

A SURVEY OF FIRST-YEAR COLLEGE STUDENT PERCEPTIONS OF PRIVACY IN SOCIAL NETWORKING*

James P. Lawler
Information Technology Department
Seidenberg School of Computer
Science and Information Systems
Pace University
1 Pace Plaza
New York, NY 10038
212-346-1013
lawlerj@aol.com

John C. Molluzzo
Information Technology Department
Seidenberg School of Computer
Science and Information Systems
Pace University
1 Pace Plaza
New York, NY 10038
212-346-1780
jmolluzzo@pace.edu

ABSTRACT

This study evaluates the perceptions of first-year college students in a survey on facets of privacy of marketplace social networking sites. Findings from a survey of the students indicate less knowledge of personal information gathering and sharing techniques on the sites, notably in privacy and security statements, than of the popular sociality of the sites. These findings furnish impetus into the continued improvement of curricula in disciplines of information systems and non-information systems.

BACKGROUND

The privacy policies of social networking sites (SNS) are effectively social contracts cited in social contract theory. Students are dependent on the rules (terms of usage) defined in the policies on the sites, though such rules may be artifacts of the 1990s [7]. Policies may be designed in favor of the social networking sites, not in favor of the students. Difficulty in interpretability of collection and distribution of information policies in privacy and security statements is clear in practitioner and scholarly literature [12] and [15]. Importantly the impact of improvement in personal information gathering techniques, information mining technologies, and increased interest in SNS and third-party gathering of private information is not evident in the privacy statements of the

* Copyright © 2010 by the Consortium for Computing Sciences in Colleges. Permission to copy without fee all or part of this material is granted provided that the copies are not made or distributed for direct commercial advantage, the CCSC copyright notice and the title of the publication and its date appear, and notice is given that copying is by permission of the Consortium for Computing Sciences in Colleges. To copy otherwise, or to republish, requires a fee and/or specific permission.

sites. Finally, it is not evident in the feasibility of intrusion into the right to privacy and security of the students [8].

Issues of privacy and security statements relative to social networking sites are evident in the literature. Firms managing the sites are engaged in fruitful interactions [17], but are focused less on privacy [9] and more on marketing opportunities [10]. In the past, Facebook has gathered presumed private information without permission of students and informed 'friends of a friend' of students on sites, to market products of organizations partnered with Facebook. It is piloting "digital calling cards" that identify subjects as they surf the Web [11]. Google is introducing monitoring 'friends of a friend' of students that may be influencing the marketing of products on social networking sites [3] and is noted for "Web bugs" that share information with others. Literature indicates students and teenagers may not be fully knowledgeable of marketplace non-privacy on Web sites [16] if not SNS [4], even assuming knowledge of privacy and security. Moreover, regulations and statements may not be protective of privacy and security, as they may not be current with mining techniques or technologies.

Therefore, the authors attempt to document student knowledge in privacy and security on social networking sites in a survey that was initiated in 2009 [5]. This survey enables a foundation for educators that may enhance curricula for dimensions of exposure on social networking on the Internet. This is important as firms in industry invest more in relationships and services on social networking sites. They invest more and more in snooping of students when they recruit them [6]. They may not have invested in sufficient privacy training of the staff [2]. Students may learn improved methods of personal profiling that might protect privacy and security on the sites. They may learn methods for evaluating elements of fair practices protective of privacy and security evident or not evident in the privacy and security statements of SNS, and for learning which sites furnish the optimum in protection of personal privacy and security. The results of the new survey in the study furnish input on the perceptions of privacy and security that can be integrated into curricula that might be more cognizant of the impact of social networking on the Web.

FOCUS OF STUDY

The focus of this study is to evaluate the extent of knowledge of first-year college students in dimensions of information gathering, profiling and sharing in social networking on the Internet. Updated input into the knowledge of privacy and security will help instructors to integrate pedagogical methods reflective of frequently perceived issues of privacy [1], issues of public sharing [13], and mechanisms needed on privacy and security on the sites [14]. Learning the problems and risks of invasive technologies will help to protect the privacy of students.

RESEARCH METHODOLOGY

The survey was conducted during three terms - Spring and Fall of 2009, and Spring 2010. It was administered online to graduate computing students and undergraduate students in several disciplines at Pace University, New York City. Over 450 valid

responses were collected. *The present study focuses on only first year students (200 valid responses.)* A paper based on the full population is forthcoming.

Survey Instrument

The survey consisted of five demographic data questions. These were followed by a list of fifteen types of data a respondent might place on their SNS, which we refer to as "data questions". Finally we included questions asking about student knowledge of how their social networking sites handle their personal information, which we will refer to as "knowledge questions". The knowledge questions asked about the respondent's knowledge about their SNS privacy policy, and if they had read that policy. The complete survey instrument is available from the authors.

