate why young women do not use privacy features.

This study involves qualitative interviews of young women attending a Western engineering college. The interviews collected data regarding how these women use Facebook, what data is shared, what privacy settings they are aware of, and what settings they use. Their results have been compiled and analyzed.

Chapter 2 of this paper will address published research conducted in the area of social networking privacy and will identify areas further research is needed as to why individuals share personal information online. These findings lead to research question of this study: Why do young women choose to share personal information on Facebook? Chapter 3 outlines the methodology taken to answer the research question and details the outline and analysis of the qualitative interviews which took place in performing this study. The results displayed in Chapter 4 discuss the findings of the interviews and categorize the findings into five areas, while Chapter 5 concludes the paper with the study's limitations, a summary of the findings, and future areas where more in-depth research is necessary.

Chapter 2 – Review of Literature and Research

A multitude of studies have been conducted to investigate the understanding and implementation of the ever-changing privacy settings by users on Facebook and similar social networking sites (SNSs). These studies have included case studies, qualitative studies, and quantitative studies for both broad and narrow scopes of Facebook users.

While publishing this material is done to socialize and share with friends as a primary reason, when females publish such content online globally or semi-globally, a contravening corollary can unfold in that unwanted or invisible audiences may use this information in identifying, cultivating, and harming a potential future victim (boyd [sic], 2009). Documented studies, including that by Besmer, Lipford, and Watson (2009) have shown that college females are aware of the risks of posting such information online, but they continue to do so.

A study in April 2009 proposed that Facebook users are putting themselves at risk due to confusing privacy settings (Besmer, et al.). The authors proposed an amended privacy interface that has since been implemented in sorts by Facebook (whether or not it was influenced by this study is unknown). In realizing the existence of privacy features is only a stepping stone to understanding a larger problem, the authors state that understanding users' online behavior is a key research question that needs to be addressed. While privacy features are added and modified within the Facebook interface and these features can aide in keeping personal data private, the heart of the matter is to understand why this data is shared to at all.

Gross and Acquisti (2005) defined Social Network Theory in an early study relative to the recent growth of SNSs. Within this proposed theory there are two ways to view the rationale behind placing sensitive data online. The first is that individuals want information about themselves to be known only by close friends. The second is that SNS users want information to

be seen by strangers, but not those close to them. While these reasons may be valid, there may be additional underlying circumstances surrounding the questions of how and why young women share information through these means. Gross and Acquisti continue to elaborate on why posting sensitive information can be dangerous. Some sites, such as Facebook, require users to use their real names on the account registered. Other sites online, such as online dating sites, allow for the use of a pseudonym. In posting similar data on both pages, the user is in danger of allowing his or her pseudonym to become compromised, in that someone seeking out this information can tie together mutual pieces of information, such as an email address or a set of the same photographs placed on both sites. This re-identification of data allows for an outsider to tie data from one site to that of another, potentially causing undesirable consequences.

Several recent quantitative studies and case studies have been conducted in an effort to discover trends in social networking. The subjects of such studies include college-age students. The published research for these projects seek findings regarding the subjects' knowledge of existing privacy tools. Boogart (2006) conducted a large-scale quantitative study on the impacts of social online communities on physical college campuses and residence halls. His study related results more to the students' success at the university, rather than their safety. These quantitative studies, along with studies by Ellison, Lampe, and Steinfield (2008) and Krishnamurthy and Wills (2008), contain much useful data; however, the data presented in these studies reveal that further research is needed to answer the question "why" a college student would disclose such information in a public setting without knowing his or her audience.

The findings of another study explored SNS users' posting, or non-posting of personal life details coupled with the truthfulness of these details (Quan-Haase & Young, 2009). The study, based on the earlier findings of Gross and Acquisti and held at the University of Western

Ontario, provided many statistics but lacked interpretations as to why different trends were prevalent. One segment touched upon in this research is the question of "Concern for Internet Privacy". The study details that 36% of university students share data external to their Facebook friends. Quan-Haase and Young found a mean result of "somewhat concerned" in the responses to their quantitative survey, which meant that respondents displayed a low level of concern over the risk they to which they exposed themselves. While this case study finds a low level for concern for internet privacy, it suggested neither why this concern exists nor why the concern isn't higher.

In a study defined as "both qualitative and quantitative analysis", researchers at Berkeley employed interviews and data analysis in an effort to determine privacy patterns with regards to photo sharing online. They identified a taxonomy of privacy considerations that classified security, social, disclosure, identity, and convenience themes. This study demonstrated privacy through the use of the online photo-sharing site Flickr as well as its image-capture software, ZoneTag (Ahern, Eckles, Good, King, Naaman, and Nair, 2007). Ahern et al. conducted study with a design that took large-scaled surveys to classify individuals, and then interviewed select individuals who share photos online. Their study exposed problems which can occur on SNSs from sharing personal information.

Lewis, Kaufman, and Christakis (2008), following the research of Gross and Acquisti, debated that more active SNS users may be better aware of the data others are sharing online, and may take a more proactive approach to protecting his or her own information. Similarly, it could be said that those who browse the internet in general more often may have a heightened awareness of the accessibility of data online. These users may be less likely to display information online, but more research is needed in this area. Lewis' expertise delves into the

area of who, more specifically, is sharing personal information within the college student demographic.

Furthering the need for research regarding the motivation to reveal personal information via SNSs, boyd (2007) hypothesized that a female tends to keep information public such that her peers are able to locate her more easily, although Lewis et al. (2008), in sharp contradiction to that of boyd, found individuals displayed no higher or lesser propensity to privatize or make public personal information based solely on gender. boyd shared several problems with this that go unnoticed by the owners of this personal information. boyd writes:

- 1) Persistence. What you say sticks around
- 2) Searchability. Today's teens' parents have found their hangouts with the flick of a few keystrokes.
- 3) Replicability. It's difficult to determine if the content was doctored.
- 4) Invisible Audiences. Not only are lurkers invisible, put persistence, searchability, and replicability introduce audiences that were never present at the time when the expression was created.

boyd's guideline stating invisible audiences can be the result of persistence, searchability, and replicability create strong questions asking why college females would publish sensitive information about themselves. The most undesired of these invisible audiences are identified as those who hold power over them and those who want to prey on them. She suggested that research be done to determine why individuals put themselves at risk.

