

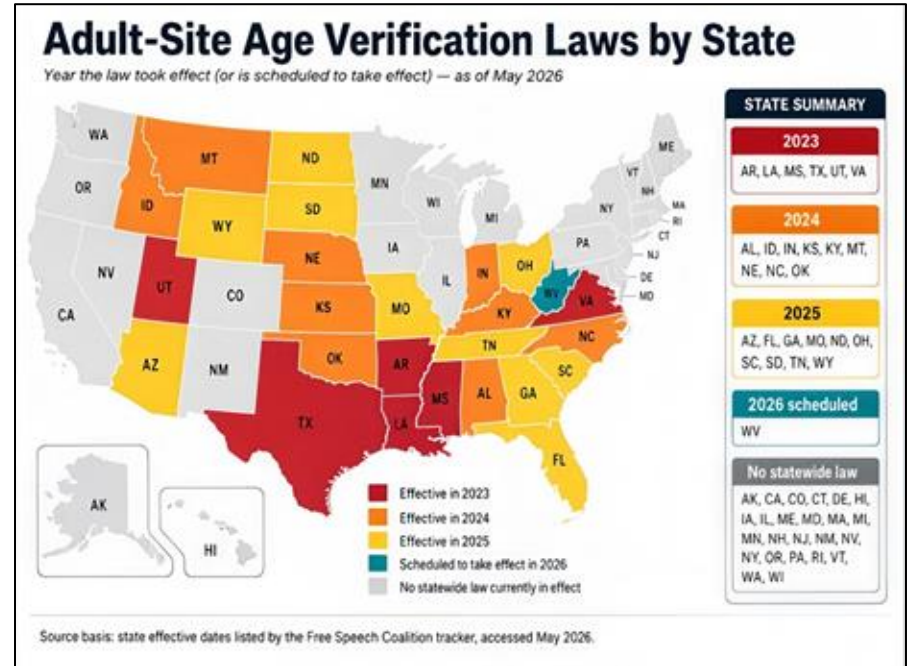
User (Non-)Compliance with Age Verification: Evidence from a Deceptive Web Experiment

Lorrie Cranor

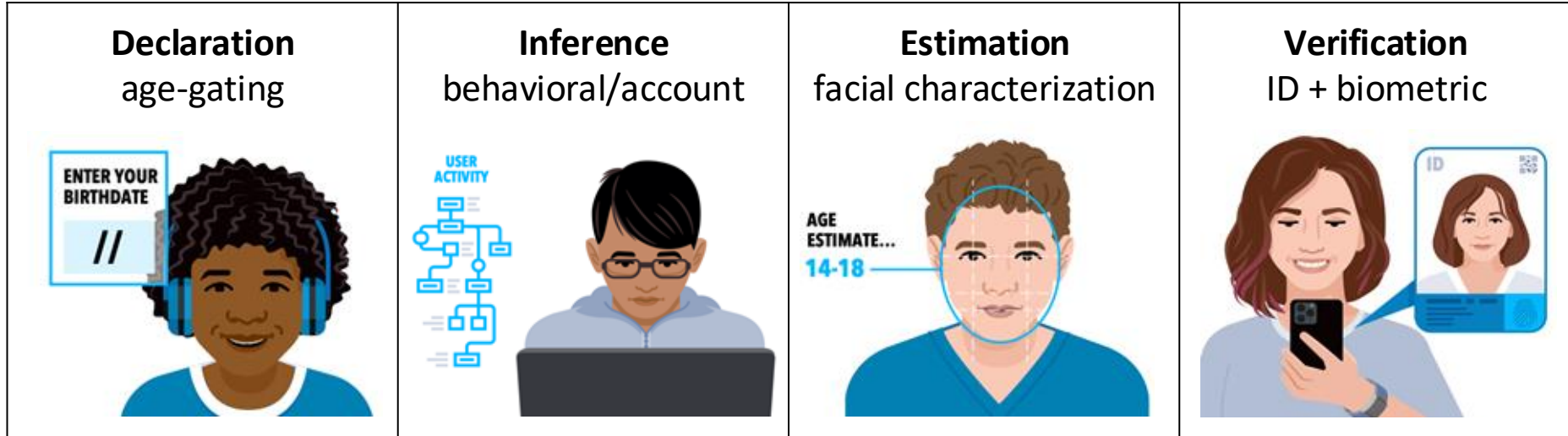
Joint work with Yanzi Veronica Lin, Cheng Zhang, Madelyne Xiao, and Sarah Scheffler

Global policy efforts to protect youth online

- Governments push for “age assurance” as the solution to protect minors from accessing harmful content
- Global youth protection laws: 25 U.S. states, UK’s Online Safety Act, EU’s Digital Services Act etc.
- FTC: will not pursue COPPA enforcement against operators that collect personal information solely for age verification



Common age assurance/verification approaches



Source: Future of Privacy Forum infographic, January 2026

What will adults do when asked to age verify?

