Privacy Concerns, Identity Management, and Awareness on Facebook

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Abstract

This paper looks into the issue of privacy for women on the social network site, Facebook. After going through the Institutional Review Board research approval process, we started to look into whether college aged females, between 18-24, read the most updated Facebook privacy agreement and how that might affect their online identification management. After collecting data in the form of a questionnaire survey, we found that although majority of our participants had not read the most current privacy agreement, they were up to date as to how to control their privacy on their Facebook pages and took advantage of various privacy settings to manage their online identity.
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Introduction

Just seven years after its inception in 2004, Facebook has become a major agent of social change. The social network was created by a Harvard student named Mark Zuckerberg to be an exclusive site for Harvard students. Facebook was adopted so well by the Harvard population that it rapidly expanded to other Ivy League schools, then opened itself to all college students, and within a year or two later opened up the network to the mainstream online population. This social media giant has changed the way members of our society interact with one another. Facebook has grown larger than any other social network of its kind, spearheading the social media revolution (Debatin, 2009). On any given day, approximately 50% of Facebook’s over 300 million users log on to the site, adding up to over 700 billion minutes of Facebook use per month (Facebook Statistics, 2010). Users share a combined 300 billion pieces of content (e.g., photos, web links, status updates, etc.) each month across the world (Facebook Statistics). With such staggering statistics about the content users share on their personal pages, there are bound to be privacy risks.

Our study will thus examine the kinds of personal information college age women are revealing as well as link this to their awareness and concern for privacy issues. The privacy policies and capabilities on Facebook are quickly and constantly changing. This, combined with increased media coverage, makes further research pertinent to determining the link between privacy knowledge and concerns and online identity management. This study will focus on a convenience sample of college age women, their awareness of Facebook’s privacy rules and regulations, and how this knowledge affects their activity and use of Facebook. It will further existing research on Facebook privacy by focusing specifically on college age women across
multiple universities.

**Literature Review**

**Online identity management.** Social networking sites (or social media) can be defined as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2007, p. 210). More specifically, Facebook is made up of networks or “collections of users with a school, workplace, or region in common” (Grimmelmann, 2009, p. 1142). When creating a profile on Facebook, the user gives such information as name, gender, hometown or current location, age/birthday, race/ethnicity, personal interests, religion, and personal contact information (Taraszow, Aristodemou, Shitta, Laouris, & Arsoy, 2010). Previous studies have examined privacy issues surrounding social media, including Facebook, due to the type of information revealed by the user, especially information revealed on the profile, such as the study referenced above by Tarascow et al. and the research done by Tufekci (2008).

For example, Tufekci’s (2008) study looked at the relationship between privacy concerns and information disclosure on both Facebook and MySpace. The sample consisted of 104 college students at a public university in the mid-Atlantic region of the United States. Another study also addressed the issue of privacy on social media sites and young people, with an emphasis on Facebook. This study looked at a sample of 131 individuals ranging from 14 to 29 years of age (Taraszow et al., 2010). Our study furthers existing research such as this by making the sample even more specific; we will be surveying college age women. Also, our study does not limit itself to one university, since we will be recruiting college women from different cities and universities, and it focuses specifically on privacy and image management on Facebook.
Previous studies have looked at the kind of information users reveal on Facebook and how many users are willing to provide personal information. Tufekci’s (2008) study found that 94.9% of students used their real name on Facebook and large percentages displayed music, movie, and book tastes as well as political views, religious views, relationship status, and sexual orientation. This same study also found that students were much more concerned about future romantic partners viewing their profiles as opposed to future employers or government organizations. There was apprehension about immediate privacy issues only, as well as concerns about peer attention and criticism. The issue of privacy thus became more about monitoring who saw their profile and how much information they saw. Another study found that 76.3% made their profiles visible to only friends, 100% of participants had their birth dates visible, 64.1% displayed their email address, and 54.2% revealed their hometown (Taraszow et al., 2010). Revealing this kind of personal information on the Internet brings up concerns about who can view it, who will view it, and what he/she plans to do with it. It is important for Facebook users to keep their privacy in mind when utilizing their online pages.

