New Strategies for Employment?

Internet Skills and Online Privacy Practices during People's Job Search

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How does online know-how relate to people's tendencies to manage their privacy? A survey of young adults' online skills and privacy practices reveals how demographic factors influence reputation-management strategies online when it comes to monitoring self-presentation.

Stories are on the rise about people losing their jobs due to content they share on social network sites. (See http://thefacebookfired.wordpress.com for a blog dedicated to documenting such cases.) Employers have increasingly taken to such services to keep tabs on their current employees and scrutinize potential job candidates.[1] Research on workplace environments has found that coworkers are making both personal and professional judgments on the basis of their colleagues' social media profiles.[2] While some social media users implement strategies to manage their privacy and varying self-presentations,[3,4] the increase in content sharing with unintended audiences has led to damaging career and reputation consequences for others.[5] Seventy percent of recruiters and human resource professionals report they've eliminated potential job candidates because of something posted about them online.[1]

Are users taking employers into consideration as a potential audience on social media, making conscious decisions about what to share and what not to share? Are they taking proactive measures to protect their information? Looking at a sample of young adults in the early stages of their careers, we explore how demographic factors and privacy-specific online skills relate to users' career-oriented reputation-management behaviors on social network sites.

Demographic Background and Privacy Management

Digital inequality research finds that demographic factors such as race and ethnicity as well as gender impact how individuals use the Internet, including their adoption and use of social network sites. For example, a 2007 survey on a diverse group of students found that White and Asian American students were more likely than others to use Facebook, whereas Hispanic students were more likely to use MySpace.[6] Ethnographic work on teenagers' social network site usage reported similar findings.[7] These differences in social media adoption and use might occur in part because different social groups attribute varying meanings and characteristics to these tools.[8] For example, a focus group study found that African Americans described their relationship with social media as spaces for self-expression, Whites tended to perceive social media as instruments for self-promotion, and Asian Americans tended to characterize social media as self-reflection and diary-like forums.[8] Interestingly, all groups except for African Americans identified thoughts and concerns about potential undesired audiences.

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Gender has also been linked to differences in social network site use, specifically privacy behaviors, with most studies highlighting that females are more likely to engage in reputation-management strategies such as changing privacy settings and untagging photos.[3,9] Given that prior research suggests users' attributes play an important role in social network site usage, we consider how demographic factors influence reputation-management strategies online when it comes to monitoring self-presentation with users' current or potential employers in mind.

Internet Skills and Privacy Management

Another often overlooked area that's theoretically relevant to people's privacy behaviors online is users' Internet and social network site technology knowledge and skills.[10,11] Privacy is about "appropriate flows of personal information."[12] Individuals work hard to manage their information and self-presentations on the basis of their contexts and audiences.[13–15] For example, because of age stigma, older prospective employees who fear age discrimination during the hiring process might engage in techniques to conceal their age, such as by changing their resume format from chronological order to "functional" categories, removing older work experiences, and modifying their appearance (for example, by dying their hair).[16]

When it comes to privacy on social network sites, research suggests that users engage in a variety of behaviors from social strategies, such as steganography practices, to technological strategies, such as deleting or removing content from their profiles.[4,17] People have long engaged in privacy-management strategies to preserve their reputations, but social network sites add new challenges. Although people typically manage their information and self-presentations on the basis of the present context and audience,[13] social network site affordances tend to aggregate contexts that were once separate as well as obscure who makes up the audience, often making the actual audience difficult to determine.[18] Users are burdened with managing their own privacy in the confines of these spaces, which are typically public by default and constantly changing (sometimes without announcement). Social network site users must stay attuned to which privacy tools are available while also understanding how to take advantage of such tools in meaningful ways. Furthermore, because of social network sites' popularity, everyday people are often interacting with larger and more diverse audiences than they are accustomed to in face-to-face contexts. Privacy management in these spaces requires both social and technological skills to help users make educated decisions on what to share and what not to share as well as how to enable technology to help preserve privacy preferences.

