Privacy and Reminiscing: The Persistence of the Initial Privacy Decision

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Abstract

In the following workshop paper we provide a brief overview of the existing research on privacy concerns of social media. We argue that privacy research regarding the sharing of artifacts on social media sites needs to be expanded to include the awareness of the persistence of the data being shared and what effects this may have on individuals as time passes. To illustrate this we focus on recommendation system that can lead to unwanted negative reminiscing.

Author Keywords

Privacy, Social Media, Reminiscing, Recommendation Systems

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Design, Human Factors

Introduction

Individuals utilize social media for a number of purposes. Many use social media as a primary means of communication, while others use it to share artifacts

with close friends and distant family members. Regardless of the purpose of using social media, the data that individuals upload to their social media profiles persists over time and has the ability to trigger memories when examined retrospectively.

In the following paper, we provide a brief overview of the existing research on privacy concerns of social media. We argue that privacy research regarding the sharing of artifacts needs to be expanded to include the persistence of the data being shared and what effects this may have on individuals as time passes. We then illustrate this need by presenting an example that focuses on a recommendation system that can lead to unwanted negative reminiscing

Prior Privacy Research
There are many issues at play when discussing privacy of user-contributed artifacts on social media. Some of these issues have been discussed in great detail by researchers: new tools have been proposed to make management of user's privacy setting an easier process [1, 2] and the motivations behind users sharing of information has been investigated [3-6]. More specifically, Young and Quan-Haase [7] found that users mitigate their privacy risks by either not disclosing information or changing the default privacy settings. Additionally, Sangmi et al. [8] determined that users' protective behaviors are determined by both the assessed importance of the information and the self-efficacy of the users with the privacy information. On the other hand, Tufekci [9] found that there is no correlation between social networking sites privacy concerns and information disclosure. As time passes users will have had longer presences on social networking sites and to date no research has looked at the long-term effects of the initial privacy settings of accounts on social media sites.

In addition to privacy settings for the artifacts that have been shared, there are also issues with how the information and images are used once shared on these sites. Individuals are taking more photos than ever before, with the ubiquity of digital cameras allowing them to catalogue every aspect, positive and negative of their life. The notion of online photo albums brings about many issues of privacy, especially when the photos allow for identity tagging.

Persistence of Initial Privacy Choices

With the combination of the choose and forget privacy settings and the trend for media sites to use past data for recommendation for friends, likes, and advertising a perfect storm has developed for triggering negative reminiscing events. Our research focuses on what happens when information that a user has shared in the past (and likely forgotten about) comes back to the surface either by a recommendation or by someone else looking at the data through new features in social networking sites.

One example that illustrates the point is when relationship is formed on a social media site. Take Facebook for instance, when a new friend is accepted, they get access to all the previous posts that were made available to the list or friends on your page. With Facebook having existed for almost eight years, many of the privacy decisions of individuals who were early adopters are from another time period in their life and may come back to haunt them in a number of ways.

What if that new friend is a potential romantic interest, and you still have previous interactions with romantic interests catalogues in your public profile. How would this new 'friend' feel about viewing this activity? Would you want them to not see it at all? What if this new friend on the social networking site is a coworker or supervisor? You can manually go through your social media and 'cleanse' it. This is the process of users periodically going through their account and deleting information or friends that they find no longer valuable. The removal of information can simply be due to it being completely irrelevant (movies and music are often mentioned), or photos that no longer represent them anymore. Friends can also be 'cleansed' as individuals move in an out of social circles and friend groups in the physical world. This process is often time consuming and as more of ones life is put online, it is likely that one would not be able to completely cleanse a profile of all artifacts of previous relationships.

Recommendation Systems Reminiscing
Reminiscing, "the act or process of recalling the past [10]", beginning when a memory is triggered. These triggers can be can be either spontaneous or intentional. Spontaneous triggers can come from sensory input, such as smell, sounds, flavors, or fleeting images. In contrast, intentional triggers are more deliberate reminiscing events in which a person is prompted about a particular event, object, or place. An example of intentional triggering includes the Story Corps project (http://storycorps.org/). Recommendation systems are one-way older data can server to trigger reminiscing events.

Recommendation systems exist in most Internet-based technologies that house interaction. Amazon recommends books based on previous purchases and services such as Yelp can suggest restaurants based on location or food preference. Social media sites such as Facebook and Twitter also have built in recommendation systems that take into account users past actions and current social graph. Although these recommendation systems seek to facilitate new interactions with others based on similarities, there are a number of negative aspects to recommendations.

One negative impact of these recommendation systems that has been noted is the existence of "Filter Bubbles." [11]. A filter bubble is created when a user is provided a set of recommendations that already reinforce existing beliefs. Such bubbles eliminate a diversity in opinion and allow individuals to create a "daily me" of information and interactions [12]. Although these algorithms exist to promote use and exposure to people we would most like to interact with, there is a negative side of such recommendations when the recommendations are individuals who a user is trying to avoid or has had a negative experience with.

Recommendation systems can bring about negative triggers because they determine algorithmically those you might know or who are closely linked to you in your social network or based on shared interested. There is rarely any way to include a notation of relationship valence to "tell" the technology that a similarity or shared interest exists, but that the relationship is negative. For example, many recommendation engines are likely to recommend an ex lover who still shares similar social circles, a childhood molester who may be closely integrated into a family or social network that you have told no one

about, or any other individual that a user has no interest in being exposed to again.

The introduction of features such as Facebook timeline makes it easier to access a user's historical activity on a social networking site such as Facebook. Other easy to access API's such as Twitter allow for the historical access of 1500 tweets of an individual that may include discourse with individuals that they do not want individuals to be exposed to. Future research needs to examine the long-term effects of initial privacy decisions regarding artifact sharing and individual reactions and perceptions of the persistence of the initial privacy controls.

Conclusion

As individuals are starting to share information at younger ages, including parents who establish accounts for their children before they are born, it is important to understand the positive and negative aspects of the artifacts that are being shared. It is important for privacy research to not only examine the setting and management of privacy settings, but how their privacy and the information that they are sharing is going to affect them in the years to come based on the initial set of privacy settings. Negative reminiscing triggers is just one of many avenues that need to be explored as we become a digital society with more information about everyone available and stored indefinitely.

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