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Differences in self-reported perceptions of privacy between online social and commercial networking users

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Differences in Self-Reported Perceptions of Privacy between Online Social and Commercial Networking Users

By

Jessie Hughes

A paper submitted

In partial fulfillment of the Master of Science degree in Communication & Media Technologies

Degree Awarded:

December 2, 2008
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DIFFERENCES IN SELF-REPORTED PERCEPTIONS OF PRIVACY BETWEEN ONLINE SOCIAL AND COMMERCIAL NETWORKING USERS

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Degree: Master of Science in Communication & Media Technologies
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Abstract

Previous research suggests individual privacy is affected in an online environment, and users’ experiences while on those sites may also have an effect on their perceptions. Users’ personal perceptions of their privacy may be shaped by multiple variables such as the frequency in which they use the site, if they are a social or commercial networker, and their age. The present study investigates users of social and commercial web sites and their self-reported perceived levels of privacy when using those sites. The present study discovered that users showed concern over what information should be given when socially and commercially networking. No significant difference was found between social networking site users and commercial networking users or between users and their age.

Keywords: Privacy, Perception/Self, Internet, Social Networking, Social Media, Social Networks
Differences in Self-Reported Perceptions of Privacy between Online Social and Commercial Networking Users

In the information age the number of people using the Internet has dramatically increased, and with it the number of users who engage in social networking sites such as MySpace and Facebook and commercial networking sites such as eBay and Amazon. A user’s privacy is affected by the Internet’s ability to collect, store, process, and act upon information (Hsieh & Tutzauer, 2003). Privacy is defined as information or actions that are secluded or hidden from others. The information that is submitted when a user is accessing an Internet site can be considered public or private depending on the view of the user (Dinev & Hart, 2004). The type of information that is being collected, how, by whom, and for what purpose influences people’s privacy concerns (Sheehan & Hoy, 2000).

Each Internet user perceives their privacy in a different way. Many factors contribute to an individual’s perception of privacy online, especially when the individual is disclosing personal information. These factors include the frequency in which the individual uses the site, his or her age, and the individual experiences related to the use of the site. The Internet and the internet sites have features that may sway a user’s decision making when giving information online (Poole, 2007). The way users think their information will be used after it has been submitted has the ability to shape their decision-making process and level of willingness to divulge that data (Dinev &
The age of the user may also shape their perception of privacy while online. Young adults are less willing to submit personal information online due to the perception of risk associated with submitting that information (Youn, 2005). Adults on the other hand, while concerned about their privacy online, showed low levels of use of protection when it came to their personal information (Turow & Hennessy, 2007).

Social or commercial networking site users’ perception may also be affected by their experiences related to site use. On sites where the users can control their personal information, it can still become publicly accessible (Gross & Aquisti, 2005). Individuals with positive experiences with submitting personal information are more likely to feel secure with issues of privacy (Fusilier & Hoyer, 2000). Site users’ desire to connect with each other or learn new information often wins over concerns for privacy (Conhaim, 2005).

Users may divulge personal information without thinking about where the information is going, or how it is being used. This study adds to previous research on privacy and users’ perception of it when socially or commercially networking. After careful examination of previous research, questions arose that the research to follow focuses on. The first three research questions deal with self-reported perceived level of privacy when using social and commercial sites.
RQ1: To what extent do social networking site users differ from those who do not use social networking sites on their self-reported perceived level of privacy?

RQ 2: To what extent do commercial networking site users differ from those who do not use commercial networking sites on their self-reported perceived level of privacy?

RQ3: How does self-reported perceived level of privacy on social networking sites differ from self-reported perceived level of privacy on commercial networking sites?

RQ4: How does self-reported perceived level of privacy on social and commercial networking sites differ between age groups?

Rationale

This subject is important to the field of communication because it may help to clarify users’ perceptions of their privacy when socially or commercially networking. This study contributes to current literature pertaining to perception, online privacy, and age. The study also broadens the growing area of research on social and commercial networks.

Review of Literature

Today online networking is a computer network system of sharing information or services among individuals and groups that can be seen on social and commercial networking sites. Social networking sites allow the user to share information with others in a private or semi-private way. This helps to form a relationship with other
users who are linked in some way (Lange, 2007). Examples of social networking sites include: MySpace, Facebook, and Second Life. Users of commercial sites such as Amazon and eBay tend to be consumers, and use these sites in order to sell and purchase items online.

