Leveraging community oversight to enhance collective efficacy for privacy and security
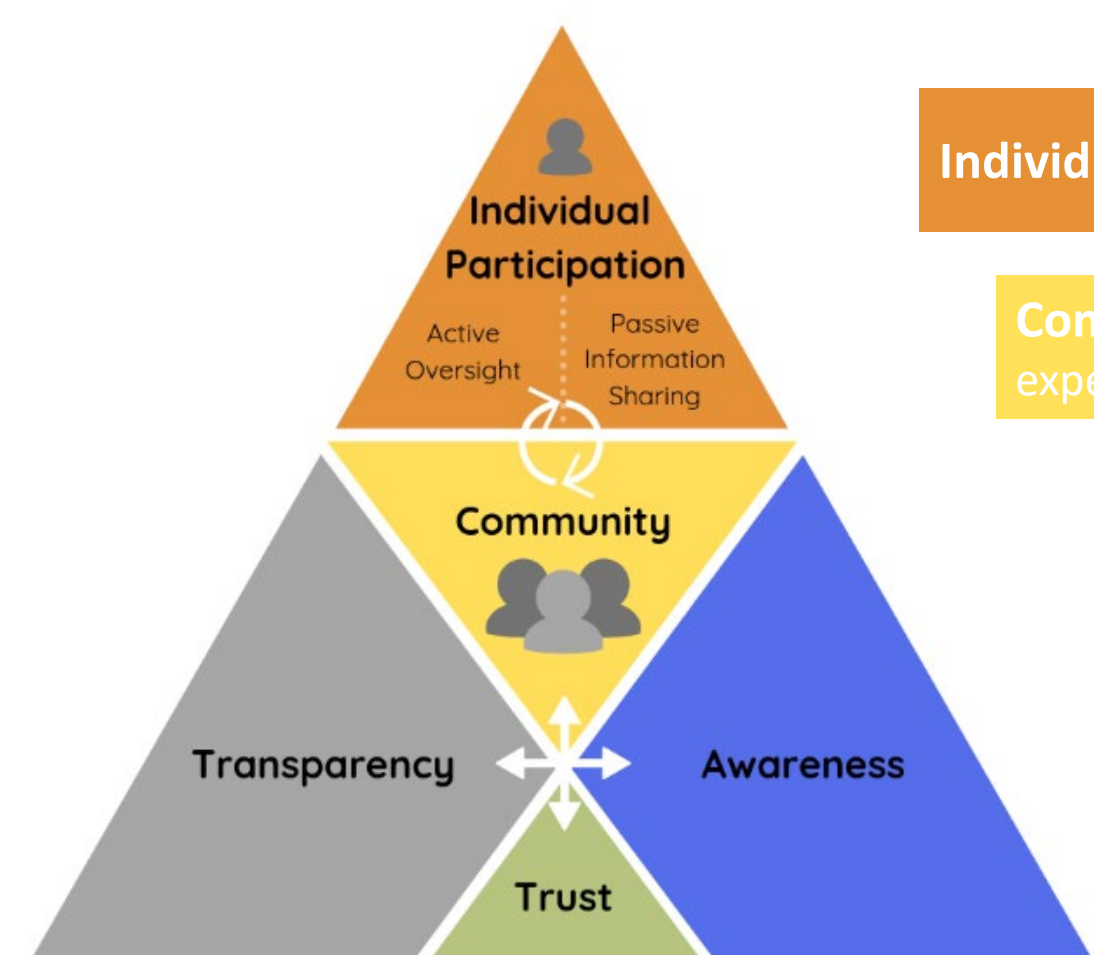
Jess Kropczynski, University of Cincinnati

Heather Lipford, University of North Carolina at Charlotte

Pamela Wisniewski , University of Central Florida

University of CINCINNATI

UNC CHARLOTTE

UCF UNIVERSITY OF CENTRAL FLORIDA

Community Oversight Model

Individual Participation: Make in-the-moment privacy and security decisions for oneself while sharing experiences with others.

Community: Support one's inner-circle of family and friends in order to provide oversight, while also gaining insight from broader group of experts and frequent users.

Transparency: Make certain privacy behaviors, personal experiences, and opinions visible to others while insuring personal info is kept private.

Awareness: Have access to useful information from others in order to make informed decisions. Only know what others are doing when providing oversight.

Trust: Form a community based on trust-relationships in order to get credible information on security and privacy.

Research Goals

Support individuals' digital privacy and security practices through the novel paradigm of community oversight, enhancing collective efficacy of trusted communities.

- Investigate social factors that impact participation in community oversight.

- Explore design features that support transparently sharing and communicating privacy and security practices

- Evaluate individual and group interactions within a community oversight mechanism

Scientific Impact

Transform digital privacy and security management into a collective process reliant on powerful social mechanisms.