O'Neill (2009) pointed out that personal or incriminating data can be placed online, and linked to an individual, without that individual even knowing this happened. Examples include being "tagged" in a photograph one did not post, or a linked friend posting sensitive data via a

status update. O'Neill's list of "10 Privacy Settings Every Facebook User Should Know" lists good tips as to how to avoid such circumstances.

Literature Review Conclusion

Besmer et al. (2009) suggests that young women are aware of risks associated with sharing personal information, but fail to ask why they continue to do so. Quantitative studies by Boogart (2006), Ahern et al. (2007), Ellison et al. (2008), and Krishnamurthy and Wills (2008) each explored college students' data regarding what is posted online, but did not explore why they choose to post this data posted. Quan-Haase and Young (2009) laid the groundwork for further research in this area; their validation of facts stating that college students share data and have little concern with the data's privacy leads to the question of why this data is shared. Guidelines by O'Neill (2009) and boyd (2007) have offered suggestions how privacy can be maintained online and what precautions can be taken, but do not offer concrete evidence as to why these suggestions are needed. It would be beneficial to the overall documented literature of SNS privacy to conduct a phenomological study on young women with regards to why they share information online publicly while knowing the present risks.

Chapter 3 – Methodology

College aged women share personal information online. The purpose of this study was to ask the question why; what is the motivation of young women, even with the documented risks given, to share private information to the general public? The purpose of this qualitative study was to illuminate the concern in the area of privacy on social networking sites. Comparing young women's stories with existing published insights along with newly-discovered phenomena will add rigor and validity to such a concern with hopes of my findings being valuable contributions in formulating problem-solving techniques.

I will be using additional data sources in my study, including case studies, questionnaires, and surveys existing within previously published researches. Similarly, the study's resources include current news stories and lawsuits involving social networking sites. This secondary research includes current articles and studies which will be added to my knowledge base over the course of the study. The primary research was comprised of a phenomenological study; the phenomenological study included interviews of two college-aged females who were selected via a purposeful sampling method.

Participants

Being in the unique position of working at a college, I interviewed two currently-enrolled female undergraduate students. The interviewees were found via flyers placed across the campus of a Western Engineering college, and campus email sent to solicit potential interviewees. The solicitations yielded 17 respondents, who were asked to supply me with a link to their Facebook pages.

A weighted point scale was created containing three tiers, each being a point of view from which I would view their Facebook profiles. In order to obtain these three tiers, I employed

the use of my personal Facebook page, along with an alternate Facebook profile I created of a nonexistent person. I linked my personal Facebook page with the phony profile I created via a Facebook Friend Request. I first reviewed the respondents' Facebook page before befriending them, such that I could see the page from the stance of a complete stranger. I then sent them Friend requests, once accepted, I viewed their profiles as a Friend. I then logged on to my phony Facebook profile and viewed their pages as a Friend of a Friend. While viewing the pages, I checked the availability of the following information: birthday, address, email address, wall posts, photographs, phone number. For each of these which were displayed, the respondent received 3 points if I could view this information while logged on as a stranger, 2 points if logged on as a Friend of Friend, and 1 point while logged on as a friend. Appendix A displays the respondents' responses, while changing their names.

The selected women were between the ages of 18 and 20 and are attending a small, Western Engineering college. They are living away from their parents' homes either alone or with roommates within the same demographic. United States citizenship was required of participants. This selection of individuals was a homogeneous subgroup of the overall college female population comprised of individuals who currently share personal information (including phone number, email address, employment location, birthday, and personal photographs) with minimal privacy settings on the Facebook social networking site.

The selections ended up being those with the highest scores overall. There were three respondents who stood out above all others on the scoring sheet provided in Appendix A. Out of a possible 30 points, two respondents scored 25 and one scored 19. Unfortunately, one of the respondents with a score of 25 decided she did not want to be interviewed, so the remaining two highest scores were selected. In an effort to maintain the interviewees' anonymity, I will refer to

the study's first participant with the pseudonym Samantha, and the second participant with the pseudonym Penelope.

Place

The interviews were held on campus within a private office. The interviewees were made aware of a digital recording device which was utilized in the semi-structured interviews. The interviewees were given an informed consent letter and were told they could discontinue the interview at any time. This consent letter is included as Appendix B. Similarly, the participants could contact me after the interview and request that their interview not be used. The interview was comprised of open-ended questions, which allowed the interview to be successful in obtaining information in the area of privacy, while allowing the interview to go in unplanned directions as the participant provided me with information.

Instruments and Materials

Basic data collected in the interview included name (although each participant is referenced with a pseudonym in this paper), age, city of current residence, employment status, education status, length of time on Facebook, and what information is shared on Facebook globally with minimal privacy settings. Once the demographic data was obtained, the qualitative portion of the interview began. Although the interviewees were selected based on specific criteria and I already knew what information they shared and to whom, it was important to gain a sense of knowledge from each of these young women regarding their Facebook usage. While Appendix A references what is shared and to whom, the need existed to confirm whether or not the interviewees remained aware of exactly what data they made available. From there, it was important to gain realizations of how these young women use Facebook. Once these realizations were obtained, the question of why was better interpreted.

O'Neill (2009) listed 10 privacy settings of which everyone using Facebook should be aware. The participants were made aware of a sample of O'Neill's suggested privacy settings, including: "Avoid the Infamous Photo/Video Tag Mistake", "Make Your Contact Information Private", "Remove Yourself from Google". Suggested reasons for ignoring these suggestions were not given (such as, "Do you do this because of Reason A?"), rather the participants were asked an open-ended probing question regarding why they do or do not adhere to these suggestions.

The interview obtained information from the participants as to their knowledge of the risks involved with sharing this information to a global audience, and why the benefits outweigh the risks in their individual cases. Once this risk information was presented to the participant, a vague question was asked in an effort to discover what phenomena could inspire them to use more conservative privacy settings. The question was phrased similar to, "Knowing these associated risks, what would it take for you personally to set your privacy settings more strictly?"

The interviews were transcribed with the assistance of Dragon Naturally Speaking software. Edits were made to the transcriptions to protect the participants' anonymity through the use of pseudonyms and the censoring of hard data, such as an actual email or physical address.

Utilizing a data triangulation method, the interview responses were verified by cross-referencing them with data and settings found on the interviewees' Facebook pages; the results were then analyzed and synthesized with findings of past case studies and research projects.

