

Privacy in a Mobile, Connected World

Research questions

Today's technologies allow for massive generation, storage and analysis of personal data, and many services we use daily rely on data-based functionalities. This data recording and use may challenge the users' privacy in different ways. In this seminar, we want to have a closer look at these challenges and explore different aspects of privacy relevant to the field of HCI.

1. Protecting privacy is a major challenge with regard to today's technologies. What does the concept of privacy mean in the context of HCI research? Discuss resulting design implications using examples.

Palen, Leysia, and Dourish, Paul. "Unpacking privacy for a networked world." Proceedings of the SIGCHI conference on Human factors in computing systems. ACM, 2003.

2. How does behavioural tracking affect the diffusion of private data? Discuss possible protection mechanisms and their advantages and disadvantages.

Krishnamurthy, Balachander, and Wills, Craig. "Privacy diffusion on the web: a longitudinal perspective." Proceedings of the 18th international conference on World wide web. ACM, 2009.

3. What are privacy nudges? How can privacy nudges improve information decision making? Present practical examples of systems using privacy nudges and discuss the effectiveness of privacy nudges in general.

Almuhimedi, Hazim, et al. "Your location has been shared 5,398 times!: A field study on mobile app privacy nudging." Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems. ACM, 2015.

4. Which privacy risks do people face when using mobile devices? Give an overview and discuss how (some of) these risks can be diminished by the help of technology.

Aditya, Paarijaat, et al. "Brave New World: Privacy Risks for Mobile Users." ACM SIGMOBILE Mobile Computing and Communications Review 18.3 (2015): 49-54.

5. What does "control" mean in the context of privacy? What role does control play with regard to privacy concerns and the willingness to share private information? Discuss the advantages and disadvantages of systems that help users control their privacy.

Brandimarte, Laura, Acquisti, Alessandro and Loewenstein, George. "Misplaced confidences privacy and the control paradox." Social Psychological and Personality Science 4.3 (2013): 340-347.

6. What is the privacy paradox? How do risk perception and trust influence the privacy paradox? Discuss possible explanations for the privacy paradox.
Norberg, Patricia A., Horne, Daniel R. and Horne, David A. "The privacy paradox: Personal information disclosure intentions versus behaviors." Journal of Consumer Affairs 41.1 (2007): 100-126.

7. How much do people know about potential risks of data sharing and privacy management? How does educating users affect privacy attitudes? Discuss whether user education is a feasible approach for better privacy management.
Egelman, Serge, et al. "The Teaching Privacy Curriculum." Proceedings of the 47th ACM Technical Symposium on Computing Science Education. ACM, 2016.

8. Analytics strive for creating hyper-personalised user experiences by extracting individuals' personal traits from their online behaviour. What are the effects of such personal profiling on people's privacy perception? Discuss the resulting design implications for hyper-personal analytics systems.
Warshaw, Jeffrey, et al. "Can an Algorithm Know the Real You?: Understanding People's Reactions to Hyper-personal Analytics Systems." Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems. ACM, 2015.

9. Automatic context sensing is increasingly used by context-aware applications to provide personalised services. Privacy controls allow for individual privacy management, but setting and adapting privacy preferences increases user burden. How could privacy management be facilitated? Compare and discuss different approaches.
Toch, Eran. "Crowdsourcing privacy preferences in context-aware applications." Personal and ubiquitous computing 18.1 (2014): 129-141.

10. Data collection and tracking are common when using apps on mobile devices, and may leak personal data to third parties. How do users feel about data leakage and how does this affect their behaviour? Discuss the design implications for apps that result from these observations.
Shklovski, Irina, et al. "Leakiness and creepiness in app space: Perceptions of privacy and mobile app use." Proceedings of the 32nd annual ACM conference on Human factors in computing systems. ACM, 2014.

11. End User License Agreements should inform users about data collection practises and thus allow for informed privacy decision, for example, when installing an application or registering with a service. However, these notices often lack usability and are therefore simply ignored by most users. What are design challenges for privacy notices and best practices? Discuss these practices in the context of mobile applications.
Schaub, Florian, et al. "A design space for effective privacy notices." Eleventh Symposium On Usable Privacy and Security (SOUPS 2015). 2015.

12. Obfuscation can be used as a privacy-preserving mechanism, for example in web search. Explain the concept of obfuscation and discuss whether obfuscation is a valid approach to personal data protection.
- Peddinti, Sai Teja, and Saxena, Nitesh. "On the privacy of web search based on query obfuscation: a case study of TrackMeNot." International Symposium on Privacy Enhancing Technologies Symposium. Springer Berlin Heidelberg, 2010.*
13. Most applications and services (to a certain extent) allow for individually adapting privacy preferences and thus for defining personal privacy policies. How do users cope with this possibility? Discuss the advantages and disadvantages of personal privacy policies.
- Sadeh, Norman, et al. "Understanding and capturing people's privacy policies in a mobile social networking application." Personal and Ubiquitous Computing 13.6 (2009): 401-412.*
14. How do expectations about data collection influence users' privacy concerns and their trust in an app or service? Discuss the influence of informing users about data collection practises and the resulting design implications for app developers and service providers.
- Lin, Jialiu, et al. "Expectation and purpose: understanding users' mental models of mobile app privacy through crowdsourcing." Proceedings of the 2012 ACM Conference on Ubiquitous Computing. ACM, 2012.*
15. What is the personalisation-privacy paradox? What are possible explanations for this paradox? Discuss implications for the design of personalised applications and services.
- Sutanto, Juliana, et al. "Addressing the Personalization-Privacy Paradox: An Empirical Assessment from a Field Experiment on Smartphone Users." Mis Quarterly 37.4 (2013): 1141-1164.*
16. In order to be able to address users' privacy concerns, it is important to quantify privacy attitudes. How can privacy concern and attitudes be measured? Compare different approaches and their advantages and disadvantages. Are there best practices?
- Preibusch, Sören. "Guide to measuring privacy concern: Review of survey and observational instruments." International Journal of Human-Computer Studies 71.12 (2013): 1133-1143.*
17. Users of social networking sites often seem to be willing to expose a vast amount of personal and even sensitive information to mostly loosely defined acquaintances. What are the reasons for this behaviour? What are patterns of personal information revelation? Discuss the privacy implications of online social networking.
- Gross, Ralph, and Acquisti, Alessandro. "Information revelation and privacy in online social networks." Proceedings of the 2005 ACM workshop on Privacy in the electronic society. ACM, 2005*

18. Does gender influence privacy attitudes and privacy concern with regard to online data collection and behavioural tracking? How do women and men react to increased privacy concern? Discuss how application designers and service providers can account for gender-specific differences related to privacy.

Sheehan, Kim Bartel. "An investigation of gender differences in on-line privacy concerns and resultant behaviors." Journal of Interactive Marketing 13.4 (1999): 24-38.

19. Research has observed that people are willing to disclose sensitive information for relatively small rewards. Do people care for their privacy after all? What value do they assign to privacy protection? Given these investigations, discuss whether letting people pay for privacy protection is a feasible approach.

Acquisti, Alessandro, John, Leslie K. and Loewenstein, George. "What is privacy worth?." The Journal of Legal Studies 42.2 (2013): 249-274.

20. Research on information privacy has resulted in a plethora of literature and a great variety in research methodology. Discuss and point out possible research gaps and new research directions.

Pavlou, Paul A. "State of the information privacy literature: where are we now and where should we go?." MIS quarterly 35.4 (2011): 977-988