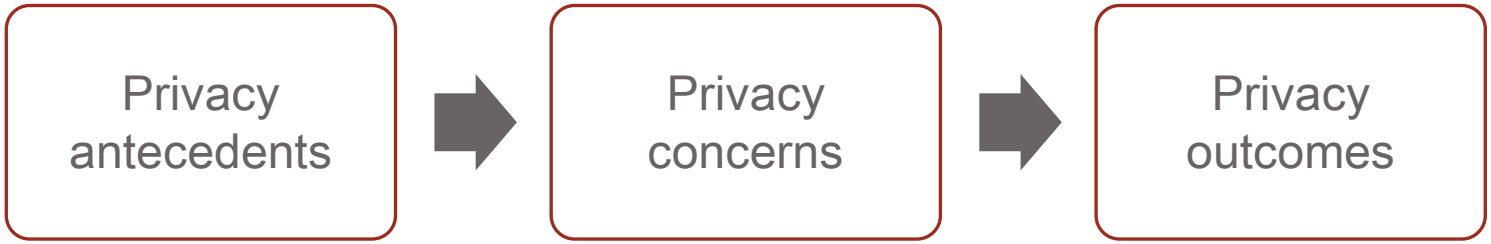
Knowing and believing

Privacy literacy, privacy self-efficacy and context in privacy-protecting behaviors