Although such online privacy skills theoretically play a major role in users' enacted privacy decisions and behaviors, few studies have investigated the role these skills might play in such processes. Research that has considered Internet skills has found that college Facebook users with higher Internet skills are more likely to modify their privacy settings than those with lower skills.[3] A survey on adult Internet users found that people's technical familiarity and Internet experiences influenced how they managed their security and privacy from institutions.[19] Although these studies help establish a relationship between Internet know-how and privacy behaviors, we took a more nuanced approach by studying privacy with regard to a particular context and audience. Moreover, building on earlier work, we introduce a new Internet skill measure specific to privacy considerations.

Data and Methods

To understand the relationship between user attributes and privacy-management practices, we conducted a paper-and-pencil survey on a diverse group of young adults.

Data Collection

We conducted a survey of 545 young adults administered through postal mail in summer 2012. This was a follow-up study to an earlier survey we administered in spring 2009 to a representative sample of first-year students at the University of Illinois, Chicago (UIC). (We chose UIC due to its student body's diverse composition.) The first wave of data collection in 2009 occurred in collaboration with UIC's First-Year Writing Program, which oversees the instruction of a required university course. Working with this program ensured that the project wasn't biased against students who might be less likely to take a particular course.

In the first year of the study, students took a paper-and-pencil survey in class. An online questionnaire would have been biased against people who are less likely to spend time on the Web, have less private access to the Internet, and feel less comfortable filling out online forms. For similar reasons and to control for the mode of data collection, the 2012 data collection also relied on a paper-and-pencil instrument. We sent surveys to those 2009 respondents who had, during the initial study, consented to being contacted again (more than 98 percent had done so). In the first wave of the study, respondents didn't receive any incentives. In 2012, we offered them a US$25 gift certificate for Amazon.com and entered them into a drawing for one of two iPads.

Our initial 2009 dataset included responses from 1,115 first-year students. Of the 92 course sections in

Table 1. Sample background characteristics.

	User attributes	%
Gender	Women	61.7
	Men	38.3
Race and ethnicity	African American, non-Hispanic	7.5
	Asian American, non-Hispanic	26.1
	Hispanic	21.4
	Native American, non-Hispanic	0.6
	White, non-Hispanic	44.4
Parents' highest level of education	Less than high school	7.1
	High school	16.0
	Some college	25.9
	College	34.1
	Graduate degree	16.8
Work experience	Currently working	77.3
	Currently looking for work	44.1
	Either of the above	90.7

the program, 86 participated in the study, for a 93.5 percent section participation rate. Of all the students enrolled in the class, 80.5 percent filled out the questionnaire. In 2012, we had permission to follow up with and contact information for 1,066 people, for a 4 percent refusal from the original sample. For 17 people, both email and postal mail addresses bounced, constituting 1.5 percent of the original sample. (Although we didn't send the survey out via email, we did use email to contact those who didn't respond to postal mailings to ask for participation.) The 2012 questionnaire included two items to verify respondents' attentiveness to question wording. We received 20 surveys—accounting for 3.5 percent of the received surveys—that had either or both of these questions marked incorrectly or left blank. We excluded these responses from the analyses, resulting in 545 valid surveys.

By 2012, several people from the initial sample were no longer enrolled in college; therefore, we refer to respondents as "young adults" rather than "college students."

Measurement

We asked people about their gender, race and ethnicity, and parents' education as proxy measures for socioeconomic status. To establish whether there was a reason for people in the study to be mindful of employment matters, we asked whether they were currently looking for a job, and to measure any current employment, we asked how many hours they currently worked.

The instrument included several questions to assess people's Internet experiences and online privacy-related skill. From a question on the original 2009 survey, we knew at what point in their schooling they started using the Internet; we used this information to calculate years of experience online. Our frequency-of-use measure came from calculations based on a question about hours of use on a typical weekday as well as a typical weekend day. To assess privacy-related Internet skills, we asked respondents to rate their level of understanding of nine privacy-related Internet terms on a 1- to 5-point scale. These terms—"privacy settings," "limited profile," "preference settings," "tagging," "bcc," "advanced search," "hashtag," "viral," and "Web feeds"—all related to managing one's own accounts as well as a conscious approach to the potential audiences for content in digital environments. This is a revised version of a more general Internet skill measure that has been used in several prior studies.[20] We use these scores' average as the measure of skill (Cronbach's $\alpha = 0.815$).