Additionally, new findings were uncovered which had yet to be published.

Data Analysis

Utilizing a data triangulation technique, I have evaluated the participants' Facebook pages to ensure validity in what they have stated in the interviews. The pages of the participants were again viewed from the perspective of a Friend, Friend of a Friend, and stranger. The participants' answers regarding what they shared and to whom were verified by viewing their pages from the viewpoint of the three aforementioned categories. The results of this verification are detailed throughout Chapter 4.

I then synthesized my interview results with existing quantitative data sources from my literature review, linking the results to past studies where applicable. Two categories were identified for my findings: those in synch with previous findings, and those which were unpublished. Those previously published findings are synchronized and cited in the results section of this paper. Additionally, I found unpublished pieces of information which provide insight to why personal data is shared. These areas include scholastic assistance and denial of known risks. These findings will be further detailed throughout Chapter 4.

Chapter 4 - Results

What Data is on Facebook

Data verification.

An early interview question for the participants generated responses of what data was shared and to whom by each interviewee. Penelope discussed (and confirmed via Appendix A) how she uses Facebook to share photos, tagged photos, address, email address, school and major, wall posts, and other forms as well. What was most interesting about Penelope's response is with what little confidence she had in one portion of her answer:

"Petty sure my address isn't on there. Er, it has what school I go to and my networks. Pretty sure my email address is on there, but I don't keep up to date, I don't know which email address is on there. I try not to put too many contact methods up. I'm not sure about wall posts, maybe everyone can see it. Probably my general information, like movies and activities. I don't really know."

To further break down Penelope's uncertainty in her above answer, she does have both her address and email address posted online, although it is only visible to her friends. Penelope seemed ignorant regarding what data she has posted on her Facebook page.

Samantha verified my previous findings of her privacy settings to match almost identically what they actually are, stating that she shares wall posts, photographs, activities, and birthday with everyone, while she stated she keeps pictures hidden from only her employer. Verification of this showed that photographs were available to Friends of Friends, but not a global audience. Verification was not able to be obtained regarding the employer block as the ability to log on as her employer and view her page did not exist. However, it can be stated that Samantha's employment is available to be seen by a global audience, regardless of friend status.

Samantha was confident in her answer and has a respectable grasp on what data she makes available and to whom.

Status updates.

When asked to elaborate on status updates and what information is shared through that means, Samantha and Penelope responded with answers similar to those classified by Dix, Hart, and Sas (2009) as genuine self expression, broken down into subcategories of significant positive events and mundane personal events. Examples included that the interviewees were "excited her basketball coach got engaged" or were ready to declare a new "Friday night Chipotle tradition." The participants shared a variety of answers when asked why they choose to share things via status updates. Samantha stated she likes to make people laugh, which Dix et al. categorize as The Joy of Laugh. Samantha's statement of making others laugh strengthens these findings that young women publish Facebook status updates to derive emotional benefits from making their thoughts public (Dix et al.). Additionally, Samantha commonly posts links to geology-related articles which may be of interest to her classmates.

Penelope states she will post as a status update anything that is not overly dramatic. When asking why Penelope chooses to not post dramatic things, she prefers to discuss these things in person with someone close to her if it is important rather than discuss it online with everyone. Her opinion was that those who post dramatic things online are doing so in an effort to have someone reach out to them for help as they are afraid to ask for it in a physical environment.

Photographs.

In discussing photographs, Samantha showed little concern for photographs she posts of herself. Samantha iterated that:

"I try hard to stay out of pictures that would incriminate me, partially because my parents will see them and also because I see pictures of completely intoxicated looking girls and they appear crazy and not the girl I want to be, so I don't want to come across that way."

Samantha went on to discuss how she isn't afraid to post pictures of anything on Facebook because they display a true representation of who she is, and she is not ashamed of her persona. Studies confirm this is commonplace, showing that users reported very high confidence that their Facebook profiles depict them accurately and that this image of them is a positive one. This is noted by scoring a 4.16 and 4.19 on a 5-point scale, respectively on the quantitative survey conducted on 1440 undergraduate students at Michigan State University (Lampe, Ellison, and Steinfield, 2007). Tagged photographs involve when a friend posts a photograph of another and links this photograph to the account of the individual(s) "tagged" in the picture. Samantha said she has removed tags of herself before so these photographs would not appear on her Facebook page, but realizes she has "no control if the photo is on there or if I'm captioned." This follows boyd's (2007) discovery of the common problem of data persistence. Samantha realizes she has no control over what others can post on Facebook, and she relies on her ability to stay out of incriminating situations in life rather than rely on the privacy options offered by Facebook to keep these situations hidden should they occur. This phenomenon avoids choice under uncertainty, where a user is uncertain who the audience of a picture will be at the time the image is being captured, thus disallowing the subject in the picture from making the best decision at the time the picture is taken (Ahern et al., 2007). Downey (2009) offers insight to choice under uncertainty in showing individuals have been fired while displaying what was, in their opinion, innocent pictures of themselves who they assumed were unavailable to, what boyd (2007) refers

to as invisible audiences. This displays that while Samantha's rationale may be sound, her desired results of having pictures that reflect her true self may turn out differently based on others' perceptions and beliefs should she be captured in a photograph of which she was unaware.

How Facebook is Used

Social networking.

Samantha has around four hundred and fifty Facebook friends. She maintains that her goal is to make people laugh by viewing information on her page. With regards to friendships, she is friends with people from her high school, people she met on a trip to Europe, college friends, classmates, professors, family, and work colleagues. She makes an effort to try not to offend anybody and enjoys reading what everybody is up to.

Penelope likes to use Facebook to get to know people. She often researches people on Facebook who she recently met in the physical world in an effort to learn more about them. She has researched crushes, neighbors, and classmates. She makes an effort to try and view pictures of everybody and likes for her pictures to be posted and viewed.

Job networking.

Penelope was asked to delve deeper into a topic she mentioned: employer and potential employers seeking out her information. She is aware of the fact that employers are researching her in saying, "Employers look at your page to see who you are personally before they hire you." Lewis et al. (2008) published findings confirming that young women are aware of this, stating that this is a common occurrence not only with employers with regards to authority figures, but with parents and teachers as well. In probing Penelope's answer deeper, she responded she still chooses to share personal pictures and such which may be incriminating because, although she is

aware that employers have the ability to look at her personal information, "I don't see Facebook as a threat as I don't see people I don't know coming after me on there no matter if it's a friend, employer, or anything like that." While Penelope is not displaying ignorance as she knows employers seeking out information about applications and employees is a common occurrence (Lewis, et. al), it seems she is in denial that while her information is available, nobody on Facebook will single her out.

