user-centric privacy
designing effective privacy protections that meet users’ needs
why we build privacy into systems

legal requirements user trust

limit liability reputation

ethics
privacy compliance
privacy management
privacy engineering
expert perspective
user perspective
no one reads privacy policies
time to read policies of websites you visit: 244 hours per year

inconsistent privacy decisions and behavior
limited mental models of data practices
no one uses privacy settings
privacy resignation
no one reads
privacy policies

limited
mental
models

user

expert perspective

inconsistent privacy
decisions and behavior

no one uses
privacy settings

privacy resignation
example: smart speakers

wake word
mute button
audio logs
speaker recognition
purchase pin
people don’t use privacy controls

is aligned with needs

controls misunderstood

modality change

used to invade privacy

example: smart speakers

“Alexa, are you Listening?”: Privacy Perceptions, Concerns, and Privacy-seeking Behaviors with Smart Speakers
Josephine Lau, Benjamin Zimmerman, Florian Schaub
CSCW. 2018
example:
smart
speakers

Amazon Workers Are Listening to What You Tell Alexa

A global team reviews audio clips in an effort to help the voice-activated assistant respond to commands.

By Matt Day, Giles Turner, and Natalia Drozdiak
April 10, 2019, 6:34 PM EDT

6. How do my voice recordings improve Alexa?
Alexa is designed to get smarter every day. The more you use Alexa, the more the service adapts to your speech patterns, vocabulary, and personal preferences. For example, we use your requests to Alexa to train our speech recognition and natural language understanding systems. The more data we use to train these systems, the better Alexa works, and training Alexa with voice recordings from a diverse range of customers helps ensure Alexa works well for everyone. You can also help us improve our voice services by providing feedback within Settings > Alexa Account > History.
suspicion and distrust

(social) media outrage

why care about user perspective?
why care about user perspective?

suspicion and distrust

(social) media outrage

liability
FTC Imposes $5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook

FTC settlement imposes historic penalty, and significant requirements to boost accountability and transparency

New Facebook Privacy Compliance System

A multilayered incentive structure of accountability, transparency, and oversight

Source: Federal Trade Commission | FTC.gov
why care about user perspective?

suspicion and distrust

(social) media outrage

liability

waste of resources
how to design privacy past user?*

*assuming it’s not all intentional
privacy = compliance issue
user experience &
product design issue
privacy policy

privacy impact assessment

data protection

data minimization
user mental models, expectations, needs

privacy policy
data protection
privacy impact assessment
data minimization
user mental models, expectations, needs

privacy user experience

privacy policy

data protection

data minimization

privacy impact assessment

privacy user experience
user mental models, expectations, needs

privacy user experience
user mental models, expectations, needs

privacy user experience

relevant
relevant to context / transaction
context / transaction

relevant to understand specific practice
context / transaction
understand specific practice
relevant to understand privacy risks
relevant to understand protections
context / transaction
understand specific practice
understand privacy risks
user mental models, expectations, needs

privacy user experience

relevant  understandable
understandable reading level
https://www.nytimes.com/interactive/2019/06/12/opinion/facebook-google-privacy-policies.html
We Value Your Privacy ... Now Take Some Cookies: Measuring the GDPR’s Impact on Web Privacy
Martin Degeling, Christine Utz, Christopher Lentzsch, Henry Hosseini, Florian Schaub, Thorsten Holz
NDSS 2019

We Value Your Privacy ... Now Take Some Cookies: Measuring the GDPR’s Impact on Web Privacy

3,044 words average privacy policy post-GDPR
42% longer than 2016

We Value Your Privacy ... Now Take Some Cookies: Measuring the GDPR’s Impact on Web Privacy
Martin Degeling, Christine Utz, Christopher Lentzsch, Henry Hosseini, Florian Schaub, Thorsten Holz
NDSS 2019
understandable

reading level

length

level of abstraction
Designing Effective Privacy Notices and Controls
Florian Schaub, Rebecca Balebako, Lorrie Cranor
IEEE Internet Computing 2017

user mental models, expectations, needs

privacy user experience

relevant  understandable  actionable
actionable information choice
actionable information choice
user mental models, expectations, needs

privacy user experience

relevant understandable actionable
integrate privacy into user experience
A Design Space for Effective Privacy Notices
Florian Schaub, Rebecca Balebako, Adam Durity, Lorrie Faith Cranor
SOUPS 2015
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SOUPS 2015
integrate privacy into user experience

- leverage design space
- layer privacy interfaces
- emphasize unexpected practices
integrate privacy into user experience

- leverage design space
- layer privacy interfaces
- emphasize unexpected practices

94% expect collection of steps
only 31% expect location collection

How Short is Too Short? Implications of Length and Framing on the Effectiveness of Privacy Notices
Joshua Gluck, Florian Schaub, Amy Friedman, Hana Habib, Norman Sadeh, Lorrie Faith Cranor, Yuvraj Agarwal
Symposium on Usable Privacy and Security 2016
integrate privacy into user experience
leverage design space
layer privacy interfaces
emphasize unexpected practices
privacy interface
= opportunity to explain practices
explain protections
reduce surprise
build trust
test with users!
user-centric approach to privacy

understand users’ privacy needs

relevant, understandable, actionable

integrate privacy into user experience

opportunities for privacy communication
user-centric approach to privacy
understand users’ privacy needs
relevant, understandable, actionable
integrate privacy into user experience
opportunities for privacy communication

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