To determine the extent to which people monitor their self-presentation on social network sites in the context of employment opportunities, we asked the following question: "Thinking about your use of social network sites, like Facebook and Twitter, how often have you done the following activities during the past year?" One of the activities on the list that followed was described as such: "changed the privacy settings or content of your online profile in anticipation of employers searching for information about you." The answer options were: "Never," "Have done it once," "Have done it two to three times," and "Have done it four or more times." For most of the analyses we present here,

Table 2. Sample Internet experiences.

		Mean	Standard deviation
Online experiences	Number of use years	8.7	2.2
	Number of Internet access locations	7.3	2.3
	Hours spent on the Web weekly	19.7	10.9
Online privacy skills	Overall index	3.8	0.8
	Lowest quartile	2.8	0.4
	Lower-middle quartile	3.6	0.2
	Upper-middle quartile	4.1	0.2
	Upper quartile	4.7	0.2

we grouped the two middle categories into a single category of one to three times.

The Sample

Given the focus of this article on people's behaviors on social network sites in particular, we restricted the sample to those who reported currently using such a site either sometimes or often. (Although the question about the self-monitoring behavior asked about the "past year," which might include prior users who have since stopped using such systems, we erred on the side of being less inclusive of those who might have used a social network site in the past year so as not to bias the results toward low levels of privacy monitoring by those who might have stopped using such services.) We excluded people who weren't using Facebook, Twitter, Pinterest, Google+, LinkedIn, Tumblr, MySpace, or Path. There were 32 such people in the dataset. After removing these people and accounting for missing variables on our outcome of interest, we ended up with a final sample of 507 young adults. All figures are reported for this sample.

Everybody in the sample was either 21 or 22 years old, as we restricted our 2009 sample to traditionally aged college students. Table 1 presents descriptive statistics about the group of young adults whose self-monitoring behavior we examine here. Women were somewhat more represented than men. Less than half of the sample was White, one-quarter were Asian or Asian American, more than one-fifth were Hispanic, and less than one-tenth were African American. One-fifth came from families in which neither parent had more than a high school education, while about one-third had at least one parent with a college degree, and close to one-fifth had at least one parent with a graduate degree. These figures indicate that the sample was quite diverse from a socioeconomic perspective.

As Table 2 shows, in terms of online experiences, on average, these young adults had been online for almost nine years, had numerous locations to access the Internet, and spent approximately 20 hours per week on the Web (not counting email, chat, or voice services). Despite all these online experiences, we observed considerable variation in their privacy-related Internet skills, with a range of 1.2 to 5.0 on a 5-point scale.

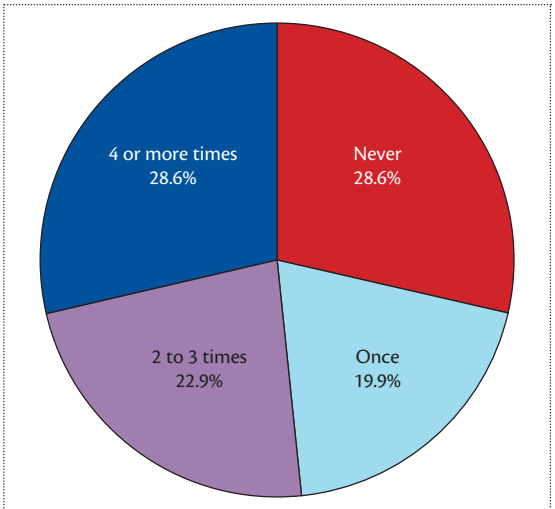

Figure 1. Frequency of privacy-management behaviors in anticipation of employer audience in the past year.

Results

Although many of these young adults were still working toward a degree, many were also working or looking for a job. More than 90 percent reported that they were either working or currently looking for a job, indicating that how they came across to potential or current employers could and arguably should concern them.