Samantha's approach has morphed over the three years she has used Facebook. When she first started using Facebook in 2006, she saw it as a way to network for potential jobs. She states, "Then when they opened it up it turned social." In asking her to explain this, she referred to when Facebook expanded to allow membership to those not associated with an educational network. This change was noted by Ellison et al. (2008), as having been modified in September 2006 to include everyone with an email address regardless of their involvement with a workplace or educational system. She no longer views Facebook as a viable method with regards to job networking.

When asking Samantha about the ability of employers and potential future employers to seek her out via Facebook, she believes:

"They aren't supposed to see sexual preference or political preference if they are an equal opportunity employer, so I don't know if that's my responsibility to not post it or their responsibility to not look at it. At this point I don't care as it's more social than networking and it's not supposed to be professional."

Samantha's response shows that her rationale behind leaving information available to invisible audiences is that she trusts they will only use the information they will need. Her complete

disregard of Facebook's use as a professional networking tool leads to her indifference of posting information that she knows may or may not be viewed by current and potential employers. She trusts that these audiences will use this data only when they are in line with the organizations' core principles and values in that they would ignore things such as gender, race, sexual preference, and political preference. Samantha chooses to display this information with assumption that it will not hurt her.

Scholastic efforts.

Penelope and Samantha both discussed a topic that was not discussed in prior research: the use of Facebook for scholastic assistance. These university students both maintain a large network of campus-related friends who assist them in reaching their scholastic goals via the Facebook interface. Samantha discusses her use of Facebook at her university in saying "Not many of us know what we're doing any more (in Thermodynamics). So having a quick link to several people in class is very helpful sometimes." Penelope adds to this in stating:

"I've done that for Quant lab a couple times this year, like, 'How do you do lab B?' (as a status update). It's really helpful, like, if you're studying by yourself and you have one or two questions, you can use Facebook Chat to see if someone in your class is online to help instead of having to physically go and find someone to help. I use that, like, every day, basically, or whenever I'm doing homework."

Penelope has expressed that sharing her troubles on Facebook has allowed her to gain advice and homework tips from others, allowing her more success in school. Samantha discussed similar events:

"People post their lab answers on Facebook or put something like 'Make sure not to drop a negative on number four.' for a status update. Others

will post 'Samantha found a great example on Page 145 that helps for Quant Lab number seven' or something like that. It also builds your confidence if you know others are struggling. If everyone has the same general issue, it may help you find that a teacher left out a variable or some important piece of information."

Neither Penelope nor Samantha expressed concern in these types of posts leading to cheating. Samantha states she wouldn't post anything to Facebook that she wouldn't feel comfortable asking a classmate in the library. She also discussed that there had been cheating scandals involving technology in the past year, including the use of sending text messages on cell phones during a Physics exam. Samantha feels cheating on Facebook is not a potential problem as it is "too cumbersome". The interviewees provided insight that Facebook helps build confidence and creates a scholastic network which, as Samantha stated, creates a "cooperate to graduate" mentality.

Facebook stalking.

Penelope's first response to the initial interview question asking how she uses Facebook yielded a response of "If you have a crush on someone you'll look at their Facebook so you can find more about them." In seeking clarity to this, she was referring to non-friends who have their profiles available to everyone. This occurrence is discussed as a popular trend which grew between 2006 and 2007, but leveled off in 2008 as it reached a virtual apex on a Likert scale in a Michigan State study (Ellison et al., 2008). Similar to Penelope's response regarding employers and potential employers not searching for her data on Facebook, she expressed no fear over someone going after her personal information in the same way she seeks this information of

others. Regarding people searching for her information, Penelope states "I feel safe as I think only friends I know are on (my Facebook page)."

Samantha has experienced a situation of an individual she met who began to stalk her to the point where she felt unsafe. She discussed this situation briefly:

"He called me and said 'I'm on your front porch and I'm not leaving until you come out and talk to me.' So I should have called the cops because I was home alone, and I lived with my parents, but instead I did nothing. Windows closed, doors locked, so he couldn't get in. Then he left and I didn't hear from him for three or four months, then he friend requested me on Facebook. Then in another few weeks I got another friend request from him. I knew it was him, so I blocked him."

While privacy settings Samantha utilizes will be discussed in a future section of this Chapter, it should be noted here that when Samantha blocked this individual from seeing her page, that means that the individual can no longer see any information about her page while logged on as himself. However, this user can still obtain information about Samantha that she shares globally (as shown in Appendix A) by either creating an additional Facebook account, or by viewing her page while logged on as another individual. Samantha brought up this point on her own, and expressed little concern in this potential threat, stating "I'm sure there are ways for him to find me, so I can only prevent it by getting rid of all profiles everywhere, and I'm not willing to do that." Quan-Haase and Young (2009) described similar findings showing that users "did not mind having their personal information on the Internet, but a link between the digital and their whereabouts in the physical world was something most felt uncomfortable about" Samantha had

expressed this same concern as she didn't care if her "stalker" saw information about her online, but she didn't want him to know where she lived.

Who Personal Information is Shared With

The interviewees were selected in a method which provided knowledge of who can see what data before the interview began. The visibility of data within the three major groups of everyone, friends, and friends of friends were also defined in Appendix A. In the interview, I explored who fit into these groups.

Who is a friend.

Samantha and Penelope are both willing to accept friend requests from anyone if they have a mutual friend. Each of these young women send messages to people they don't recognize who send them a friend request. The only case Samantha can recall of not accepting a friend is when she received a message and friend request from a stranger from Indonesia who was making inappropriate comments towards her.

Penelope stated that she is friends with people from her classes, both students and professors. She sends friend requests to them in order to build a network for schoolwork assistance. Samantha concurs on this point, "If I recognize you from class then I'll probably be your friend automatically."

Both of the interviewees are friends with their parents, siblings, and cousins on Facebook.

Samantha is friends with her boss as well.

Reviewing friends.