- Prior studies show support for age verification to protect kids, but concerns about implementation effectiveness and privacy
- But what will adults actually do in practice when asked to age verify?
- We provide empirical evidence on how adults actually respond to age verification in a realistic access context

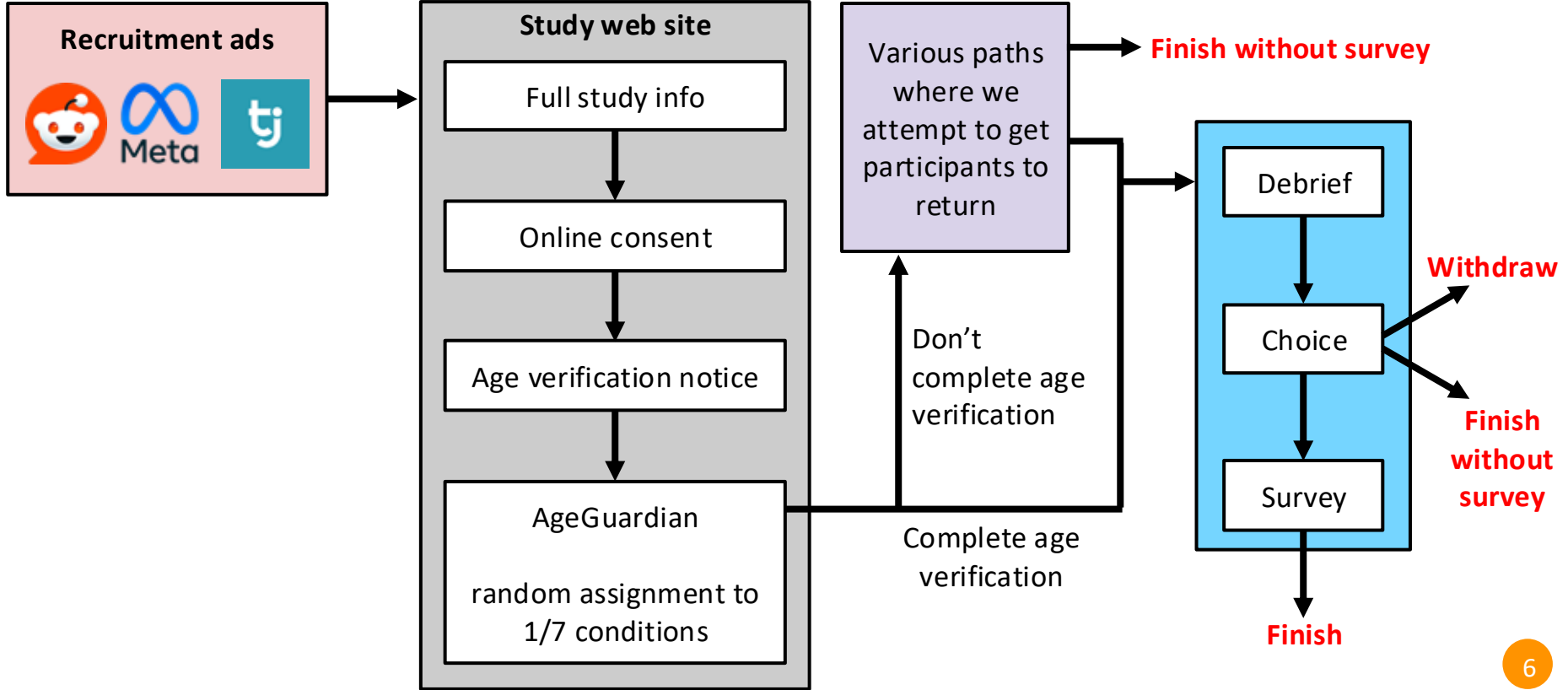


Research Questions

RQ1: How do different age verification methods affect users' decisions to access R-rated romantic media?

RQ2: How do disclosures of data handling practices affect those decisions?

RQ3: What are users' perceptions of and attitudes toward different age verification mechanisms?