Figure 1 shows the breakdown of how often people changed the privacy settings or content of their online profiles in anticipation of employers searching for

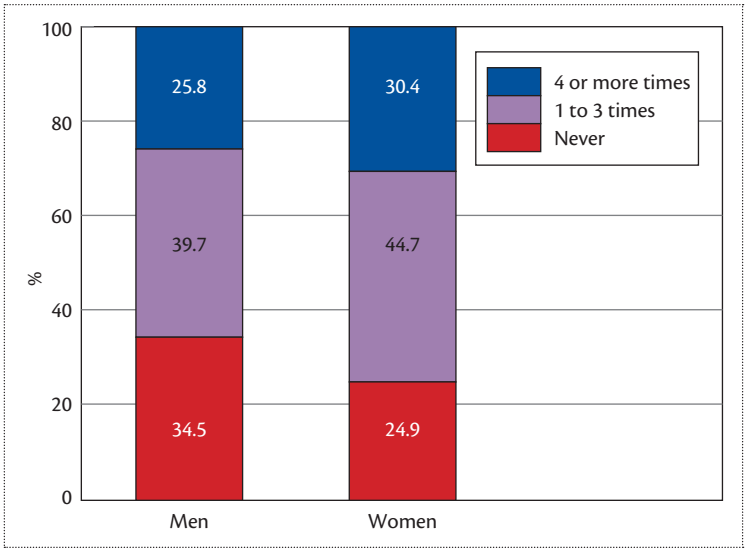

Figure 2. Frequency of privacy-management behaviors in anticipation of employer audience by gender.

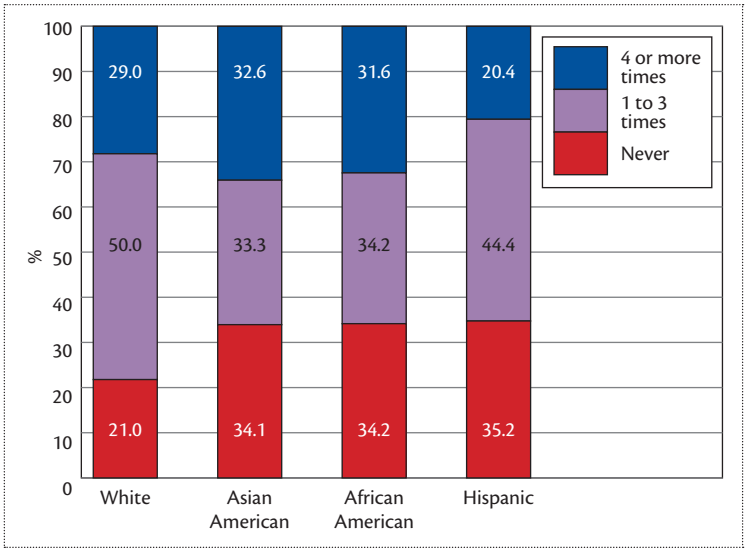

Figure 3. Frequency of privacy-management behaviors in anticipation of employer audience by race and ethnicity.

information about them. More than one-quarter had never done this, and an additional one-fifth had only done it once. Overall, approximately half of the sample had engaged in such behavior more than once, with less than one-third doing so four or more times in the previous 12 months.

Figure 2 highlights the breakdown of these privacy practices by gender (significant at the $p < 0.1$ level). Women were more likely to manage their privacy for an employment-related audience and tended to do so more frequently than men. Over one-third of men reported never having adjusted their self-presentations in anticipation of an employer audience, compared to one-quarter of women. At the other end of the spectrum, just over one-quarter of men had engaged in these behaviors more than three times, compared to more than 30 percent of women.

Addressing prior work on how those with different racial and ethnic backgrounds adopt social network sites[7,8] as well as how they incorporate the Internet into their job-search practices,[21] Figure 3 displays how privacy strategies broke down among White ($p < 0.01$), Asian American ($p < 0.05$), African American (not statistically significant), and Hispanic ($p < 0.1$) young adults in the sample. Whites were much more likely to have adjusted their social network site presence at least once in the previous year than people in any other category. When it came to managing online profiles actively, Hispanics were the least likely to do so at just over 20 percent, while the proportions for other groups were similar to each other, hovering around 30 percent.