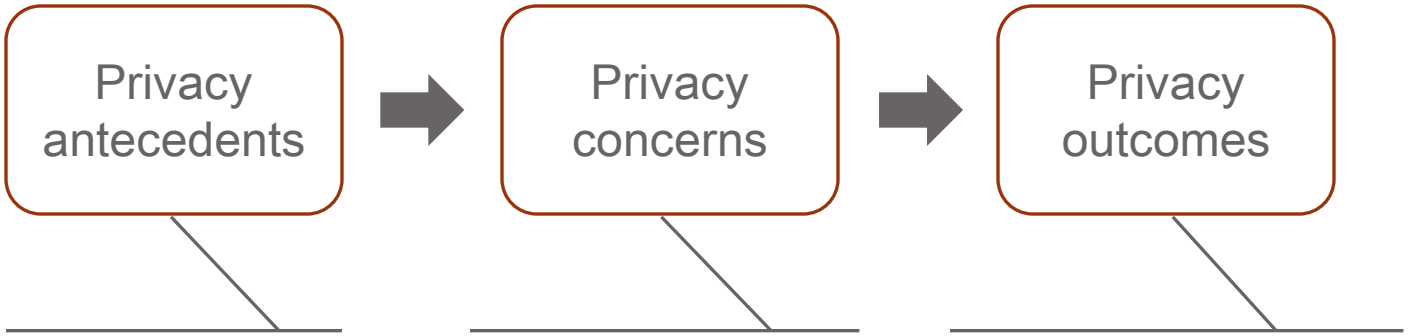
DMITRY EPSTEIN AND KELLY QUINN

SEPTEMBER 13, 2018

Thinking about privacy



Thinking about privacy

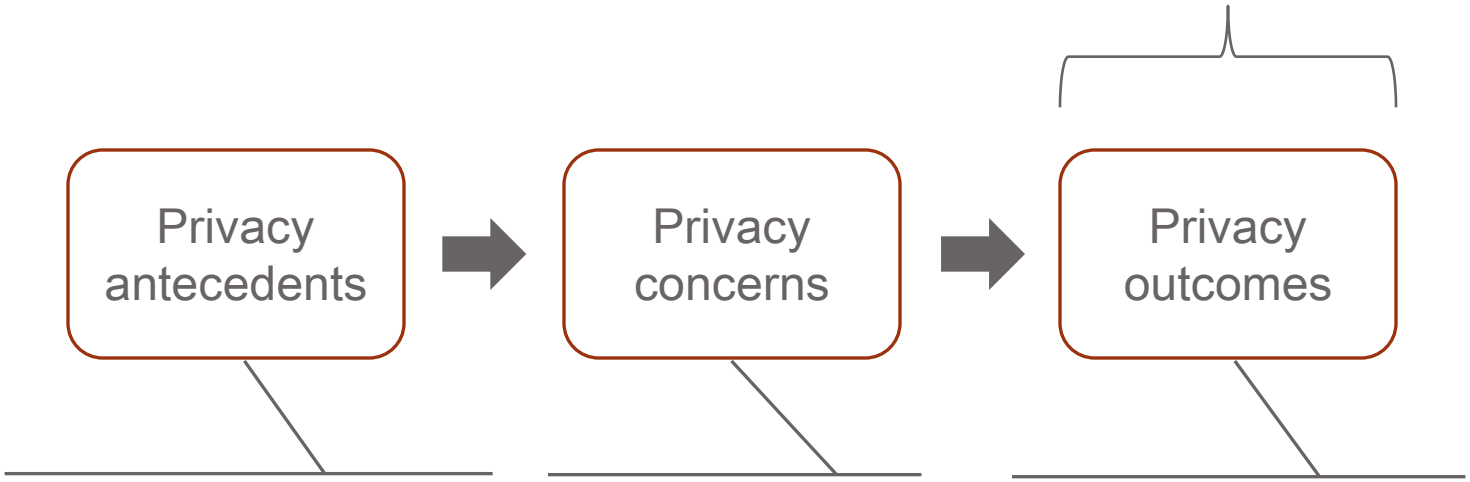


- Age
- Gender
- Income
- Education

- Control
- Risk
- Disposition

- General tech
- Application
- Disclosure
- Social
- Disguise
- Advanced tech

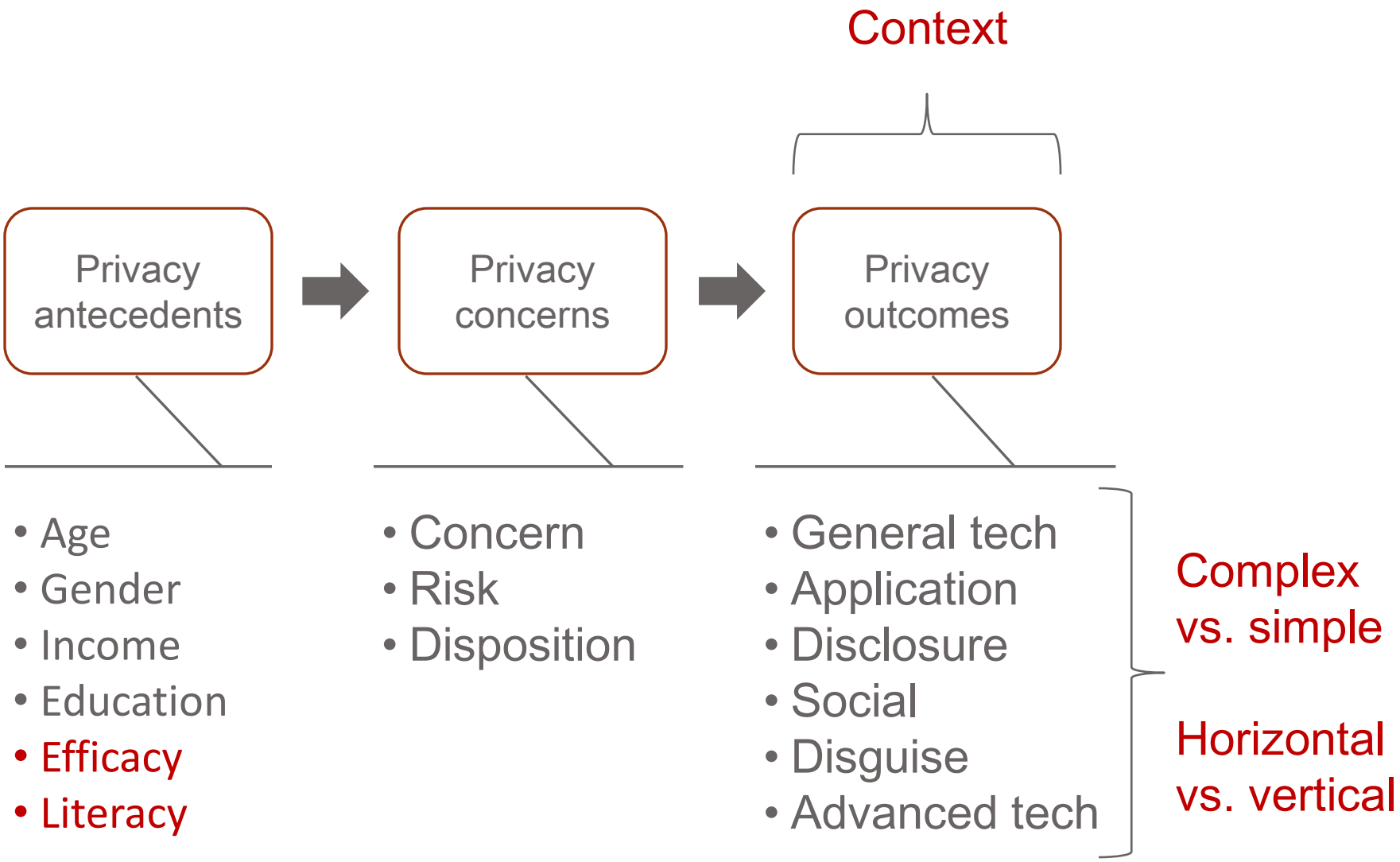
Context



- Age
- Gender
- Income
- Education
- Privacy Self-Efficacy
- Privacy Literacy

- Control
- Risk
- Disposition

- General tech
- Application
- Disclosure
- Social
- Disguise
- Advanced tech


Context
Privacy antecedents
Privacy concerns
Privacy outcomes
• Age
• Gender
• Income
• Education
• Efficacy
• Literacy
• Concern
• Risk
• Disposition
• General tech
• Application
• Disclosure
• Social
• Disguise
• Advanced tech
Complex vs. simple
Horizontal vs. vertical

RQ1: How does privacy self-efficacy affect the choice of privacy protecting behaviors?