Recruitment via ads

Recruitment ads



Watch Romantic Clips (18+)
& Take Research Survey

15-min University Study

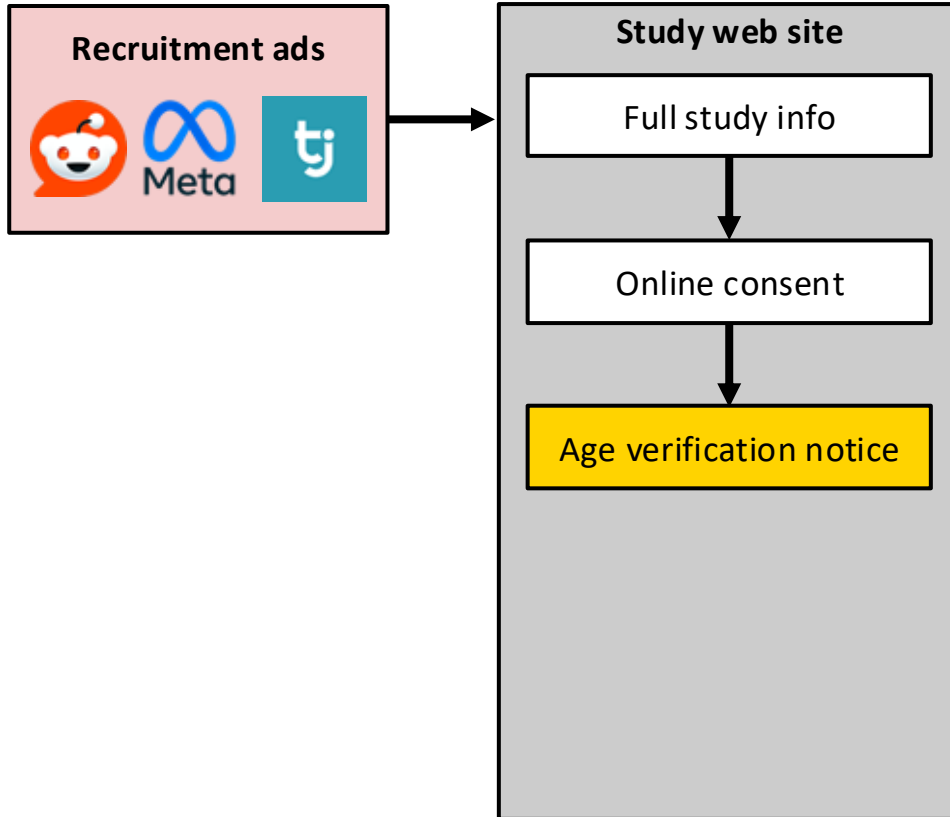
**\$210
Random
Drawing**

R **RESTRICTED** 
CONTAINS NUDITY
AND SEXUAL CONTENT

Carnegie Mellon University

The advertisement features a red background with a central illustration of a man and a woman kissing. A white play button is overlaid on the kiss. The text is in white and yellow. The university logo is in the bottom left, and a rating box is in the bottom right.

Study info → consent → age verification notice



Rec



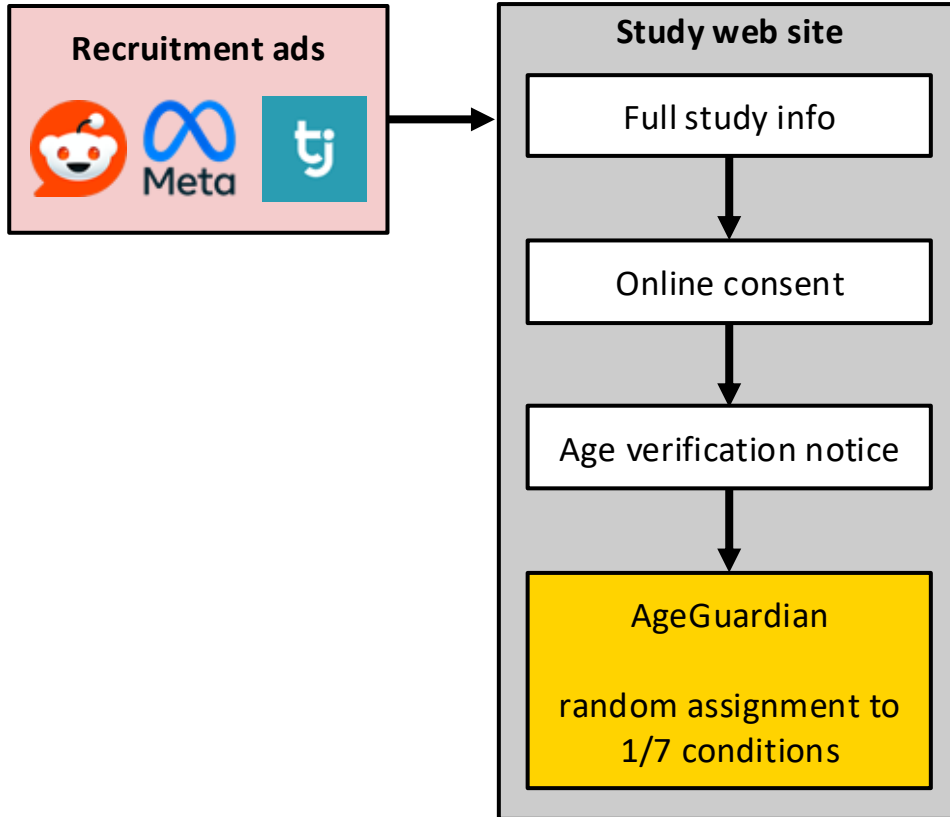
Important Notice

Before we can show you clips from R-rated romance films, we are required by law to verify that you are over 18 years of age.