Figure 4 shows that being knowledgeable about Internet privacy matters was related to managing one's social network profile with respect to potential employment-related audiences (significant at the $p < 0.1$ level). The more such skills people had, the more likely they were to engage in such practices. Among the least skilled (lowest quartile on the skill measure), more than one-third had never changed the privacy settings or content of their social network profile in such a context, whereas among the most skilled (highest quartile), 27 percent had never engaged in such behavior (interestingly, this is even lower at 21 percent among the upper-middle quartile group). In contrast, less than one-quarter of the least skilled had done this with at least some amount of frequency, compared to more than one-third of the most skilled.

Figure 5 breaks down how online privacy skills related to privacy-management practices by gender. Among both men and women, those with higher skills were more likely to have engaged in privacy-related practices than those with lower-level skills. However, the differences by skill were much more pronounced among men. (The within-gender differences were statistically significant for men at the $p < 0.1$ level, but not significant for women. The between-gender differences were statistically significant for the low-skilled at the $p < 0.05$ level, but not significant for the high-skilled.)

Discussion

Employers and coworkers are increasingly turning to social media to learn about current and potential employees,[1] and evidence suggests that people might utilize such tools directly and indirectly during the job-search process.[22] Although individuals might be thinking about friends and family as they share updates,[5,18]

research indicates that professional colleagues and employers are also forming impressions on the basis of users' social network site profiles,[2] potentially challenging the contextual integrity of this information.[12] Those not engaging in any form of privacy management in response to the employment audience—whether through content considerations or profile-setting adjustments—might be putting their job prospects at risk and their reputations on the line.

Contributing to past research on systematic variation in who uses different social network sites[6,7] and who uses the Internet in the job-search process,[16] our findings also suggest that demographic background relates to how different people approach their employment-related privacy and reputations in online social spaces. More specifically, analyzing the experiences of a diverse sample of young adults at the start of their careers, we see that women, Whites, and those with higher Internet privacy skills are more likely to manage self-presentation online actively. The patterns we found might be attributable in part to variations in how and why different people use social media more generally speaking. Again, research has found that in comparison to other social groups, White students are more likely to reference social media as instruments for self-promotion and marketing,[8] indicating a potentially higher likelihood of being cognizant of a far-reaching audience. This could explain why this group is most likely to have used a privacy strategy in the employment domain. Given that minorities who have traditionally faced discrimination in the labor market have been shown to use the Internet most in their job-search process,[21] the fact that Hispanics are the least likely to keep employment-related audiences in mind when it comes to their online profiles might be particularly disconcerting.

There are a variety of reasons why women are more active in the domain we examined. Many of the first public messages about online privacy and safety-related issues targeted women.[3] Studies have also found that, irrespective of topical domain, young women tend to use more privacy strategies on social network sites than men;[3,9] thus, their tool familiarity and experience might better prepare them to handle the employment audience as it becomes relevant to their lives.

Online profile privacy management is complex—users are burdened to tackle both social and technological challenges. Introducing a unique privacy-related Internet skills measure, our study shows that privacy management depends in part on domain-specific knowledge and expertise. Although more general Internet skills have been found to impact how people search for information, and produce and share content on the Web,[10,11] our results suggest that they might also influence self-presentation online, which in turn can have profound consequences for reputations and affect employment opportunities.

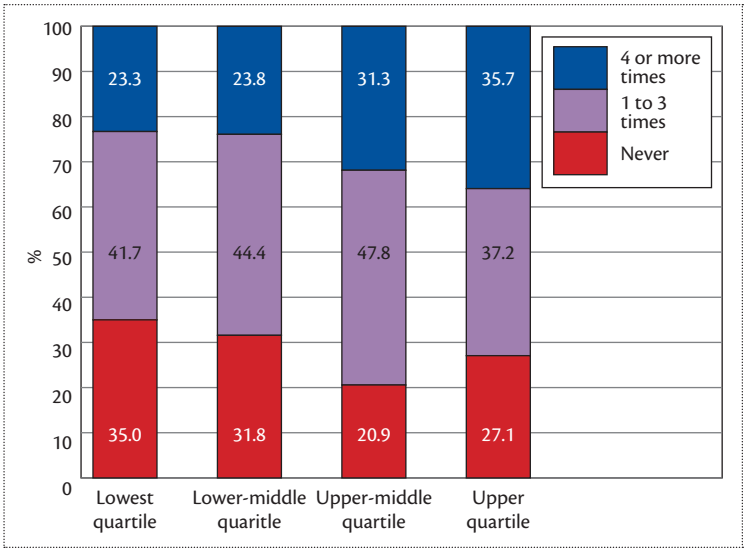

Figure 4. Frequency of privacy-management behaviors in anticipation of employer audience by online privacy skill.