In an online situation a user’s view of their privacy can easily change depending on the environmental and personal factors that surround them (Sheehan, 2002). Users are constantly faced with an adjustment process where the desire for personal communication is weighed against the desire for disclosure and privacy (Kimmel, 1996). These perceptions can vary with the use of a social or commercial networking site, as the sites are vastly different.

Users who socially network are exposed to a very different environment than commercial site users. Social networks are focused on social bonding and communicating between individuals in networks such as MySpace (Brown, Broderick, & Lee, 2007). The idea of security through a social networking site contributes to a user’s perception of their personal privacy. Users who were members of social networks were more likely to form attachments than commercial users who go to sites simply for their consumer needs (Brown, Broderick, & Lee, 2007).

Social networks have been found to differ from commercial networks by creating a greater sense of security and forming trust within groups. Participants using
online social networking sites like Facebook were willing to disclose large amounts of personal information to a variety of anonymous sources without regard for associated privacy risks (Gross & Aquisti, 2005). One-on-one interaction is lowered when using Facebook, while large group interactions and sharing of personal information are increased (Gross & Aquisti, 2005).

Gross and Aquisti (2005) noted that 90% of Facebook users provide a picture when using the site, and include large amounts of personal information such as residence, birthday, and phone number. Users’ information could also be accessed by linking to their personal profile (Gross & Aquisti, 2005). Moreover, the inclusion of this information has been found to trigger questions that may reveal more personal information not intended for submission. In many cases divulging private information can cause a breach of privacy that users are unaware of.

In contrast to social networks, commercial networking sites deal mainly with online purchasing. On a commercial site an individual’s view of their privacy relates to the willingness to submit personal information through surveys, or other information-gathering techniques. Hsieh and Tutzauer (2003) determined that users are concerned when accessing online commercial networking sites, worrying that personal information such as bank account numbers could be accessed by other users.

Users are of two minds about trusting large institutions with their personal
data. On the one hand, they are wary of releasing information on the Internet. Nevertheless, they trust online institutions to protect their personal information from leaking out (Turow & Hennessy, 2007). Online consumers are aware that their personal information is being collected, yet they are only alarmed when they feel it has been taken without their knowledge or consent (Sheehan & Hoy, 2000).

Perception is a variable found to affect a user’s views of their online privacy. Previous studies have linked perception to its ability to shape an individual’s thoughts and decision making processes. Perceptions directly influence a person’s actions in a situation (Anderson & Shirako, 2008). In terms of the Internet, people determine what their relationship with an online environment will be based on the experiences associated with that entity (Kimmel, 1996).

Social networking sites users as opposed to commercial site users develop relationships with online organizations that change their perception. Sheehan and Hoy (2000) discovered that commercial networking users who engage in short term exchanges of information with an organization are less concerned than other users about their privacy. However, if the information collected is released to multiple organizations, they experience a loss of control over their personal information and privacy concerns increase. In contrast, social networking users develop a trust building relationship with their online environment, and their experiences differ. Users who
established a relationship or sense of familiarity with an organization experienced a lower level of concern for privacy (Sheehan & Hoy, 2000).

An individual’s past experience with the misuse of their personal information may affect their willingness to submit information in the future (Dinev & Hart, 2004). Those who disclose personal information but are able to control the use of that information, experience a lower sense of invasion of privacy than those who feel they cannot control their personal information after it has been released (Fusilier & Hoyer, 1980). Users perceive their risk to be at a higher level when submitting information, private or public, in an online environment. Individuals relate their level of privacy to the amount of personal information that has been accessed and what amount of that has been positively or negatively used (Dinev & Hart, 2004).

Age may also be a variable that shapes the privacy perception of a social or commercial networking user. When studying the typology of an Internet user Sheehan (2002) discovered that age and education were two main variables that influenced a user’s view toward their online privacy. Age groups ranged from 18 to 65 and above. The users who had minimal concern for their online privacy were in fact shown to consist of a younger age group than the average. The Internet users who were seen as wary about their privacy concerns, but still mainly unconcerned, were also found to be of a younger age group. Those that were alarmed or highly concerned about their
online privacy were found to consist of an older age bracket (Sheehan, 2002).