We have partnered with a trusted third-party age verification service, AgeGuardian, to complete this verification process. You will be able to continue with the study after age verification is complete. **Please do not refresh the page during the verification process.**

[Begin Age Verification](#)

Random assignment to 1 of 7 conditions



5 experimental conditions for RQ1

RQ1: How do different age verification methods affect users' decisions to access R-rated romantic media?



Checkbox
Self-Attestation



Gov-ID



Gov-ID with Liveness Check
for Identity Matching



AI Age Estimation



Email-Based
Age Estimation

3 experimental conditions for RQ2

RQ2: How do disclosures of data handling practices affect those decisions?



Gov-ID



Gov-ID with
Simple
Reassurance



Gov-ID with
Compound
Reassurance

"Your data will be used
only for age verification."

"Your data will be used only for
age verification. We will delete
your identifying information
after access has been granted."

7 conditions total

RQ1



Checkbox
Self-Attestation



Email-Based
Age Estimation



Gov-ID with Liveness Check
for Identity Matching



AI Age Estimation

RQ2



Gov-ID



Gov-ID with
Simple
Reassurance



Gov-ID with
Compound
Reassurance

7 conditions total

Verification was simulated:

- No ID photos/selfies were uploaded
- No AI models/3rd-party databases were accessed

Check
Self-At



Gov-ID
for Identity Matching

ID with
pound
insurance



You must be 18+ to view this content

We are required to verify your age in compliance with local regulations. To complete this step, please upload a government-issued ID.

 Your data will be used only for age verification.

Verify with Your ID

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[Privacy Policy](#)

Gov-ID with simple reassurance

“AgeGuardian” age verification embedded in an iframe

← Back



Take a Photo of Your ID

Choose how you'd like to capture your ID for age verification.
Accepted documents include: U.S. driver's license, passport,
state ID, or permanent resident card.

 Use Computer Camera

 Use Phone (QR Code)

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← Back

Scan Your ID

Make sure your ID is centered, well-lit, and clearly shows your date of birth.



Capture Photo

Verifying Your ID

Please wait while we verify your age.