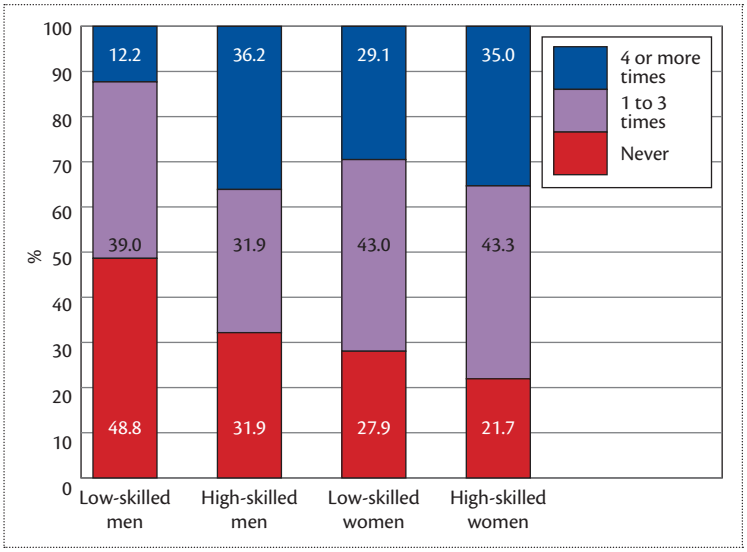

Figure 5. Frequency of privacy-management behaviors in anticipation of employer audience by online privacy skill and gender.

This article has several implications for those researching and designing social network sites from a computer science perspective. Our findings highlight the importance of drawing on diverse study samples and being conscious of sample demographics when studying users of a system. Given that systematic differences in privacy behaviors exist based on gender,

race and ethnicity, and Internet experiences, privacy scholars need to remain mindful of their samples' compositions and, ultimately, the conclusions they draw from studies administered on particular population groups.

From the users' perspective, the results highlight a need to stay attuned to social practices online. Although some users might rely on social media primarily to interact with their friends and family, traces of these interactions might become visible to others. Not all users are aware of this, and many lack the skills to understand the implications of their online actions. Given that a significant portion of the sample seemed at risk with regard to privacy-management practices, this might be an area in which users could benefit from more formal guidance or training. For example, career services and similar organizations could offer workshops on best practices for maintaining self-presentations in today's networked world and how to put one's best foot forward online. Businesses might also consider implementing workshops that advise their staff on best practices to avoid problematic situations.

This study also has important implications for social network site designers. We found that user skills related to how people managed their privacy on such sites, with a sizeable proportion lacking the necessary skills to manage their online presence optimally in the context of the job-search process and likely in other domains—something future research should address. Accordingly, designers will need to continue to make privacy tools more user friendly and default privacy settings more transparent. Adjustments could include making privacy tools easier to find, particularly those that let users control the accessibility of profile information to noncontacts as well as ones that allow users to reflect on their self-presentations, such as Facebook's View As functionality. Designers might also consider implementing tools that provide feedback to help users become more aware of their audience, particularly when audience members come from outside a user's immediate contacts. Such metrics might help users better reflect on their self-presentation and how others perceive them.

Finally, our study's results have implications for policies currently being devised or revisited to help enforce normative privacy practices. For example, the US has laws to protect prospective employees from potential job discrimination; however, social network sites pose a challenge to related practices. If users don't adjust their behaviors and privacy with an employment audience in mind, it's possible that users unintentionally and indirectly share the type of information that these laws originally set out to protect. Preliminary experimental research suggests that social media profiles might play a role in hiring discrimination.[23] Policymakers need to revisit antidiscriminatory laws and policies keeping in mind the role social media play in the hiring process. ■

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