- Fundamental understanding of role of community oversight in privacy and security management

- Model of community oversight developed through design exploration and evaluation

- Impact of oversight on community collective efficacy for security and privacy

Community Oversight of Privacy and Security (Co-oPS)
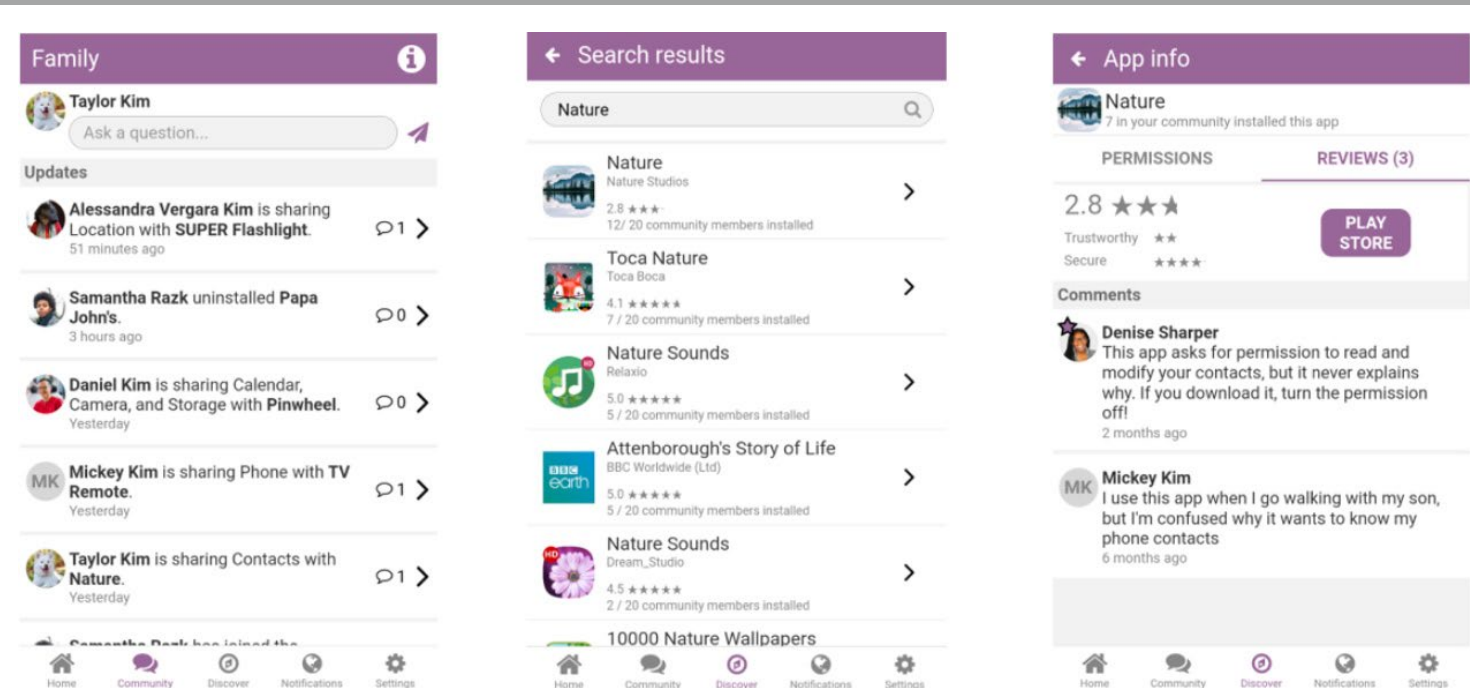
Mobile app for groups to collectively share and communicate around app permissions.

- Participatory design study explored features and model concepts. Results emphasized need for trustworthy info within care relationships as well as from informed experts.

- Implementing Android prototype to deploy for long term field studies within trusted communities

Survey study explored efficacy of security and privacy management in elder communities

Broader Impact

- Enhance end users' ability to enhance their mobile security and privacy awareness and behaviors

- Provide guidance and a platform to support diverse groups of people in collaborating around mobile privacy and security risks

- Inform interdisciplinary fields how to leverage real world social processes to enable collective digital security and privacy management.

Educational Impact

- Training of multiple graduate and undergraduate students at 3 institutions in broad set of user-centered methods

- Development of mobile security and safety training based on results for outreach by computing students

- Workshops educating diverse consumers on mobile security and privacy risks and ways to work together to mitigate those risks

Outcomes

- Open source mobile app under development that will be available for those seeking to promote mobile security and safety

- Community collective efficacy for security and privacy measure and evaluation

- Publications:
  - Z. Aljallad et al (2019). Designing a Mobile Application to Support Social Processes for Privacy. NDSS USEC 2019.
  - C. Chouhan et al (2019). Co-designing for community oversight: Helping people make privacy and security decisions together. CSCW 2019.