Demographic Data

The average age of the respondents was 18.6. The ethnicity was distributed as follows: African American (8%), Asian (14%), Caucasian (57%), Hispanic (12%), Middle Eastern (2%), and other (7%). Most of the respondents (63.5%) were female.

Respondents were asked to which SNSs they belong. The three most popular were Facebook (96.5%), MySpace (27%), and Twitter (24.5%.) Respondents were asked how many hours they spend each week on their SNS. Almost half of students (43.5%) spend 1 to 5 hours each week on SNS, and (34.5%) spend between 5 and 10 hours each week on SNS. A full 22% spend more than 11 hours each week on their SNS.

Data Stored on Social Networking Sites

Respondents were asked to select from a list the types of data they store on their social networking sites. Nearly everyone stores their name (97.5%) and gender (94%). Many store the names of friends (92%), photos (87.5%), and age (80%). A surprising number store what can be considered highly personal data, such as their telephone number (13.5%) and sexual preferences (49%).

The survey asked whether the respondent's profile was public (i.e. available to anyone who is a member of the SNS and in some instances, for example Facebook, to anyone on the Internet), or private (available only to those SNS members "friended" or invited by the respondent.) Among the respondents, 74.5% indicated that their profile was private; 14.4% indicated that it was public; and 10.7% did not know!

ANALYSIS AND DISCUSSION

The survey contained questions that asked about the respondent's knowledge of how their personal information is gathered, used, and shared. The survey also asked questions about choices SNS users have about the accuracy and security of personal information gathered by their SNS. In these questions, respondents were asked to respond "yes", "don't know", or "no." Because our sample size was relatively small ($n = 200$), having three categories did not yield statistically valid results. It was felt that the "don't know" and the "no" responses basically meant the same thing - the respondent could not answer

in the affirmative. Therefore, these answers were combined, which enabled a chi-squared test of significance on 2x2 cross-tabs. Following is an analysis of some of the statistically significant results organized along some of the categories of the respondents.

Gender Differences

The only significant difference ($p = .014$) between the sexes was in the question "Is your profile public?" with 21.9% of males having a public profile as opposed to 9.4% of females.

Students Who Read the Privacy Policy vs. Students Who Do Not

The authors categorized respondents as those who have read their SNS privacy policy and those who have not. In the data question ("What data do you store on your SNS?") the only significant difference ($p = .05$) between the groups (privacy policy readers and those who have not) is in putting sexual preferences on their SNS.

More important, however, are the differences in between the groups' responses to some knowledge questions: "Do you know what personal information your SNS gathers?" with $p = .019$; "Does your SNS tell explicitly how the site will use your data?" with $p = .002$; "Do you have a choice about how the information about you will be used?" with $p = .013$; "Do you know how your information will be safeguarded by your SNS?" with $p = .001$ "; and "Do you know what the site will do if there is a breach in security of the site?" with $p < .001$.

IMPLICATIONS OF STUDY

The most popular items students place on their SNS concern their personal data and preferences. Data such as name, gender, school attending, friends, and photos are routinely stored by them. However, it is noteworthy that there seems to be some concern among respondents about privacy. For example, only 4% store their address and 13.5% their telephone number. Also, it seems that respondents are somewhat reluctant to store data that one might consider too personal to make public. For example, only 26.5% store their political views and 39% store their religion. The majority of respondents (61.5%) did not read the privacy policies of their SNS. This could be the result of several factors. A user might not care about privacy and, therefore, not seek out the privacy policy. A user might assume their data will be kept private and, therefore, not seek out the privacy policy. The link to the SNS privacy policy might not be easy to find. Even if the user seeks out the policy, it could be too long or written in terms that are difficult to understand thereby encouraging the user not to bother reading it. Whatever the reason, it is clear that SNS should make their privacy policies easily accessible and easy to read. SNS might also consider trying to make new users read their privacy policy as part of the sign-up process.

For most knowledge questions a large number of the respondents answered "Don't know." For example, 39.1% of respondents answered "Don't Know" to the question "Do you have a choice about how information gathered by you will be used?", and 30.0% answered "Don't know" to the question "Do you know what personal information your

SNS gathers?" This means that these people either did not read their SNS privacy policy, read it and did not remember, or read it and did not understand it confirming the authors' belief that more needs to be done by SNS to make their privacy policy statements more accessible to their members. These results imply that users do not know their rights as users of their SNS, thus basically relinquishing control of their personal data.