Providing personal information online exposes users of social networking sites to various cyber risks, so they must actively protect their privacy (Gross & Aquisti, 2005). Today, such protection is more important than ever, when even marketers are getting in on the social networking trend by incorporating advertising into online social networking websites to gain users’ trust and gather personal information (Woo, 2006).

Method

A convenience sample was drawn from a list of active emails in the College of Liberal Arts at the Rochester Institute of Technology. The study group included students, faculty, staff, and alumni, of which 83 surveys were completed and returned.

The instrument was designed on Clipboard a web-based electronic survey distributed through the RIT network by email. Survey participants were given access to the survey by an email link and university ID and password.

The instrument was a survey consisting of 22 questions broken down into three different parts. The survey was scored using a Likert-type response scale ranging from 1 (strongly disagree) to 5 (strongly agree) with a middle number of 3 representing neither agree nor disagree. Data was then analyzed using SPSS.

The first half of the survey included 10 statements with scaled response options, where participants were presented with a series of statements regarding their
perceptions of their privacy when using a social network. The second section consisted of two yes or no questions that asked if the user was a member of a social networking site or a commercial networking site. Section three consisted of ten statements that inquired about participants’ perceptions of privacy when using commercial networking sites. A copy of the instrument that was distributed is in Appendix A.

Part one of the survey measured users’ perceptions of privacy on social networking sites. Statements such as “I am confident that I know all the parties that are collecting the information I am providing” and “I know what information I need to provide when using a social networking site” measured participants’ perceptions toward privacy.

Part two included two items. The first item asked “are you a member of one or more social networking site(s)?” This question was designed to determine who is characterized as a social networking site user. The second question was designed to determine who is a commercial networking site user by asking “are you a member of one or more commercial networking site(s)?” Each question offered a yes or no response option. Users were assigned a 1 if they were a member of a social networking site, 2 if they were a member of a commercial networking site, 3 if they were a member of both, and 4 if they were not a member of either.

Part three included the same 10 statements as part one, but each statement was
changed to measure users’ perceptions toward privacy on commercial networking sites.

Part four consisted of a series of demographic questions. The statements asked gender, zip code, alternate email, and “what was your age on your last birthday?” which was used to measure the variable of age. Respondents’ ages were then grouped into three age categories, 18 to 24, 25-40, and 41 to 65.

The rating scale system along with the questions from part one and three were adapted from a survey consisting of 17 statements designed by Pavlou and Chellappa (2001) who researched the role of perceived privacy and security in online transactions. A thorough literature review noted that privacy and security are viewed as unidimensional constructs in previous studies, and all items were subjected to factor analysis to verify those findings (Pavlou & Chellappa, 2001).

The instrument was also used in research conducted by Hsieh and Tutzauer (2003) which focused on online users’ perceptions of their privacy, security, and trust in relation to submitting personal information to an online e-survey.

The reliability of the statements used in the instrument were previously tested by computing Cronbach’s alpha, which tested above the 0.05 level suggested for research (Hsieh & Tutzauer, 2003). The instrument used in the present study was used to determine social networking users from commercial networking users as well as a user’s perceived level of privacy and security when socially or commercially
networking. The items also tested for differences by age group and self-reported perceptions toward privacy.

Results

A total of 83 participants responses were used for this study. A small number of responses were discarded due to unanswered questions. Respondents ranged from 18 to 60 years of age with the average 28.2 years. One way analysis of variance was performed to determine whether social networking site users’ perceptions toward privacy differed from commercial networking site users’ perceptions toward privacy when online.

Research question one asked to what extent do social networking site users differ from those who do not use social networking sites on self-reported perceived level of privacy? A one way analysis of variance compared perceptions of privacy of users of social networks, and non-users. The test revealed no significant ($p > .05$) difference for all nine items between site membership and privacy perception. However, on the single item when users were asked if they believe their personal information while using a social networking site would not be revealed to inappropriate parties, all groups differed significantly ($F = 4.513, df = 2, p = .014$).