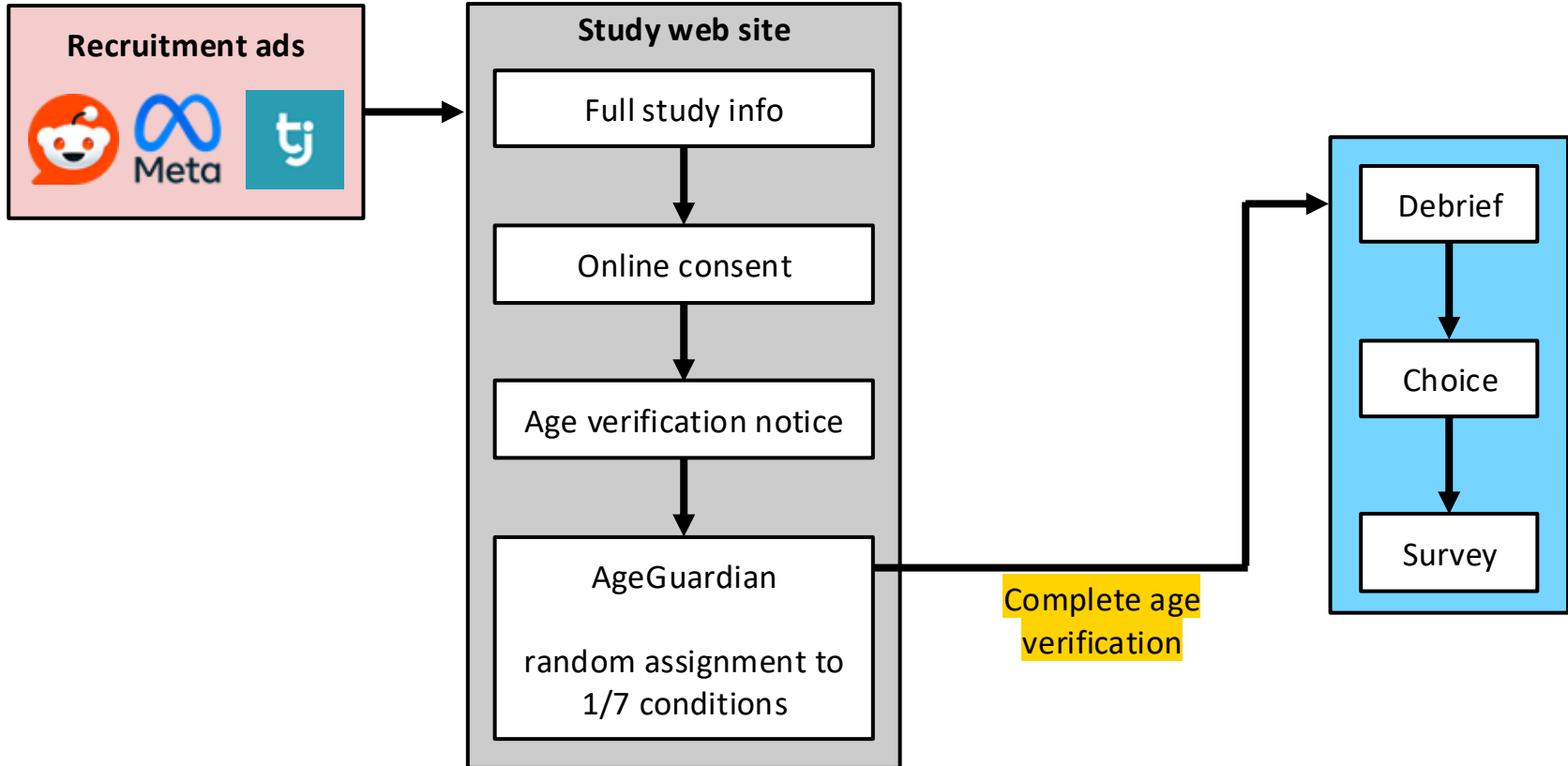


Verification Successful

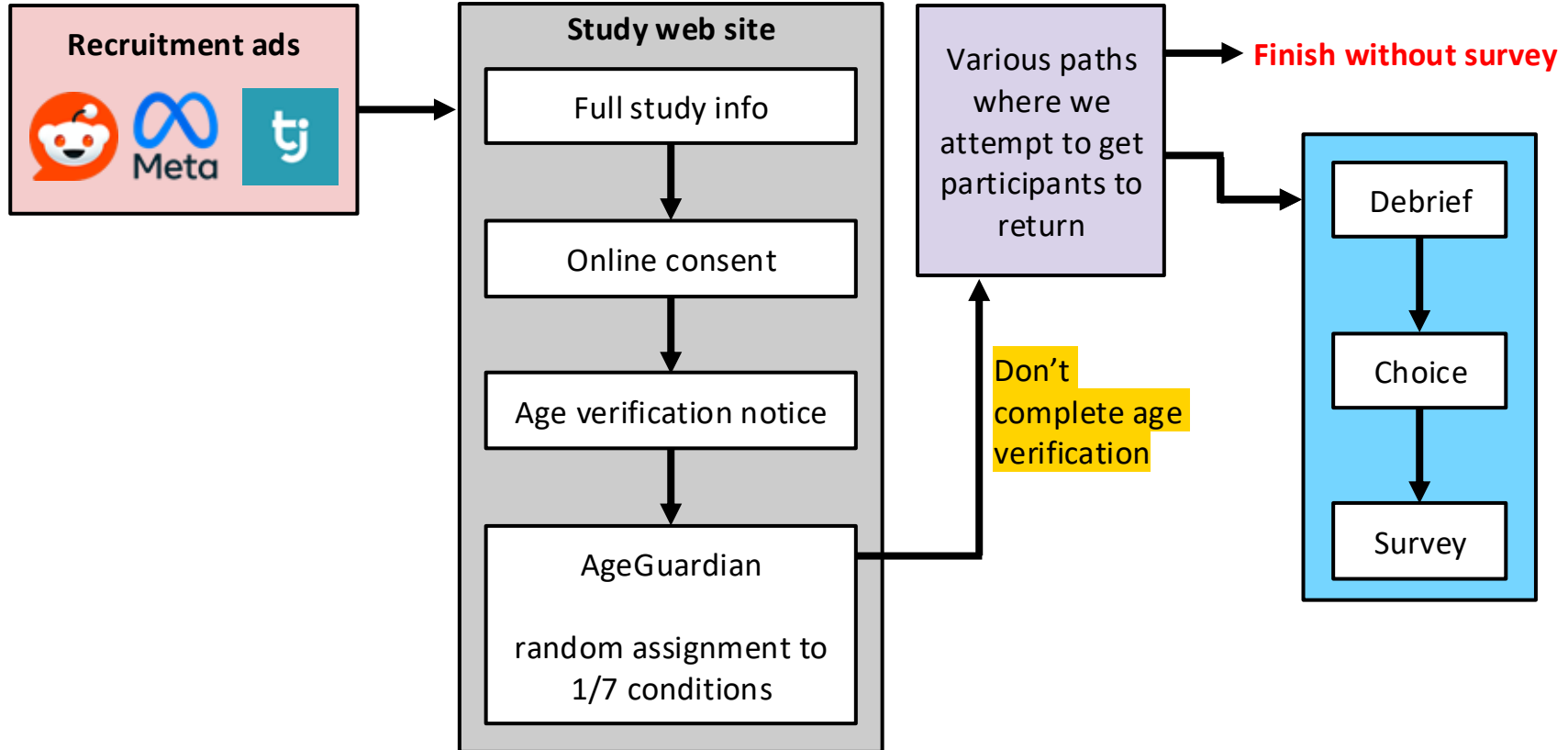
Your age has been successfully verified.