The topic of reviewing the interviewees' list of friends was introduced in an effort to determine if these young women show signs of concern with limiting the availability of their data to specific individuals. Samantha stated one case where she unfriended an individual and he

sent her emails questioning why she did this, but "he was psycho and ended up stalking me and sleeping on my front porch." Other than the occasional bad seed, Samantha also reviews her friend list for people she is no longer acquaintances with in the physical world. She provided no real explanation to doing this other than stating she "does not need eight hundred friends."

Penelope has never reviewed her friend list. When asked why not, she stated it can never hurt to have more connections.

Benefits of Sharing

Multiple reasons were unearthed in the qualitative interviews pertaining to the benefits derived from sharing personal information on Facebook. The benefits shared by Penelope are both scholastic and personal. As aforementioned, Penelope utilizes Facebook to assist with her school work. She also stated that sharing her contact information has been of a direct benefit to her. There was an incident where her friend needed to get a hold of her immediately in an emergency situation and had lost her phone number. Her friend was able to obtain her cell phone number from her Facebook page. For this reason, she has continued to keep her phone number available.

Penelope also discussed more in depth the benefits of sharing photos online. Having stated that she has little concern for invisible audiences seeking her out, she enjoys when others post photographs of her so that she can show her friends her activities without needing to carry a camera with her at all times.

In addition to mentioning things similar to Penelope, Samantha said she benefits in having a friendship with her boss on Facebook. She is unable to get her work email on her phone, while she has the ability to get Facebook messages on her phone. For this reason, when her boss needs her outside of work, their correspondence occurs through Facebook. She broke it

down to stating the mobility of Facebook increases her favor of using it over more traditional means of staying in touch, such as email.

Facebook Privacy Settings and Policy

Awareness of privacy settings.

The interview participants were asked what privacy settings they were aware Facebook has available to them to assist them in their privacy needs. This question was included to provide insight as to if ignorance of settings is a reason that these women share information in the way they do.

Penelope's initial response of "I don't know much about privacy settings" was intriguing. She stated they she thinks the ability exists to create groups such that each group can see different areas of her profile as she would allow.

Samantha displayed greater awareness of privacy settings on Facebook. She is aware of the ability to block search engines, such as Google, Yahoo, or Bing, from displaying her Facebook page. Samantha also discussed how friends can be placed into groups and these individual groups can be assigned separate access rights to information. She is also aware of the ability to limit viewing of particular Facebook modules to everyone, friends, friends of friends, or custom based on groups created.

Usage of privacy settings.

Penelope abides by a practice which involves her posting only things which she is comfortable for everyone to see. She showed great ignorance of the plethora of privacy settings made available by Facebook, and her lack of concern regarding individuals seeking her out online coupled with her viewpoint of the complicated nature of the settings prevent her from using Facebook in a more private manner. In discussing the creation of groups who can each

have individual data access rights, she chooses not to use this feature as "it seemed like a lot of work so I don't use it".

After discovering which privacy settings she was aware of, the interview process presented her with some settings she wasn't aware of and sought her opinion on them. The privacy setting which disallows Facebook's search feature from displaying her information, as well as external search engines from searching her profile, Penelope feels "It's a good feature but it wouldn't have a positive impact for me as I don't think it happens that often that people look for me."

In discussing which features she does use, Penelope stated that she has her wall blocked from people unless she is friends with them. In verifying this information, it proved to be incorrect. Any individual with a Facebook account has access to read what she or her friends post on her wall. She stated that photographs are open to everyone, this was also incorrect as this information is not global; this information is only available to friends of friends. In the end, Penelope declared bluntly, "I'm not sure what my settings are."

Samantha has experimented with the settings and shows less ignorance regarding the availability, so her standpoint was from an entirely separate point of view. Like Penelope, Samantha stated that the group settings were too complicated and difficult to manage regularly so she did not use them. Besmer et al. found similar findings, stating that users ignore privacy settings which are too confusing (2009). Samantha had attempted to use this feature to block family from seeing some photos, but she didn't feel it worked well so she undid the changes she made and set everything back to the default setting. She does have her information blocked from search engines, but that is the sole setting she chooses to utilize. Samantha does not like tagged photos of her and stated "I guess I'm not aware of a way to prevent that." This is simply an

instance of ignorance on her part as Facebook currently offers a feature which allows users to prevent others from tagging them in photos.

Review of privacy settings.

Facebook sends email notifications to its users to inform users when they have altered the available privacy settings, suggesting users review their privacy settings. The interviewees were asked if they review their settings either on their own, or when these emails are received.

Penelope stated that her Facebook account is linked to an email account she no longer uses, so she doesn't receive notifications when privacy settings are altered. Similarly, Samantha has disabled the feature which allows Facebook to send her account notifications, so she also does not receive messages when changes are made. She expressed concern over the fact that the settings are changed so often; she wishes Facebook would "set it and forget it", meaning they should have a standardized protocol regarding the available privacy settings and stop altering them. When asked what it would take for her to review her privacy settings, Samantha responded, "Instead of saying, look we did this, say LOOK WE DID THIS!!!! The last time they did such-and-such settings were changed, and I couldn't find those changes. They need to force you to review, otherwise I never do." With this response, she has suggested that the changes are made so often that they aren't seen as significant. Furthermore, when they are significant, they are difficult to find. With proper guidance and explanation of any new settings, she suggests she may use these features; however that is not currently the way Facebook works.

Results Summary

Several reasons have been placed into the answer of the research question regarding why young women choose to share personal information online. These answers can be categorized into five areas: ignorance, denial, confusion, trust, and apathy.

Ignorance.

Penelope is unaware of what data she has posted on Facebook, similarly, her answers were incorrect in stating who can view what information on her account. Her personal information is much more readily available to strangers than she thought.

Neither Penelope nor Samantha receives notifications when privacy settings change.

They are unaware of a great number of features as a result of this.

Denial.

Penelope believes that while employers seek out information on potential employees, nobody will seek her out. Similarly, she thinks only her friends seek her out on Facebook and that she will never be singled out as a target for any form of harm. She is under the impression that nobody will seek her out via Facebook's search feature, or that of any search engine.

Samantha believes she will be able to stay out of all photos that people will see as incriminating. Additionally, she believes that what is appropriate or inoffensive to her will be appropriate or inoffensive to everyone who views these pictures.

Confusion.