Also implied in this study is the need for better online privacy education. The present study shows that a large part of our population is unaware of the data practices of their SNS. This population needs to be educated on how their SNS collect and use their personal data. Most colleges and universities have introductory computing courses. These courses should include modules on privacy and the Web. Our nation's high schools should also educate their students on who might see their personal data, how permanent that data is on the Internet, and how their SNS might use their personal data.

LIMITATIONS AND OPPORTUNITIES

The present study is limited to first year college students. In a forthcoming study, the authors will include all levels of undergraduate students. The answers to the knowledge questions in the survey (for example "Do you know what personal information your Social Network site gathers?") must be interpreted with caution. If a respondent answered that they read their SNS privacy policy, then what does it mean if they answered "Yes" to this question? Does their SNS privacy statement actually state what personal information it will gather, or does the student merely *think* that the SNS privacy policy makes this statement? In the forthcoming study, the authors will investigate whether what survey respondents think is stated in their SNS privacy policy is in fact actually stated in that policy.

CONCLUSION

Results of the current study show that many respondents have not read their SNS privacy policy statement. It also shows that many do not know how their personal information will be gathered, used, and shared. Finally it shows respondents are not familiar with their rights regarding their personal data stored on SNS. Clearly, SNS need to make privacy more of a priority than it is now. Users need to be informed in easily accessible privacy statements that are easy to understand - especially by young adults who make up a substantial proportion of their users.

REFERENCES

- [1] Clifford, S., Many see privacy on web as big issue, survey says, *The New York Times*, March 16, 1-2, 2009.
- [2] Cline, J., Privacy training gone awry: Despite good intentions, companies often make these five mistakes when educating employees about data protection, *Computerworld*, February 8, 24, 2010.
- [3] Green, H., Google: Harnessing the power of cliques, *Business Week*, October 6, 050, 2008.

- [4] Havenstein, H., Millennials demand changes in Information Technology (IT) strategy, *Computerworld*, 13, 2008.
- [5] Lawler, J.P., Molluzzo, J.C., A Study of the perceptions of students on privacy and security on Social Networking Sites (SNS) on the internet, *Proceedings of the Information Systems Education Conference (ISECON)*, Washington, D.C., November, 2009.
- [6] Lamm, S. and Phile, R., Still got that picture of yourself chugging a Brewski on Facebook? Better listen to us and take that pic down! - A look at when social networking sites and Human Resource recruiting collide, *Proceedings of the 2009 southeastern information for operations research and management sciences (INFORMS) conference*, Myrtle Beach, South Carolina, October 1-2, 962-966, 2009.
- [7] Lohr, S., Redrawing the route to on-line privacy, *The Sunday New York Times*, February 28, 4, 2010.
- [8] Milberg, S., Smith, H. and Burke, S., Information privacy: corporate management and national regulation, *Organization Science*, 11(1), 35-57, 2000.
- [9] McCreary, L., What was privacy?: privacy as we knew it is virtually gone. Why should you care? What should your business do about it?, *Harvard Business Review*, October, 124, 2008.
- [10] MacMillian, D., Facebook banks on a little help from its friends: mixing its social network with e-tailing adds a twist to on-line shopping and a source of potential revenue, *Business Week*, October 26, 048-049, 2009.
- [11] MacMillian, D., Why Facebook wants your ID: by trying to be the De Facto standard for on-line identity, it's making privacy advocates nervous, *Bloomberg Business Week*, December 28, 2009 / January 4, 2010, 092-093, 2010.
- [12] Rapoza, J., 'Privacy Policy' as oxymoron: current United States (US) law prevents real progress in the on-line privacy push, *eWeek*, October 20, 48, 2008.
- [13] Solove, D.J., The end of privacy: Young people share the most intimate details of personal life on social networking web sites, portending a realignment of the public and the private, *Scientific American*, September, 104, 101-102, 2008.
- [14] Strater, K. and Lipford, H.R., Strategies and struggles with privacy in an on-line social networking community, *British Computer Society*, 117-118, 2008.
- [15] Showalter, E.D., Privacy policies: An investigation into best practices for information security and data protection, *Proceedings of the Southeastern Information for Operations Research and the Management Sciences (INFORMS) Conference*, Myrtle Beach, South Carolina, 851, 2008.
- [16] Turow, J., Hennessy, M., and Bleakley, A., Consumers' understanding of privacy rules in the marketplace, *Red Orbit*, October 2, 4-6, 2008.
- [17] Vijayan, J., Staying on message: How companies are leveraging social networking sites to their advantage, *Computerworld*, October 19, 26, 2009