Finish Age Verification

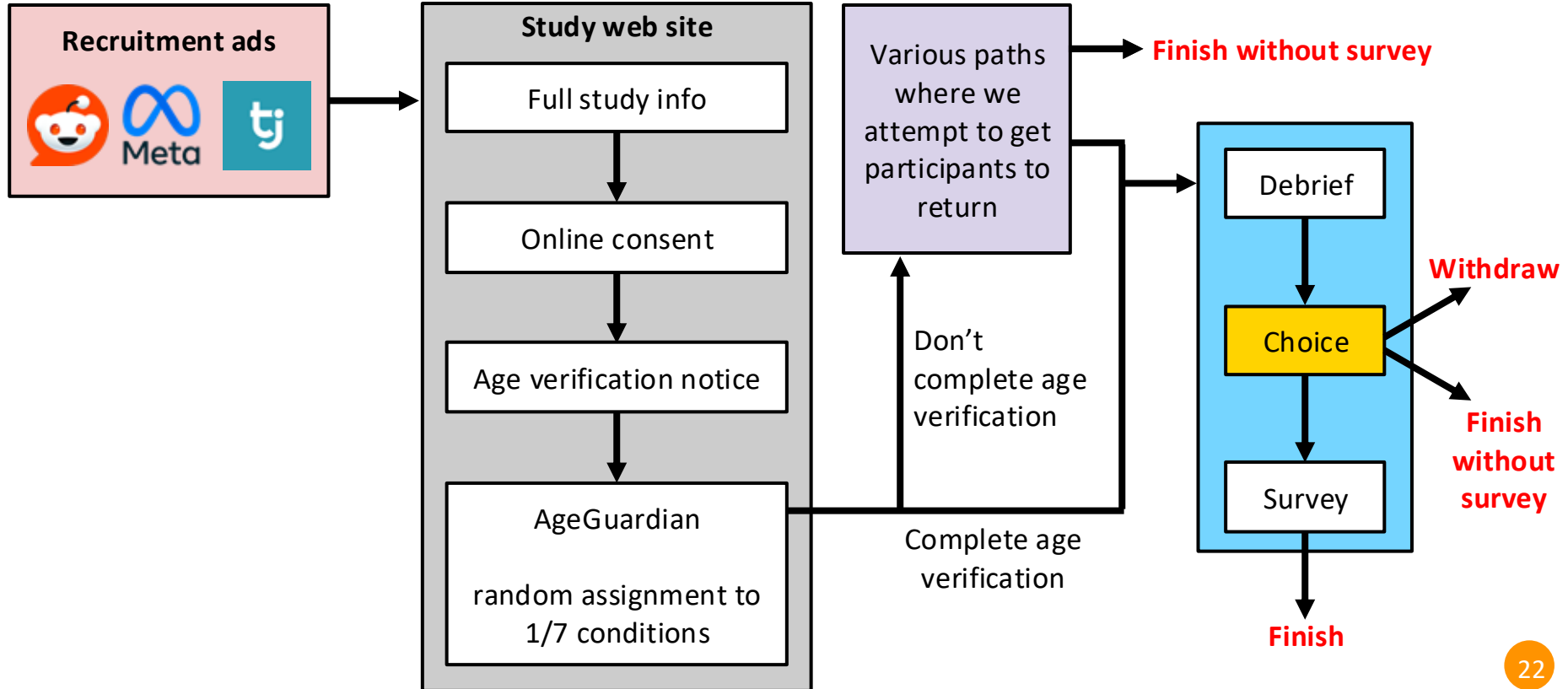
After age verification, debrief + survey



And what happens if they don't age verify?



Those who verify, exit, or return are debriefed



Final survey explored attitudes and perceptions



- Explored comfort, perceived risk, effectiveness, and convenience with the process
- Prior experience with age verification
- Demographic information

1,635 US participants (~230 per condition)

- Recruited through ads on three platforms
 - 84% from Reddit
 - 13% from TrafficJunky
 - 3% from Meta

- 881 completed final survey (~94 per condition)