Samantha and Penelope both discussed a feature which they knew was available. Both of them had investigated this feature and said it was complicated to figure out. Penelope stated that the feature seemed like too much work, so she didn't bother setting it up.

Trust.

Samantha trusts that information she has on her Facebook page, such as political affiliation, will not be used by Equal Opportunity Employers as they aren't supposed to be judged based on that. She posts information about this in confidence that it will not be used against her by her employers.

Apathy.

Samantha discussed she has no control over others posting pictures of her online on their accounts so she doesn't let herself get upset about it. She also expressed that if someone wants to find information about her, they will, so why bother worrying. She summed this up nicely by stating "You know it's dangerous but you know you'll do it anyway because it's impractical not to. Take precautions where you can."

Chapter 5 – Conclusions

It is important to remember the limitations of this study as this applies only to young women; applying the same results to other demographics may not be comparable to a case such as presented in this study. This study also has a small sample size as the two interviews are a small sample size; the conclusions reached will serve as a guide to future, larger studies. The study was also limited as all data offered by the interviewees could not be verified. Instances of blocking certain individuals or groups of individuals to specific pieces of data could not be verified; my belonging to these groups was not possible.

Several reasons can be placed into the answer of the research question of why young women choose to share personal information online. These answers have been categorized into five areas: ignorance, denial, confusion, trust, and apathy. Ignorance can be viewed three ways. The user is ignorant of settings available, the user is ignorant of which settings are applied to his or her Facebook account, and the user is ignorant of what information is shared on his or her Facebook page. Ignorance, trust, denial, and apathy are all issues brought upon the users by themselves, while the blame for the confusion within privacy settings may lie with both the Facebook interface as well as the users.

Each of these areas defines different levels of concern, and each identifies an area future research necessary. Further research is necessary to determine what can be done to lessen ignorance of users regarding what information they are sharing, what privacy settings are available, and what settings they are currently using. An additional area of future research includes determining why young women feel they are exceptions to threats posed to them.

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 Community. ACM International Conference Proceeding Series; Vol. 229, pp. 257-158.

Appendix A – Selection of Participants

Shares Information With Everyone About

| | | About | | | | | |
|----------|--------------------|-------|----------|-------------------|---------------|------|-------|
| Name | FB Link | Me | Birthday | Employment | Photos | Wall | Total |
| Erica | hidden_in_appendix | 3 | 0 | 3 | 0 | 0 | 6 |
| Tasha | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Stacie | hidden_in_appendix | 3 | 0 | 0 | 0 | 0 | 3 |
| Gina | hidden_in_appendix | 3 | 0 | 3 | 0 | 0 | 6 |
| Traci | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Serena | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Katie | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Penelope | hidden_in_appendix | 3 | 3 | 0 | 0 | 3 | 9 |
| Hannah | hidden_in_appendix | 3 | 0 | 0 | 0 | 0 | 3 |
| Laura | hidden_in_appendix | 3 | 3 | 3 | 0 | 3 | 12 |
| Andrea | hidden_in_appendix | 3 | 0 | 0 | 0 | 3 | 6 |
| Audra | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Samantha | hidden_in_appendix | 3 | 3 | 3 | 0 | 3 | 12 |
| Shawna | hidden_in_appendix | 3 | 0 | 0 | 0 | 0 | 3 |
| Sarah | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| Karen | hidden_in_appendix | 3 | 0 | 0 | 0 | 0 | 3 |
| Angela | hidden_in_appendix | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |

Shares Information with Friends of Friends Contact

| | | | Contact | | | |
|----------|-----------------|------|---------|----------|-------------------|-------|
| Name | Pictures | Wall | Info | Birthday | Employment | Total |
| Erica | 2 | 0 | 0 | 0 | 2 | 4 |
| Tasha | 2 | 2 | 0 | 0 | 0 | 4 |
| Stacie | 0 | 0 | 0 | 0 | 0 | 0 |
| Gina | 0 | 0 | 0 | 0 | 2 | 2 |
| Traci | 0 | 0 | 0 | 0 | 0 | 0 |
| Serena | 2 | 0 | 0 | 0 | 0 | 2 |
| Katie | 2 | 0 | 0 | 0 | 2 | 4 |
| Penelope | 2 | 2 | 0 | 2 | 0 | 6 |
| Hannah | 0 | 0 | 0 | 0 | 0 | 0 |
| Laura | 2 | 2 | 0 | 2 | 2 | 8 |
| Andrea | 0 | 2 | 0 | 0 | 0 | 2 |
| Audra | 0 | 0 | 0 | 0 | 0 | 0 |
| Samantha | 2 | 2 | 0 | 2 | 2 | 8 |
| Shawna | 2 | 0 | 0 | 0 | 0 | 2 |
| Sarah | 2 | 2 | 0 | 2 | 2 | 8 |
| Karen | 2 | 0 | 0 | 0 | 0 | 2 |
| Angela | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |

| Shares Information | with | Friends |
|---------------------------|------|----------------|
| Contact | | |

| | | | Contact | | | |
|----------|-----------------|------|---------|----------|-------------------|-------|
| Name | Pictures | Wall | Info | Birthday | Employment | Total |
| Erica | 1 | 1 | 0 | 1 | 1 | 4 |
| Tasha | 1 | 1 | 0 | 0 | 0 | 2 |
| Stacie | 1 | 1 | 0 | 0 | 0 | 2 |
| Gina | 1 | 1 | 0 | 0 | 1 | 3 |
| Traci | 0 | 1 | 0 | 0 | 0 | 1 |
| Serena | 1 | 1 | 0 | 0 | 0 | 2 |
| Katie | 1 | 1 | 0 | 0 | 1 | 3 |
| Penelope | 1 | 1 | 1 | 1 | 0 | 4 |
| Hannah | 0 | 1 | 0 | 0 | 0 | 1 |
| Laura | 1 | 1 | 1 | 1 | 1 | 5 |
| Andrea | 0 | 1 | 0 | 0 | 0 | 1 |
| Audra | 0 | 1 | 0 | 0 | 0 | 1 |
| Samantha | 1 | 1 | 1 | 1 | 1 | 5 |
| Shawna | 1 | 1 | 0 | 0 | 0 | 2 |
| Sarah | 1 | 1 | 1 | 1 | 1 | 5 |
| Karen | 1 | 1 | 0 | 0 | 0 | 2 |
| Angela | 1 | 1 | 0 | 0 | 0 | 2 |
| | | | | | | |