Research question two asked to what extent do commercial networking site users differ from those who do not use commercial networking sites on self-reported
perceived level of privacy? A one way analysis of variance showed no significant (p > .05) difference for all 10 items between commercial networking site users, and non-users.

Question three asked how self-reported perceived level of privacy on social networking sites differed from self-reported perceived level of privacy on commercial networking sites? A pair sample t-test revealed there was not a significant (p > .05) difference between perceptions of privacy for a social network and a commercial networking site.

Research question four asked about differences in users’ self-reported perceived level of privacy on social and commercial networks by age. A one way analysis of variance found no significant (p > .05) differences in relation to commercial networking site users. The ANOVA was significant (F = 4.158, df = 2, p = .019) when participants in age groups 18-24 and 41-65 were asked if they knew what information they needed to provide when using a social networking site. Respondents expressed concern over what information they were giving out when joining a social networking site. There was also significance (F = 3.414, df = 2, p = .038) between the younger (18-24) and older (41-65) age groups when participants were asked if they believed they had control over how their information would be used on a social networking site. Differences were shown by users’ ages 18-24 and ages 41-65 over what information they needed to
provide when joining an online networking site.

Discussion

Past research has shown that an individual’s perceptions are linked to privacy concerns. The present study looked at perceptions of privacy when one uses a social or commercial networking site online. In the present study over half of respondents disagreed or strongly disagreed to the statement “I believe I have control over how my information will be used by a Social networking site” and more than fifty percent disagreed or strongly disagreed that their personal information was protected from inappropriate parties. These findings are similar to Hsieh and Tutzauer (2003) who studied trust and participation in online E-surveys. Hsieh and Tutzauer (2003) discovered that the higher the perceived level of privacy and security an individual has, the greater the likelihood will be for that individual to trust a website or online institution and provide personal information. Previous research and the results of the present study support the idea that perceptions of privacy have an effect on an online user’s decision making process, and that the concern over how the information will be used is greater than the concern over submitting the information.

Previous research has shown that users of social networking sites develop relationships with those sites and are more willing to submit personal information on a social website than those who are members of commercial networking sites and
exchange in short term transactions (Sheehan & Hoy, 2000). The present research found that eighty percent of the survey respondents who were social networking site users disagreed with the statement “I am sure that I know all the parties that are collecting the information I am providing” while over sixty percent of the survey respondents who were commercial networking site users disagreed with the same statement. These present findings vary from previous research in that current social networking site users showed a higher level of concern for where their personal information was going than commercial site users. Current research did not conclude that membership of a social or commercial networking site had any effect on the information that was being given by users. The site that a networking user is a member of may not have a significant difference on their willingness to submit personal information, but their perception of privacy of that information when using that site may play a larger role.

The present study revealed no difference by age and perception of privacy. Age was thought to be a determinate of willingness to submit information on a social or commercial networking site because of possible differences in perception of privacy. Respondents ages 18 to 24 and 41 to 65 may be concerned over the information they were providing and how it would be used on a social networking site. Younger and older users may be doubtful of security on a social networking site, as well as wary of how to use the site in general, and further research in the area of familiarity is
The present study helps to understand the differences between social and commercial networking site users and their perceptions of privacy when involved in these sites. Today concerns for privacy may have changed by increased use of social and commercial networking sites. The current research only touches on privacy concerns related to the internet. Privacy may be linked to security, trust, familiarity, and incentive, and further research is suggested to reveal the real effect of social and commercial networks.

Limitations

The present study’s findings are limited to only the sample drawn. This sample does not represent an entire population of online users, and was chosen in order to gain the broadest sample of social and commercial network users available. The study utilizes self-report data. Knowing the limitations of this study can help to fuel further research in the area of privacy perception and social and commercial networks.

Future Research

Future research should use a larger and more varied sample to discover perceptions and behaviors associated with social and commercial networking site users. Experimental measures such as observation or multiple test groups could be used in order to test users’ perceptions and behaviors when using a social or commercial...
Incentives such as coupons or special offers are offered to internet users in order to gain their personal information as well as site membership. Incentive may play a key part in present day social and commercial networks in order to persuade users to submit information they may have previously withheld. Further research could be conducted in order to test how much information a site user is willing to submit for what kind of an incentive.

