



Bottom-up psychosocial interventions for interpersonal privacy preservation



PI: Mary Jean Amon, University of Central Florida

Students: Aaron Necaie, Tangila Tanni, Renita Washburn, Aneka Williams

Overview

- **Interpersonal privacy violations (IPV)** on social media are rampant, as users share sensitive photos of other people and others' personal information without permission.
- Few studies have gone beyond identifying self-reported privacy attitudes to establish interventions that change the status quo.
- This project empirically tests bottom-up psychosocial interventions to prevent interpersonal social media privacy violations among diverse users.

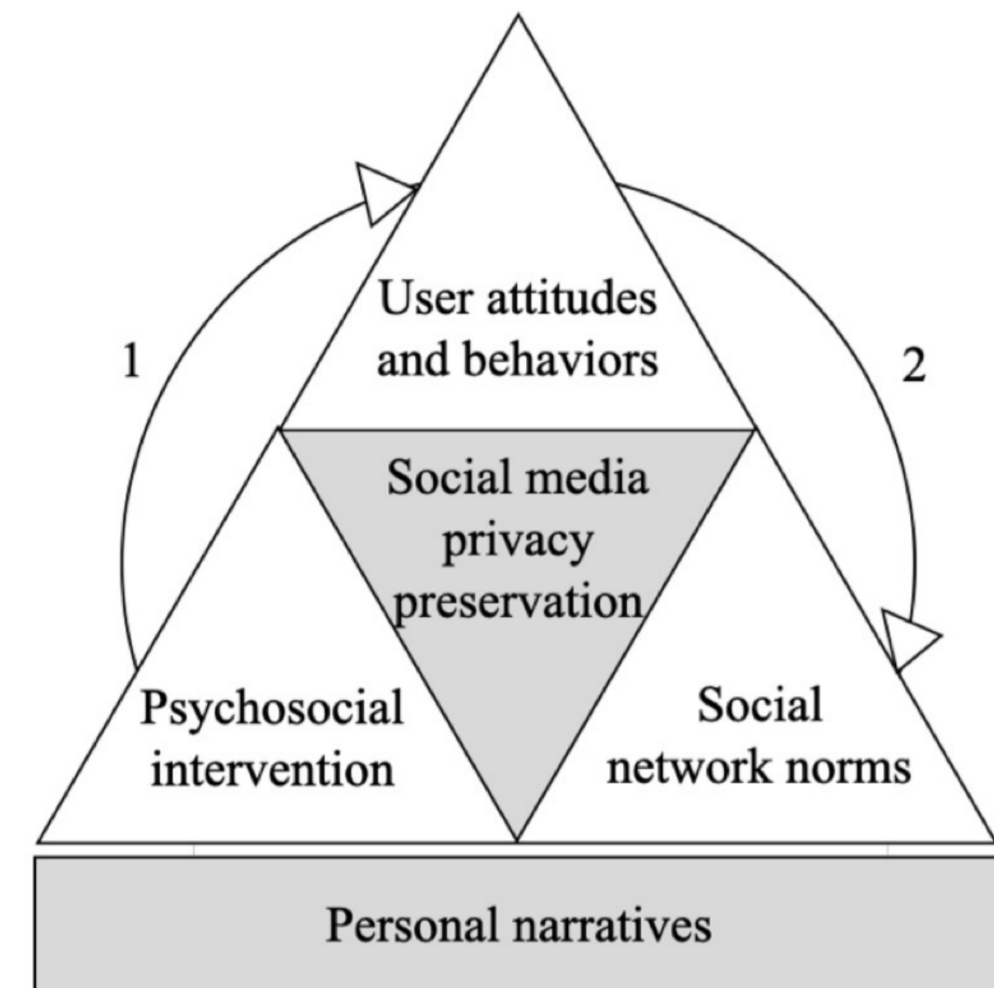


Figure 1. Bottom-up social media privacy preservation model.

Types of potential IPV

- *Aim:* Identify potential types of IPV in social media.
- *Method:* Qualitative and quantitative analysis of viral photo-based memes ($N = 245$).
- *Findings:* Qualitative analysis revealed 13 sources of potential IPV.
- Users consider memes depicting others' personal information, sexual history, online activity, drug use, and online activity as most privacy-violating.

Table 1. Types of photo-based memes depicted during the meme rating tasks.

Category Name	Category Description	Privacy rating <i>M (SD)</i>
Candid	Individual appears to be unaware their photo was taken	2.68 (0.24)
Children	Child portrayed (vulnerable population)	2.72 (0.28)
Out-of-Context	Photo taken out of context through addition of text caption	2.45 (0.16)
Drug Use	Photo or text highlights individual's potential drug or alcohol use	3.05 (0.57)
Insulting	Photo accompanied by derogatory message	2.87 (0.25)
Location Information	Photo or text caption reveals details of subject's location	2.56 (0.14)
Medical Information	Photo or text caption reveals personal medical information	2.70 (0.19)
Online Activity	Aspects of a person's online activity, such as dating profile or search history	3.07 (0.55)
Personal Information	Identifying personal information, such as driver's license or passport	4.00 (0.22)
Sexual History	Photo or text highlights individual's potential sexual history	3.45 (0.18)
Shaming	'Calling out' someone's socially unacceptable behavior	2.84 (0.20)
Work/School Misbehavior	Potentially reprimandable behaviors at work or school	2.89 (0.55)
Not otherwise sensitive*	Control category portraying people in a positive or neutral light	2.50 (0.13)

*Note: "Not otherwise sensitive" photo-based memes are included as potential sources of interdependent privacy violations, as some people may not want their information shared by anyone without their permission, even if neutral or positive in tone

IPV content moderation attitudes

- *Aim:* Determine user attitudes toward content moderation strategies controlled by users, corporations, or governments.
- *Participants:* $N = 200$ Qualtrics panel; $N = 200$ Amazon Mturk.
- *Method:* Twitter data collection; social media sharing task; surveys.
- *Findings:* Users rate IPV as a serious issue.
- Users perceive user-controlled approaches to moderation as most effective.
- Users who are more likely to share sensitive information about others believe moderation is more effective.