| | | Totals | | | |
|----------|-------------------|---------------------------|------------------|-------|----------------------|
| Name | Everyone Score | Friend of Friend Score | Friends Score | Total | <u>Notes</u> |
| Erica | 6 | 4 | 4 | 14 | |
| Tasha | 0 | 4 | 2 | 6 | |
| Stacie | 3 | 0 | 2 | 5 | |
| Gina | 6 | 2 | 3 | 11 | |
| Traci | 0 | 0 | 1 | 1 | |
| Serena | 0 | 2 | 2 | 4 | |
| Katie | 0 | 4 | 3 | 7 | |
| Penelope | 9 | 6 | 4 | 19 | |
| Hannah | 3 | 0 | 1 | 4 | |
| Laura | 12 | 8 | 5 | 25 | Refused Interview |
| Andrea | 6 | 2 | 1 | 9 | mitor view |
| Audra | 0 | 0 | 1 | 1 | |
| Samantha | 12 | 8 | 5 | 25 | |
| Shawna | 3 | 2 | 2 | 7 | |
| Sarah | 0 | 8 | 5 | 13 | |
| Karen | 3 | 2 | 2 | 7 | |
| Angela | 0 | 0 | 2 | 2 | |

Appendix B - Research Study Participation Cover Letter

Regis University

SOCIAL NETWORKING PRIVACY: A QUALITATIVE STUDY OF THE RISKS AND EFFECTS OF SHARING DATA TO A GLOBAL ENVIRONMENT VIA FACEBOOK

Project Title: <u>Social Networking Privacy</u>: A Qualitative Study of the Risks and Effects of Sharing Data to a Global Environment via Facebook

Researcher: Bryan L. Mack, School of Computer & Information Sciences

Phone Number: 303-273-3132 Email: bryan.mack@is.mines.edu

Research Advisor: Shari Plantz-Masters, School of Computer & Information Sciences

Phone Number: 970-351-2807

I am researching reasons why young females post personal information on Facebook to a global audience. Research has been done in the area of risks involved with this, but my goal is to further the information regarding why this is being done when the risks are known.

I would like to interview you about your reasoning for posting personal information on Facebook. The interview will last approximately 45 minutes and will involve a series of openended questions. There will also be a few demographic questions, including age, citizenship, gender, and other details vital to the study. The interview will be recorded and transcribed; however, your anonymity will be protected.

I see no risks in your participation of this survey. In my published thesis and transcribing, you will be referenced via a pseudonym; your name will never be used. Should you like to see the finished thesis upon completion, I will gladly provide you with a copy.

Your participation in the interview is voluntary. You may decide to withdraw from the interview at any time. Your completion of the interview indicates your consent for me to publish findings in my thesis report. If you have any concerns about your interview, please contact the Sponsored Programs and Academic Research Center, Main Hall, Regis University, Denver, CO 80201; Phone 303-964-3615

| Sincerely, | | | | | |
|-----------------|-------------|--------------|---------------|---------------|-----------|
| | | | | | |
| | | | | | |
| | | | | | |
| You may wish to | keep a copy | of this rese | arch cover le | etter for you | r records |

Annotated Bibliography

Ahern, S., Eckles, D., Good, N., King, S., Naaman, M., Nair, R. (2007). Over-Exposed?: Privacy Patterns and Considerations in Online and Mobile Photo Sharing. *Proceedings of the SIGCHI conference on Human factors in computing systems.* pp. 357-366.

This study, based on the online photo-sharing website Flickr, is proclaimed to be qualitative and quantitative as it studies the patterns of many online users' picture sharing habits and suggests privacy considerations which should be taken to minimize (or eliminate) unauthorized use and access of shared images. Discussed are the linking of photos within this site to those on other social networking sites, which can provide additional (private) information to a web surfer about its owner. The study draws a poor conclusion, however, the facts it presents are valuable to a research involving the study of unintentional public sharing of online personal content.

Besmer, A., Lipford, H., Watson, J. (April 2009). Understanding Privacy Settings in Facebook with an Audience View.

This study was founded upon an interview-based research which uncovered that undergraduate aged students unintentionally reveal private data via Facebook due to confusing or changing privacy policies. An audience-based view is suggested for Facebook to implement such that a user of Facebook can view his or her own page exactly like a suggested individual would potentially view it.

Boogart, M. (2006). Uncovering The Social Impacts of Facebook on a College Campus.

This was a quantitative evaluation of four universities with regards to how the students use the internet. Statistics such as time spent online are evaluated and interpreted in an effort to connect these findings with scholastic performance.

boyd, danah. 2009. Social Media is Here to Stay... Now What? *Microsoft Research Tech Fest*, Redmond, Washington, February 26.

boyd's transcription of a speech discusses how social media began and gained steam into the mainstream, how youths utilize social networking vs. how adults do the same, and where will social networks be in the future. The article gives an overview of what social networks are all about and how they are used. This information is useful when developing a background or overview of social networking as a whole.

boyd, danah. (2007). Social Network Sites: Public, Private, or What? *Knowledge Tree*, May, 2007.

In this article, boyd [sic] gives an overview of social networking websites such as Facebook and MySpace. The general features of these pages and how they are created are provided. boyd delves into the sensitive nature of the data that individuals, particularly teens, tend to post in a public environment. Problems with making such information public are discussed. Suggestions for parents and teachers of teens are given with regards to how to put appropriate information on the networking site. Advantages such as peer counseling and trouble spotting are also touched upon. This article is a resource for those wishing to understand the use and problems associated with making private information public over a social networking site.

Dix, A., Hart, J., Sas, C., Su, R. (April 2009). Emotional Experience on Facebook Site.

This quantitative study focused on obtaining stories from several individuals about memorial experiences, both public and private, from Facebook usage. This article provides specific stories from users and helps complement the research necessary to answer the question why people disclose information.

Downey, M. (11-13-2009). Facebook flap in Barrow raises troubling fairness issues. Retrieved from http://blogs.ajc.com/get-schooled-blog/2009/11/13/facebook-flap-in-barrow-raises-troubling-fairness-issues/?cxntfid=blogs_get_schooled_blog.