**Knowledge of privacy policies.** “Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others” (Westin, 1967, p.7). Specific privacy concerns of Facebook users include “inadvertent disclosure of personal information, damaged reputation due to rumors and gossip, unwanted contact and harassment or stalking, surveillance-like structures due to backtracking functions, use of personal data by third parties, hacking and identity theft” (Debatin et al., 2009, pp. 83-84). Findings from Debatin et al.’s (2009, p. 100) research relayed that although the “majority of Facebook users report having an understanding of privacy settings and make use of their privacy settings, it is apparent, however, that they may have a skewed sense of
what that exactly entails.” The study also found that Facebook users felt that the benefits of being a part of the social networking site outweigh any privacy concerns.

In relation to our study, awareness means being cognizant of one’s online presence, especially on Facebook. Certain aspects of Facebook such as applications and various advertising platforms expose and even abuse user privacy. For example, there are applications on Facebook that “track user behaviors and/or make information from personal profiles available for targeted advertising” (Debatin, 2009, p. 85). Specifically, Facebook’s “Beacon,” an online advertising system, tracks user activity and gathers information on third-party sites even if a user is logged off of Facebook (Perez, 2007). Facebook users’ level of privacy awareness is in question in our study. Whether or not users are aware that the “Patriot Act allows state agencies to bypass privacy settings on Facebook in order to look up potential employees” is also of interest (Debatin, 2009, p. 85). Most Facebook users are likely unaware that a “clever data thief could even deduce social security numbers (which are based on 5-digit ZIP codes, gender, and date of birth) from the information posted on almost half of the users’ profiles” (p. 86). Debatin’s study emphasizes that young people need to be “educated about risks to their privacy in a way that actually alters their behavior” (p. 103).

In the world of Facebook, the term, “Friend” is very broad and can include very close friends and family or mere acquaintances. One of Facebook’s most simple and straightforward privacy options is whether or not to make one’s profile private, meaning only friends, or people in their “Networks” can view the profile. It even goes as far as to limit the visibility of their profiles to certain individuals or groups of people (i.e., employers, peers, professors, parents). In 2006, Facebook established the “News Feed,” which displays a user’s activities on the site’s homepage. Activities consist of, but are not limited to, writing on a friend’s wall, joining a
group, uploading new albums, and updating relationship status. When the News Feed first came about, users felt exposed, as if they had lost control over their information (Boyd, 2008). Groups were formed on Facebook protesting the News Feed. Facebook responded by introducing specific privacy controls that allowed users to monitor what information was published on the News Feed as well as who could see this information (Debatin, 2009). As of today, Facebook no longer offers the News Feed privacy controls. A study done by Jones and Soltren (2005) found that 74% of Facebook users were aware of the general privacy options but just 62% utilized them, and 89% of Facebook users said that they had never read the Privacy Policy. The ambiguity associated with privacy as well as the uncertainty of user’s actual awareness makes our study essential to the evolution of social media and our society at large.

Rationale

Social media sites, like Facebook, have changed the way we interact with one another. Facebook allows users to share as much information as they want on their page, as well as check the pages and “statuses” of other users. Users can share photos, private information (e.g., birthday, hometown, relationship status, employment information), publish events and even disclose where they are, as well as their current activities. With such a steady flow of personal information being shared through the site, privacy inevitably comes into question. The knowledge of privacy control and management on Facebook also comes into question, along with how users use this knowledge to control their profile pages. Our study aims to explore how Facebook users, specifically young college age women, treat their online privacy and if they take active steps to manage their online profiles.

RQ: To what extent are college-age women aware of Facebook’s privacy management settings and rules?
Method

Participants and General Procedures

Participants ($N = 97$), who completed an online survey through www.SurveyMonkey.com, were required to be: (1) college-age females and (2) have an active Facebook account. The final sample averaged 20.4 years ($SD = 1.221$), and ethnically consisted of White/Caucasian ($n = 63$), Latino/Latin American ($n = 4$), Asian or Pacific Islander ($n = 19$), and “Other” ($n = 8$). The final sample had a majority of participants that were enrolled in college ($n = 87$, not enrolled $n = 7$, did not respond $n = 4$). All participants responded that they had a Facebook account.