RQ2: How does privacy literacy affect the choice of privacy protecting behaviors?

RQ3: How does context of social media use affect the choice of privacy protecting behaviors?

RQ4: What are the differences in the predictive power of demographic factors, privacy self-efficacy, literacy, and context in explaining the willingness to engage in simple vs. complex privacy-protecting behaviors?

RQ5: What are the differences in the predictive power of demographic factors, privacy self-efficacy, literacy, and context in explaining the willingness to engage in vertical vs. horizontal privacy-protecting behaviors?

Sample

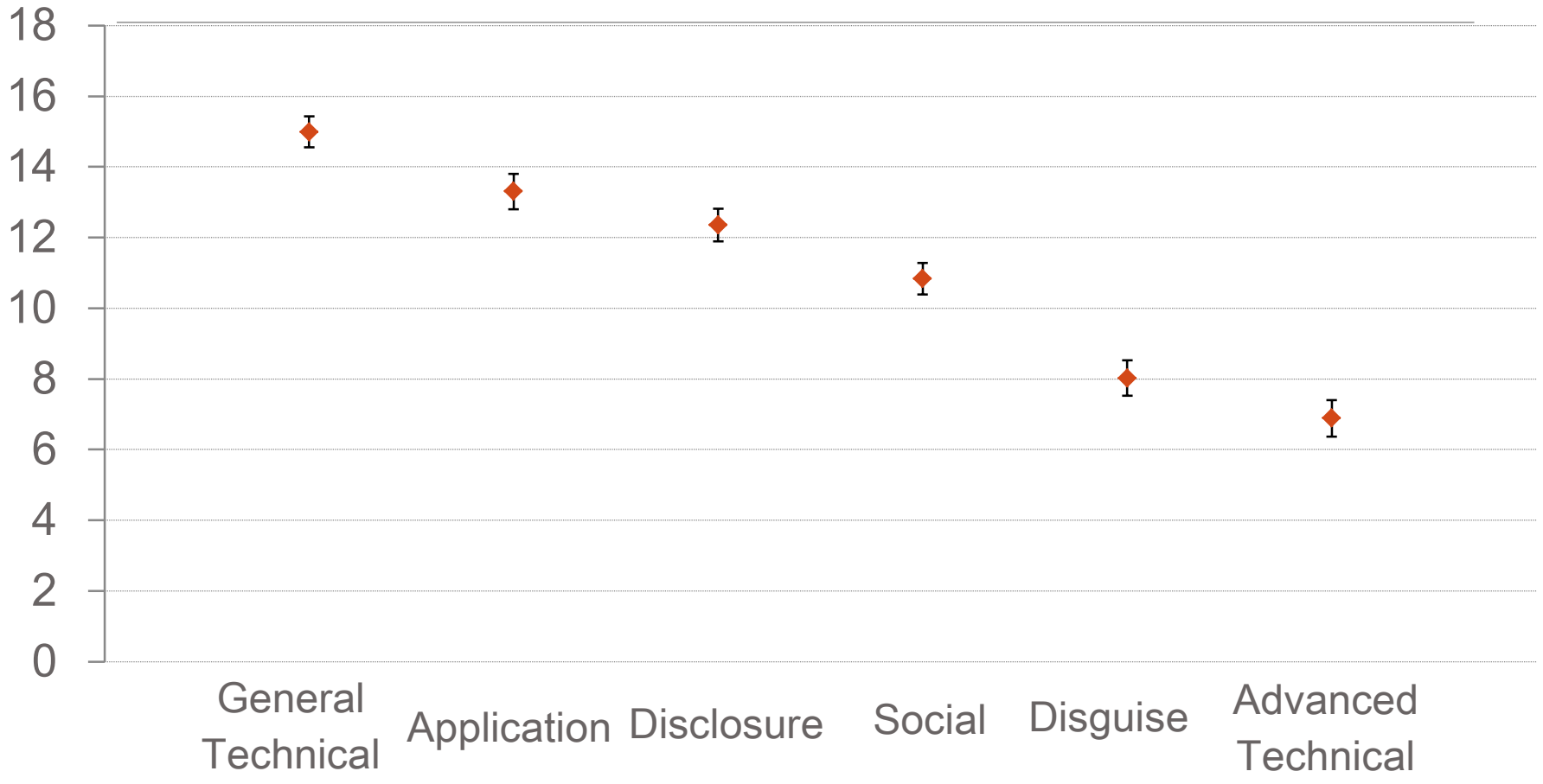
- n = 608
- Matched to age, income, gender of 2015 ACS
- 46.5% Male, 53.5% Female
- Mean age = 46.8 years
- Race/ethnicity: 9.0% African-American, 7.1% Asian, 7.2% Latinx, 78.5% White
- Social media use: 77.7% Facebook, 8.3% Twitter, 7.7% Instagram