Previous positive or negative experiences with online sites as well as with submission of personal information may also be a significant area of research. A networking site user’s experience with a site may significantly affect future privacy concerns in an online environment. By further exploring these areas, researchers may gain insight into the behaviors of social and commercial networking site users and their ever changing privacy perceptions.
References


security in the development of trust in electronic commerce transactions.

Information System Research, 11, 18-36.


Appendix A

Survey Information:

The survey you are being asked to fill out relates to research that investigates Internet users and their habits when using social and commercial networking sites. Please answer all questions that are asked on the survey to the best of your ability. This survey will take no longer than 15 minutes to complete. By completing the following survey you as user may gain a better understanding of your behavior when socially or commercially networking online. Taking part in this study is completely voluntary, and all of the information submitted will be kept confidential. You may stop taking this survey at any time with no consequence. If you have any questions concerning this survey feel free to contact Jessie Hughes by email jessie.hughes92@gmail.com or phone XXX-XXX-XXXX at any time. Thank you for your participation.
Appendix B

Part 1.

Below are statements regarding your Internet privacy and security when using a Social networking site. For each statement, please indicate your level of agreement or disagreement, using the scale below:


Indicate your level of agreement or disagreement as it relates to the survey below:

1. I am sure that I know all the parties that are collecting the information I am providing

1  2  4  5

2. I am aware of the exact nature of the information that is being collected during my use of a Social networking site.

1  2  4  5

3. I know what information I need to provide when using a Social networking site.

1  2  4  5

4. I believe I have control over how my information will be used by a Social networking site.

1  2  4  5

5. I believe that a Social networking site will disclose my personal information without my consent.

1  2  4  5

6. I believe that my personal information will only reach the administrators of the
Social networking site I am using

1 2 4 5

7. I believe inappropriate parties will be able to view my information while I am using a Social networking site

1 2 4 5

8. I believe my personal information will not be manipulated by other parties when I am using a Social networking site

1 2 4 5

9. I believe inappropriate parties might store my personal information while I am using a Social networking site

1 2 4 5

10. I believe my personal information while using a Social networking site will not be revealed to inappropriate parties

1 2 4 5

Part 2.

For each item below please choose the button indicating yes or no:

I am a member of or have an account with one or more Social networking site(s)

YES NO

I am a member of or have an account with one or more Commercial networking site(s)

YES NO
Part 3.

Below are statements regarding your Internet privacy and security when using a Commercial networking site. For each statement, please indicate your level of agreement or disagreement, using the scale below:

```
1                           2                     4                          5
Strongly Disagree       Disagree            Agree           Strongly Agree
```

Indicate your level of agreement or disagreement as it relates to the survey below:

1. I am confident that I know all the parties that are collecting the information I am providing

```
1             2              4             5
```

2. I am aware of the exact nature of the information that is being collected during my use of a Commercial site.

```
1              2              4              5
```

3. I know what information I need to provide when using a Commercial networking site.

```
1             2             4              5
```

4. I believe I have control over how my information will be used by a Commercial networking site.

```
1              2             4            5
```

5. I believe that a Commercial site will disclose my personal information without my consent

```
1              2              4             5
```

6. I believe that my personal information will only reach the administrators of the
Commercial site I am using

1  2  4  5

7. I believe inappropriate parties will be able to view my information while I am using a Commercial site

1  2  4  5

8. I believe my personal information will not be manipulated by other parties when I am using a Commercial site

1  2  4  5

9. I believe inappropriate parties might store my personal information while I am using a Commercial site

1  2  4  5

10. I believe my personal information while using a Commercial site will not be revealed to inappropriate parties

1  2  4  5

Finally, the following are just basic question to get to know you a little better.

Are you? (Choose one)  Male  or  Female

What was your age on your last Birthday? ________________

What is your current zip code? ________________

Please provide a current email if different from the email in which you received this survey
____________________________
Sources searched:

Academic Search Elite

ComAbstracts

Communication and Mass Media Complete

Ebscohost Databases

MasterFile select

Proquest (all data bases)

PsycARTICLES

PsycINFO

SAGE Journals Online

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Key Word:

Privacy
Perception/self
Internet
Social Networking
Social Media
Social Networks