Before any research was started, all the researchers of this study had to go through training and certification through Chapman University’s Institutional Review Board (IRB). After we got certified, our Research Consent Form, Patient Bill of Rights, and survey questionnaire also went through the IRB process for approval. Once that went through, we started data collection. A self-selected survey was most appropriate because we studied participants’ behaviors with their Facebook account. Participants were recruited through Facebook status updates and a Craigslist “volunteer” posting. These messages generally reached the population of college-age females. Once participants chose to take the survey, they were given a brief description of the purpose for the study and their rights as a participant. We ensured that each participant was over 18 and obtained informed consent. The survey took approximately 10 minutes to complete.

The participants were asked a variety of questions ranging from demographic questions (as mentioned previously) to current Facebook use. These questions asked about current self-disclosure habits on Facebook and the participants’ knowledge of the current Facebook privacy
agreement. The average participant spends 2-3 hours per day on Facebook \((n = 46,\) followed by 0-1 hours \((n = 36),\) and 4 hours or more \((n = 15).\) The participants most frequently update their Facebook status 1-4 times per week \((n = 61)\) and upload photographs once per month \((n = 53).\) The majority of participants had not read Facebook’s most current privacy agreement \((n = 77),\) yet had their email address \((n = 57)\) and cell phone numbers listed on the private settings \((n = 88).\) Most participants did not have their birthday set to the private setting \((n = 53, yes n = 37, don’t know n = 5).\)

**Measures**

The researchers created 21 items to measure the information about Facebook privacy agreement knowledge and information disclosure. The two variables measured were (1) *online identity management* (how frequently the respondents post and edit information on their Facebook pages) and (2) *knowledge of Facebook privacy settings* (if they had read the current Facebook agreement and how knowledgeable they were about the ownership of the information posted on their page).

**Knowledge of Facebook privacy settings.** Four items measured the participants’ knowledge of Facebook Privacy agreements and their knowledge and concern about the reality of the privacy agreements. These items measured whether the participants have read the current Facebook agreement (have read \(n = 18,\) have not read \(n = 77\)) and how knowledgeable they would consider themselves about the agreement \((5 = very knowledgeable, 4 = knowledgeable, 3 = neutral, 2 = somewhat knowledgeable, 1 = not at all valuable).\) The questionnaire also contained items asking how aware the participants are of Facebook permanently saving all data \((1 = very aware, 3 = unaware),\) how concerned the participants are that Facebook permanently saves all data \((very concerned = 1, not concerned = 3),\) and how aware they are that Facebook
data is used for direct advertising (1 = very aware, 3 = unaware).

**Online identity management.** Ten items were used to measure how frequently the participants edited the information posted on their Facebook profile page, as the regulation of information on a personal Facebook page implies the importance of online identity management. The survey measured personal uploads, profile access privacy settings such as editing viewers and blocking/_limiting content. These items were measured by average amount of status updates per week (10 times or more, 5-9 times per week, 1-4 times per week, 0 times per week) and frequency of photographs uploaded per month (4 or more times per month, 2-3 times per month, once per month, 0 times per month). Privacy settings were measured regarding personal information as well. These items surveyed if their email address, birthday, and cell phone number are set to the private setting (yes, no) and if they have posted a Facebook status that contained current and/or future locations (yes/no). Participants rated how frequently they edit their page content (daily = 1, weekly = 2, monthly = 3, never = 4), and how concerned they are about the appropriateness of their Facebook content (very concerned = 5, concerned = 4, neutral = 3, somewhat concerned = 2, not at all concerned = 1). Additionally, the items asked who can view their page (everyone = 1, friends of friends = 2, friends only = 3, only self = 4) and if they have ever used the privacy setting to block users or content (yes, no).

**Results**

We used descriptive statistics to answer our research question because it shows a simple summary of the participants’ behaviors on Facebook.

In regards to knowledge about Facebook privacy settings (our first variable), we found that only 18.6% ($n = 18$) had read the most current Facebook privacy agreement, while 79.4% ($n = 77$) had not, and 84.5% of the population ($n = 82$) took advantage of Facebook’s privacy
settings to have their profile pages only viewable to their Facebook friends. Eighty-seven participants (89.7%) also used Facebook privacy settings to limit/block specific contents of their pages from certain users.

