Cooperative Privacy and Security: Learning from People with Visual Impairments and Their Allies

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Motivations & Takeaways

Motivations

- Existing privacy solutions lack support for people with visual impairments
- Long-term goal: design inclusive privacy solutions
- Focus on people with visual impairments & allies

> **Ally:** explore the complexities of social relationships between people with disabilities and those who respect and often interact with them.

Take-Aways

- Multifaceted disability identities need to be considered
- Interactions with allies important for privacy/security
- Designs for cooperative privacy & security

Research Questions

- **RQ1:** What are the everyday privacy/security challenges and practices of people with visual impairments?
- **RQ2:** How do people with visual impairments interact with their allies? What are the privacy or security implications of such interactions?

Method

Ethnographic study + Interviews	• An Initial interview • A weekday observation • A weekend observation	• A set of tasks in one observation session • Exit interview
Blind or low vision + Their allies	• 8 participants • 3 blind, 2 low vision, 3 allies	• Age range 30 – 80+ • P1-P5 (blind/low-vision) • A1-P1, A2-P2, A3-P5 (allies)
Field notes + Interview data	• Thematic analysis • Affinity diagrams • Meeting with research	team regularly to discuss • Inspired in part by critical disability literature

Results

Self-Perceptions of Disabilities: Selective disclosure of visual impairment

> "They are not astute enough to know that I can't read it. And what I am gonna have to do is to contact the people I really want to hear from [...]" (P3)

Everyday Privacy/security Practices: Private information being compromised on the job

> "When you have such a big screen, you can't sit there. Most people can do personal stuff, you know, you could see what I'm doing." (P4)

Social Relationships and Interactions: Allies' perspective; Family relationships

> "I believe in complete right to privacy in all situations dealing with P2. She is an adult and my help to her is strictly for her benefit and I consider any breach of her privacy to be also a breach of trust." (A2-P2)

> "If I'm filling out a camp scholarship form and my daughter is helping me and it starts asking for salary [...], I don't. It's mostly because I'm in a divorce situation and I don't want her to accidentally tell her father." (P4)

Implications

- Designing for **cooperative assistance tools**, instead of for individuals
- Focusing on interdependence in technology design, not on independence
- Embracing accessibility in cooperative privacy designs

Examples of cooperative privacy designs
- Mobile app/web-based service
- Users invite allies
- Real-time chat requests by users
- Users' full control of personal information

Acknowledgement

P4A Inclusive Privacy — Privacy for all

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