Considering Social Pressures: Privacy Management in Location-Sharing-Enabled Social Media

Abstract
Our research focuses on privacy management in context of location-sharing-enabled social media. We've found that a key to supporting social media users is understanding the privacy-affecting social nuances of interpersonal interaction and group dynamics. In absence of this understanding, current privacy management features that assume individuals should make privacy decisions in isolation are insufficient and lead to lower adoption rates and/or low levels of participation for those who are signed up for a service. We propose an agenda of better understanding these influences and improving how we can design and evaluate user interfaces that address these privacy concerns and social considerations.

Keywords
Privacy, Social pressures, Personality-based, Location-based services, Social Media

ACM Classification Keywords
H.5.2 [Information Systems]: Information interfaces and presentation – User Interfaces: Evaluation/methodology.
General Terms
Design, Evaluation, Human Factors, Survey

Introduction
Because social media is social in nature, we must go beyond many traditional notions of privacy and data protection. Simply keeping data secure and offering access control is no longer sufficient. The social dynamics of group norms and interpersonal interaction influence decisions of with whom and how to engage and what to disclose. Managing privacy involves navigating social relationships such as making sure not to offend colleagues, friends and acquaintances. Our research focuses on understanding these types of privacy concerns and management techniques, particularly in social media that enable location-sharing.

Our previous exploratory research into adopter and non-adopters of location-sharing social media [1,2] has shown a number of major social influences shape privacy concerns and how they should be addressed. First, normative pressures around participating and being responsive in social media create an expectation of what it means to be a “good” user of social media. Whether you respond to others and how you participate shapes others’ perception of you. This can lead to anxiety around managing interactions with others. Some people resist using social media at all when they perceive too much social anxiety that comes with using social media. Others participate but minimize their interaction with everyone to lower expectations of their actively participating.

Secondly, the symbolic meaning behind various gestures and actions performed in social media is sometimes even more important in dictating people’s actions than the utility or content itself. For example, accepting a friend request is not necessary a problem from the standpoint of revealing one’s location. Rather, the privacy issue is the users’ perception that being connected as friends grants permission to use one another’s locations to show up unannounced.

Even though the symbolic meaning behind various social media actions may be cause for concern, the problem can be exacerbated if both parties do not attribute the same meaning to a given action or interaction. We found that even different friends in the same social network on the same service could have very different perceptions of what a given action means and the correct social etiquette concerning that action. For example, in two separate interviews with two friends they stated opposite views on whether it is okay to tweet mundane status messages. Another example is whether untagging your name from a picture posted by someone else is the norm or not (and implicitly, whether it is acceptable or not).

Understanding Different Demographics
In the previous study, the way people were affected by various social influences appeared to vary by some personality dimensions. As part of our ongoing research, we are developing a scale for identifying these personality factors [2]. We will administer a larger-scale survey on diverse populations so that we can test whether these personality factors do indeed map to certain privacy concerns and management techniques. We suspect that some personality traits may be more prevalent in various demographics (such as young single adult vs. married with children) and it is important to understand the various subpopulations for supporting effective privacy management.
Designing for Social Pressures
After we gain insight into the prevalence of various social pressures central in shaping privacy concerns, we must still turn to the question of how to design for these social influences. Thus, we are developing a scale for evaluating various interface designs. This is not from the typical usability standpoint, but rather from the metric of evaluating which social influence a given interface addresses and how well it does so. We are currently in the process of developing and testing various location-sharing service designs.

We have already conducted some initial research on normative pressures in a different domain, namely the dissemination of awareness information in instant messaging [3]. In an experiment we exposed the norms of how our participants’ friends are setting their privacy preferences, and looked at how it affected the way our participants’ set their own privacy preferences. We found that the norms did sway people in how they set their own preferences but was secondary to the effect of the different privacy settings that participants could control (e.g. visibility of status information vs. awareness of others’ actions). An open question is whether personality affects the choice made by a participant and a deeper exploration of the types of privacy preferences that users treat similarly. Our studies on location sharing privacy suggest that the symbolic meaning behind giving access to certain awareness information influences people’s disclosure preferences for this information.

Conclusion
As we increasingly are connected and interacting in social media, the boundaries blur between what is my content and what is yours. What makes it even more complicated is that the symbolic meaning behind my or your actions may not be clear and can do great damage if taken the wrong way. We are concentrating on understanding these social nuances and designing interfaces that support these subtle interactions.

Acknowledgements
This research has been supported by NSF Grants 0831526 and 0953071.

Citations