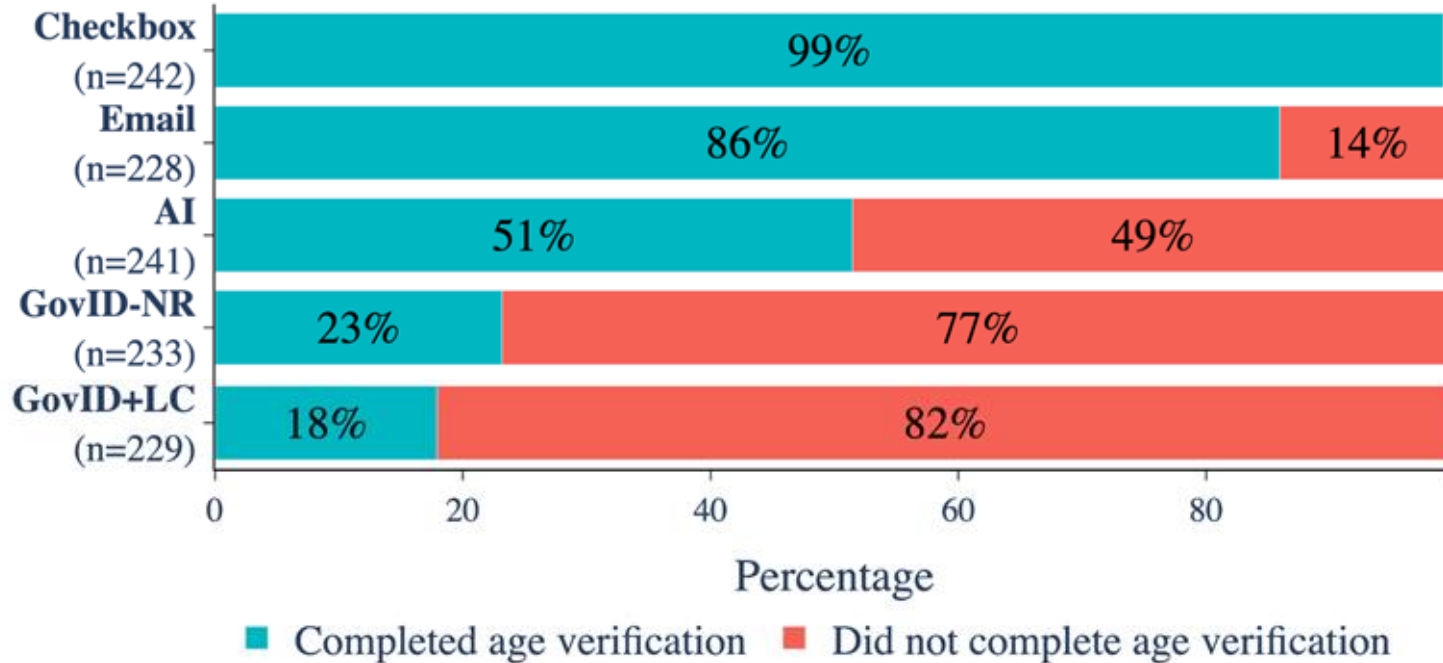
RQs

RQ1: How do different age verification methods affect users' decisions to access R-rated romantic media?

RQ2: How do disclosures of data handling practices affect those decisions?

RQ3: What are users' perceptions of and attitudes toward different age verification mechanisms?

Methods impact verification decisions





RQs

RQ1: How do different age verification methods affect users' decisions to access R-rated romantic media?

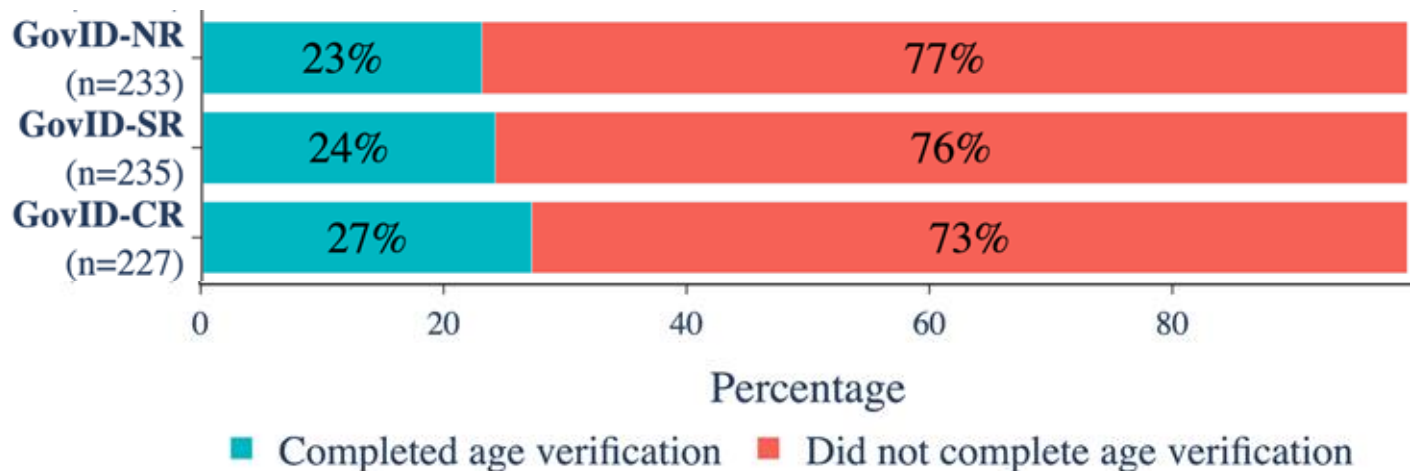
RQ2: How do disclosures of data handling practices affect those decisions?