Our second variable is online identity management. In regards to sharing information regarding cell phone numbers, email addresses, and current/past locations on Facebook: 90.7% of participants \((n = 88)\), 58.8% \((n = 57)\), and 58.8% \((n = 57)\), respectively, responded that these were set on the private setting, meaning only they and/or their friends could view these said information. When it comes to editing their Facebook pages in terms of un-tagging photos and videos, deleting wall posts, etc., we found that 34% \((n = 33)\) edited their profiles daily, 29.9% \((n = 29)\) updated their profiles weekly, 29.9% \((n = 29)\) updated monthly and only 4.1% \((n = 4)\) had never edited their profiles in terms of photos and wall posts. The data show that although a very small number of our participants have read the most current Facebook privacy agreements, they still edit their pages regularly and limit their profiles so that it is on a more private setting, sharing with only their Facebook friends and/or specific friends and sometimes keeping it private. This meant that even without reading the Facebook privacy agreements, users managed to keep themselves up to date on how to control and maintain the privacy settings on their accounts.
Discussion

Our study aims to explore the relationship between knowledge of Facebook privacy settings and online identity management in female college students. Our study found that 79.4% of our participants have not read the most current privacy agreement on Facebook. Our results also revealed that even though a high percentage have not read the up-to-date privacy agreement, the majority of the participants (89%) utilized privacy settings for restricting various personal information, limiting the viewers of certain content to themselves and/or their friends only. This finding suggests that even those who do not keep up with Facebook’s privacy agreement still view online privacy as important. Our discussion will look at the implications of these results as well as other findings of our survey. We will discuss the limitations we faced and improvements that could be made for future research.

Our study found results that are consistent with Taraszow et al.’s (2010) study, which established that a high majority (over 70% for both studies) of the participants took advantage of Facebook’s privacy settings and set their pages so that only their Facebook friends could view. The two studies also had a relatively similar percentage of participants who disclosed information such as email addresses, which is a little over half the participant sample. We
expanded on this by investigating the number of participants that read the most current privacy agreement on Facebook and how this correlates with how they managed their privacy online in regards to disclosure of their private information (e.g., email address, phone number, photos, etc.) and what privacy setting their pages are on (i.e., only friends can view or friends of friends can view).

Tufekci’s (2008) study found that students were more concerned with how they are perceived due to what is seen on their Facebook pages. This leads to privacy becoming an issue of self-monitoring on Facebook, which motivates students/Facebook users to modify the contents of their profile pages to manage the impression they send out to their Facebook friends. Our study found that over 60% of our participants monitored their tagged photos, videos, statuses and wall posts on a daily and/or weekly basis. Another 29% edited their profiles monthly; meanwhile, only 4.1% had never edited their profiles. We could correlate the editing and modifying of these aspects of Facebook pages with concerns of their online identity. Students self-monitor their Facebook pages on a weekly basis, if not more frequently, in order to better manage their online identity and channel an identity that is perceived in a more acceptable, if not better, light by their friends and peers on Facebook. In addition to the editing of content on a profile page, participants have also shown interest in protecting their images by limiting what is seen online. For example, participants set their pages to private, where only their friends can have access to their pages, or they block/limit view of certain parts of their Facebook to certain people as a way to control disclosure of personal information.

Our research is consistent with previous findings conveying that participants have an understanding of Facebook’s privacy settings and management rules (Debatin, 2009); however, we have found that very few of our participants actively update themselves by reading the most
current privacy agreement on Facebook, leaving them with a skewed sense of what “Facebook privacy” entails. This would suggest that future research investigate how participants learn the privacy settings on Facebook because although few have read the agreements, the large percentage of users who use the privacy settings show literacy in protecting their privacy using Facebook settings. We would also recommend that future research focus on the reasons for privacy settings, such as the reasons people are interested in setting their pages or certain parts of their Facebook pages to private. This would further the knowledge on the importance of privacy management and self-monitoring online.