Interdependent privacy user categories

- *Aim:* Establish user characteristics associated with IPV.
- *Participants:* $N = 245$; $N = 111$; $N = 104$; $N = 145$ Amazon Mturk
- *Method:* Meme rating tasks; surveys
- *Findings:* Users are less likely to share memes rated as private, unless the meme is entertaining or the user has dark triad characteristics.
- High dark triad users exhibit a heightened awareness of interdependent privacy, and increased sharing of others' photos.
- Three distinct user types vary in their interdependent privacy perceptions: privacy preservers, privacy ignorers, and privacy violators.

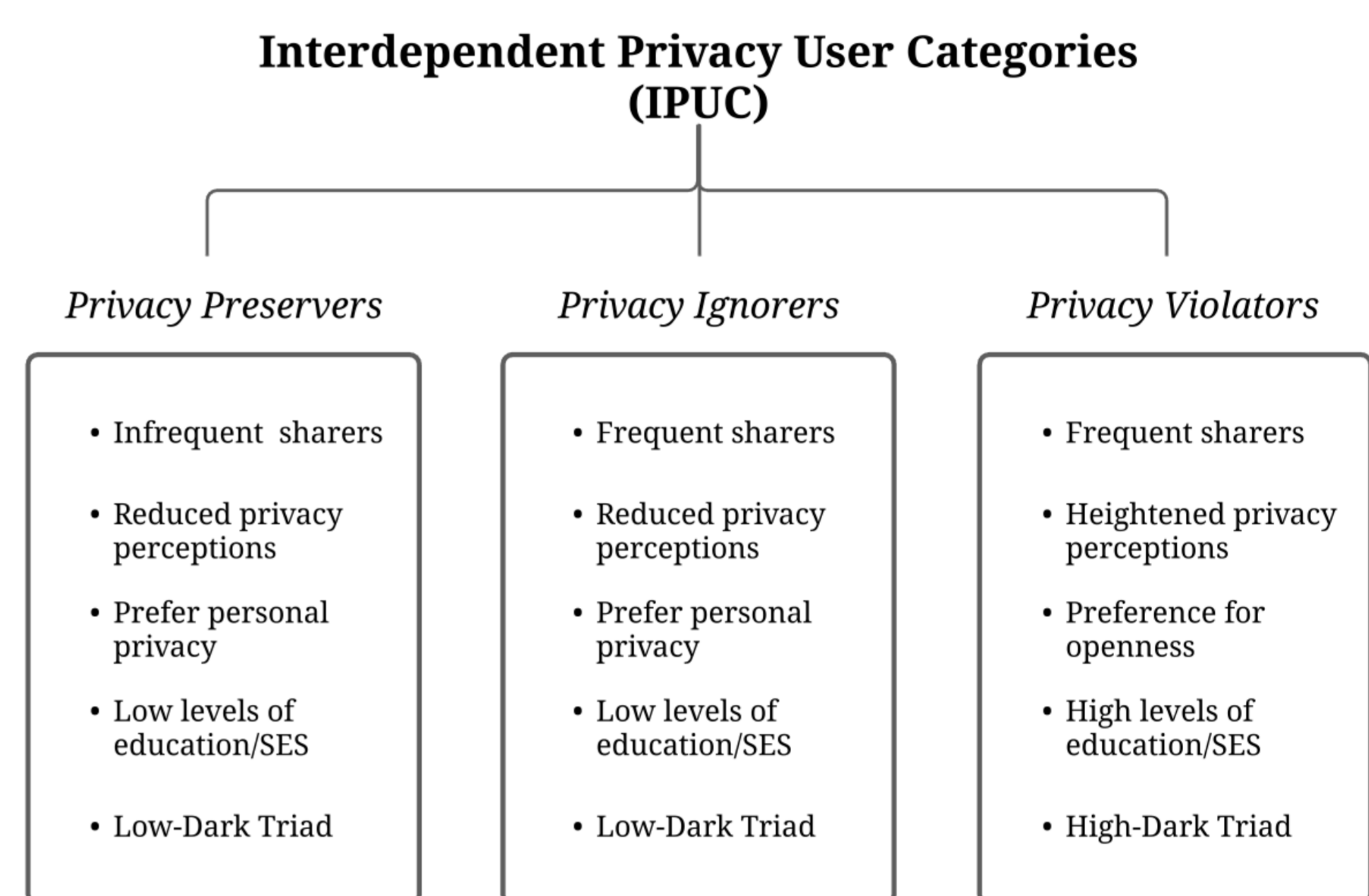


Figure 2. Bottom-up social media privacy preservation model.

Bottom-up psychosocial interventions

- *Aim:* Develop and empirically test interventions for preventing IPV.
- *Participants:* $N = 396$ Amazon Mturk
- *Method:* Participants assigned to one of four conditions:
 - 1) Control- No intervention
 - 2) Educational- Information about what interdependent privacy violations are (termed "privacy pirating" for the purposes of the study)
 - 3) Narrative- Stories about people negatively impacted by privacy pirating
 - 4) Fact-based condition- Facts about the seriousness of privacy pirating
- Twitter data collection; experimental manipulation; social media sharing task; surveys
- Findings are in progress.



Figure 3. Still images taken from videos aimed at reducing IPV.