This published article discusses the story of a teacher who was dismissed from her job after photographs of her with alcohol were discovered on Facebook. Although she thought she had her privacy set strictly, these tame pictures still lead to her firing. This article is beneficial to research which shows that implied privacy is nonexistent.

Ellison, N., Lampe, C., Steinfield, C. (November 2008). Changes in Use and Perception of Facebook.

This quantitative study published findings of how people use Facebook. Data obtained includes: Use Facebook to keep in touch, Facebook stalking, and number of friends. Specific stories from individuals are stated, discussion how the users utilize Facebook.

Gross, R., Acquisti, A., Heinz III, J.H. (2005). Information Revelation and Privacy in Online Social Networks. *Proceedings of the 2005 ACM workshop on Privacy in the electronic Society.* pp. 71-80.

This article explores both the evolution of social networking, the common users of social networking sites, and privacy concerns within these sites. The focus of the article is privacy as many ways in which privacy can be

used and ways in which it actually is used are identified. A sample of over 4000 Carnegie Melon students were used in this study. Privacy concerns are addressed both as technical concerns and logical concerns. Reasons why social networking users choose or do not choose to adopt best privacy practice are identified. Risks which are created from not adhering to privacy standards are also discussed. This paper is an excellent resource for disclosing many privacy concerns and would be a primary reference for any study based on social networking privacy.

Joinson, A. (2008). Looking At, Looking Up, or Keeping Up With People?: Motives and Use of Facebook. *Conference on Human Factors in Computing Systems*. pp. 1027-1036.

The authors of this article investigate the motives behind using social networking sites. Investigations of whether or not users knew their online connections before utilizing the site were conducted and the authors studied what information was investigated by those who know each other and those who do not. Issues such as reconnecting with lost friends and finding new friends are explored utilizing statistics. This is a large enough sample size within a study to develop generalizations on how college-aged students use social networking sites. The study is beneficial to one who seeks online behavioral information of social networking site users.

Krishnamurthy, Balachander and Wills, Craig E.. (2008). Characterizing Privacy in Online Social Networks. *Proceedings of the first workshop on Online social networks*.

This article investigates how private data on online social networks is leaked externally from said social network, both technically and socially. The sharing of data from a social network with an application or third-party site is discussed. Privacy settings are discussed in depth in an effort to demonstrate how a user can keep unwanted individuals from finding data about them.

Lampe, C., Ellison, N. and Steinfield, C. (2007). A Familiar Face(book): Profile Elements as Signals in an Online Social Network. In *Proc. CHI 2007*, ACM Press, 435-444.

This study is a review of what fields are available within Facebook to store data in, thus presenting a list of overall choices one can display on Facebook. The study investigates whether or not certain fields indicate specific usage goals of the social networking site. This article is useful in profiling individuals based on which data they present on social networking sites.

Lampe, C., Ellison, N. and Steinfield, C. (2006). A Face(book) in the Crowd: Social Searching vs. Social Browsing. In proceedings of *ACM Special Interest Group on Computer-Supported Cooperative Work*, ACM Press, 167 – 170.

This case study is determining why users tend to join Facebook and who they depict their audiences to be. The study delves into whether or not users are looking up information on audiences they may know, or may not associate with. The researchers define social searching as gathering information about those you know; social browsing is seeking information on individuals the user may wish to meet offline.

Lewis, K., Kaufman, J., and Christakis, N.. (2008). The Taste for Privacy: An Analysis of College Student Privacy Settings in an Online Social Network. *Journal of Computer-Mediated Communication*, 14(1),79-100

This in-depth quantitative study evaluated the privacy settings of college students. The data was analyzed to display racial and sexual statistics for privacy settings; which races used which settings, which did not, and so on. This metrics and statistics-laden evaluation is useful in verifying how college students tend to set their privacy settings.

Mannan, M., van Oorschot, P. (2008). Privacy-enhanced Sharing of Personal Content on the Web. *Proceeding of the 17th international conference on World Wide Web.* pp. 487-496.

This study proposes a method of privacy security in which online information can be seen only by a defined audience. Existing methods of privacy control within popular social networking sites are discussed along with additional steps that can be taken by the member of the site. This article is beneficial to a researcher as it identifies many problems regarding privacy and proposes a technical solution. While a researcher may not agree with this solution, the basis behind it's need would be supported by this article.

O'Neill, N. (2-2-2009). 10 Privacy Settings Every Facebook User Should Know. Retrieved from http://www.allfacebook.com/2009/02/facebook-privacy/

This article displays 10 suggested privacy settings on Facebook which all users should know about, and implement. This article is useful in any study, whether qualitative or quantitative, in citing what features an interview participant may or may not be aware of or use.

Quan-Haase, A., Young, A. (June 2009). Information Revelation and Internet Privacy Concerns on Social Network Sites: A Case Study of Facebook.

This case study explores why college aged students put personal information online. The study was an survey of 77 individuals and 19 face-to-face interviews. Results include the top privacy concerns by Facebook users as well as the top protection strategies used by these same individuals. This study is an excellent resource for a study narrowing

down the scope of a study asking the question why personal data is displayed on Facebook.

Strater, K., Richter, H. (2007). Examining Privacy and Disclosure in a Social Networking Community. *ACM International Conference Proceeding Series*; Vol. 229, pp. 257-158.

This article involves the authors taking a small random sample of Facebook users from their college and discussing privacy concerns within their accounts. Statistics are given for the different privacy settings utilized among these social networkers. Reasons for not utilizing privacy methods offered by Facebook are discussed. This article is a good basis of ideas to use for a larger-scale study. Although the random sample is too small and narrowly-focused for real value, the ideas used in the study are of value to a research topic in this area.

Glossary

Friend: When two Facebook accounts are linked together via Facebook's Friend module.

Friend of a Friend: When two Facebook accounts are not linked together via Facebook's friend module, however, the two accounts share a mutual Friend.

Friend request: when an individual sends notification to another individual that they would like to be friends on Facebook.

SNS: Social Networking Site. Examples include Facebook, MySpace, and Friendster.

Stranger: When two Facebook accounts are not linked together via Facebook's friend module, nor do the two accounts share a mutual Friend.

Tagging: A method in which a friend can post a picture to another individual's Facebook page by informing Facebook's picture module that the other individual is in the picture.

Unfriend: The act of removing an individual from one's friend list

Wall: The feature within Facebook which displays status updates and comments from friends on your individual Facebook page