Social media websites such as Facebook are growing tremendously in popularity and usage among undergraduate college students. The current generation of college students relies heavily on online social media to communicate and stay connected with friends and peers. It is now more important than ever that Facebook users be educated about the ways they can protect their privacy, especially with the amount of personal information shared online rapidly increasing.

Based upon our research findings, there are several ways in which women specifically can improve and protect their privacy while using Facebook. It is extremely important that individuals become aware of the ways one can adjust their privacy settings using the options provided by Facebook. For instance, one can change their settings to ensure that their future employer will only see a limited profile as opposed to the full profile. One should decide on how much personal information they want shown in their profile. There are settings that control who views what, search restrictions, as well as photo album limitations.

Women should be responsible for what kind of personal information they supply to Facebook in the first place. For example, what may seem like trite information such as likes and dislikes, favorite movies, hometown, and phone number are actually precious and critical sources
of user behavior for Facebook’s advertisers. Also, women should take the time to read Facebook’s Privacy Policies in order to become aware of exactly what their options are and Facebook’s outlook on user privacy. We focused on women in our studies, but all these information can also be useful for men, teens, and anybody who utilizes the Facebook network, as well as other social networking sites.

Although common, it is unsafe to post statuses that provide information regarding one’s exact whereabouts. This type of information can lead to stalking and can be very dangerous. Since Facebook changes their options and profile features relatively often, it is important to keep updating privacy settings to stay protected and current. Being aware of what Facebook has to offer is crucial in order to fully utilize privacy options. Being more aware and careful about the personal information that one submits to Facebook will ensure that one’s experience is a safe one.

Limitations and Conclusion

While the participant responses in our study generally had a strong, leading percentage response for each question, we have recognized that there are limitations to this study in regards to measuring our variables and sample. We obviously cannot generalize our findings to the entire population of college age females due to the nature of our participant selection method. We chose to use a self-selected sample for our research. We recruited our participants through our own statuses on Facebook and also through the “volunteer” section on Craigslist. One of the participant requirements was to have an active Facebook account, so recruiting on the actual Facebook site was effective. However, since the questionnaire information was posted through a status update, it may have recruited heavier Facebook users that take the time to read many statuses more frequently. Also, we may have recruited participants that were more interested in
our topic and passionate about the issue of privacy on the Internet, since we did not randomly select our sample. Additionally, our sample was very representative of Southern California, as most of our participants’ zip codes are from the local area. We cannot generalize this study to college age women across the United States.

Another limitation is the limited number of questions included in our survey. While we were able to gather a good amount of information about participant demographics and about specific Facebook uses (i.e., “On average, how many hours per day do you spend on Facebook?”), we could have asked more specific information. General questions could have been broken down into the more specific, such as “How frequently do you edit your Facebook page content (i.e. tag and un-tag photos, delete comments, etc.)?” By making questions more specific and increasing specific response options, this survey could extract more information that would benefit understanding of the participants’ online identity management.

Additionally, the survey could have contained more items regarding knowledge of online privacy settings. The questions asked such as, “Have you read Facebook’s most current user privacy agreement” and “How knowledgeable would you consider yourself to be about Facebook’s privacy policy” help us to understand how knowledgeable college age women are about the privacy policies but not necessarily how their online behavior is affected by that knowledge. More research about participants’ willingness to disclose personal information on Facebook could provide stronger information about this variable.

In conclusion, this study sought to identify the different ways college age women protect and manage their online identities, specifically looking at their Facebook profiles. Our results determined that our participants do actively manage the many facets of their online profiles; however, much research still needs to be done on this subject matter, as it is becoming an
integral part of how we communicate and interact online. For future research on this subject matter, we suggest broadening the sample size and perhaps opening up the participant pool to men, teenagers, and people of all ages. Obtaining results from a more diverse participant pool would allow for further examination of the many ramifications of having an online profile. Additionally, examining the effects of having an online profile that is purposefully regulated versus one that is loosely managed can lead to further conclusions on the role our online profiles play in our lives. In this day and age, supervising our online identities can be just as important as maintaining our real life identities; therefore, one must actively manage and protect whatever they put out on the World Wide Web.
References