Method

- Principal component analysis
  - Privacy protecting behaviors
    general technical, application level, advanced technical, socially-oriented mechanisms, disguise, and limits on disclosure
  - Contexts of social media use
    Communication, entertainment, companionship, information sharing
- Logistic regression
  - PPB = Antecedents + Concerns + Literacy + Self Efficacy

Findings

Privacy protecting behaviors (95% Confidence Interval)



Logistic Regression of Privacy Behaviors

	GenTech	App	Disclos	Social	Disguise	AdvTech
Age	**1.02***	1.00	.99	1.00	**.97*****	.99
Income	1.01	1.07	.97	**1.23*****	**1.19****	1.12
Control	1.04	**1.04***	.97	1.03	1.03	1.00
Disposition	**1.17*****	**1.13*****	.94	**1.13*****	1.05	**1.10****
SelfEfficacy	**1.05****	1.03	1.03	1.02	.98	1.01
Literacy	**1.13****	1.06	.98	.94	.97	**.89****
Communicate	1.03	1.02	**1.08*****	.98	**.96***	1.00
Entertain	1.00	1.01	1.00	**1.04***	1.02	1.01
Companion	.97	.99	1.04	1.03	**1.07***	**1.07****
InfoShare	1.03	.99	**1.11*****	1.03	1.02	1.01
R^2	.22	.14	.36	.19	.20	.21

*p<.05, **p<.01, ***p<.001

RQ1: Privacy self-efficacy has limited influence on privacy protecting behaviors.

RQ2: Privacy literacy has significant impact only in vertical privacy-protecting behaviors.

RQ3: Context is an important predictor of privacy protecting behaviors

RQ1: Privacy self-efficacy has limited influence on privacy protecting behaviors.

RQ2: Privacy literacy has significant impact only in vertical privacy-protecting behaviors.

RQ3: Context is an important predictor of privacy protecting behaviors

RQ4: What are the differences in the predictive power of demographic factors, privacy self-efficacy, literacy, and context in explaining the willingness to engage in simple vs. complex privacy-protecting behaviors?

RQ5: What are the differences in the predictive power of demographic factors, privacy self-efficacy, literacy, and context in explaining the willingness to engage in vertical vs. horizontal privacy-protecting behaviors?

	Vertical (General Tech, Advanced Tech, Disguise)	**Horizontal** (Disclosure, Application, Social)
Simple behaviors (General Tech, Application, Disclosure)	Age (+) Disposition (+) Self efficacy (+) Literacy (+)	Control (+) Disposition (+) Communicate (+) InfoShare (+)
Complex behaviors (Advanced Tech, Disguise, Social)	Age (-) Income (+) Disposition (+) Literacy (-) Communicate (-) Companion (+)	Income (+) Disposition (+) Entertain (+)

Next?

- Move from a singular privacy to plural privacies
- Address whether conceptual models of privacy are sufficiently dynamic to keep pace with evolving technologies
- How do we know we all talking about the same privacy?

Thank you!

Didn’t have time for your question?

dima.e@mail.huji.ac.il | @think_macro
kquinn8@uic.edu |@_kquinn_

THE HEBREW UNIVERSITY OF JERUSALEM

UIC UNIVERSITY OF ILLINOIS AT CHICAGO Department of Communication