RQ3: What are users' perceptions of and attitudes toward different age verification mechanisms?

Reassurances do not change verification behavior

SR (Simple-Reassurance):
"Your data will be used only for age verification."

CR (Compound-Reassurance): "Your data will be used only for age verification. We will delete your identifying information after access has been granted."



Not significant

Reassurances affect comfort for some

“How did seeing [statement] impact your feelings about the age verification process?”

- Among those who age verified: 48-57% reported **increase in comfort**

“I was less worried that my data would be exposed by hacking or data breaches in the future” (GovID-CR)

- Among those who did *not* age verify: 56-76% reported **no change in comfort**

“I never really trust what they say about making sure the records used for verification stay separate or deleted from the list of verified users” (GovID-CR)



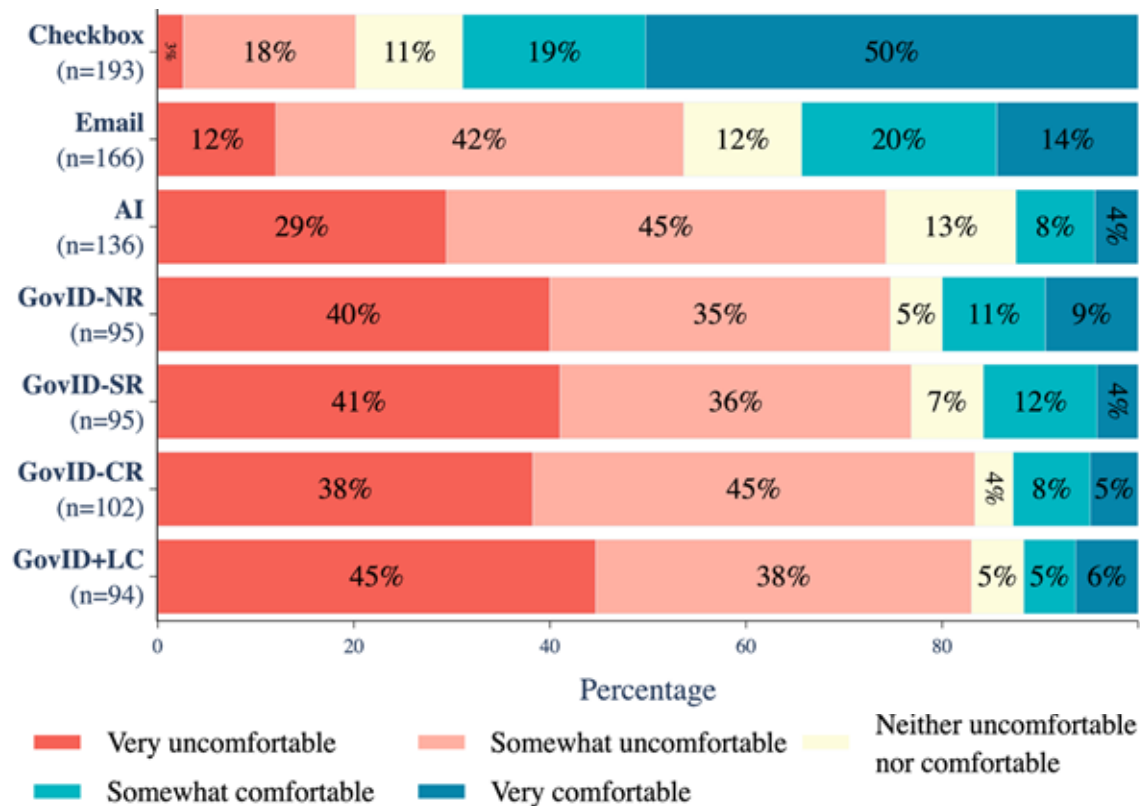
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Discomfort was common across all non-checkbox methods



Most mentioned reasons for discomfort

- Distrust in AgeGuardian or verifiers in general:

“I do not trust any private entity to securely store or process my information, period.” (GovID-CR)

- Security concerns about uploading PII:

“Given the proliferation of AI and deepfakes, I’d rather not upload an ID photo that could easily be used maliciously.” (GovID-SR)

Other concerns that lead to discomfort

- Anonymity concerns:

“I don’t like the idea of my government ID being able to be tied to what I watch online.” (GovID-NR)

- Insufficient/inaccessible information on how data are collected, stored, and used post-verification:

“The only way to know if my photo would be deleted or stored would be to read through a dense terms and conditions statement that I would need to be an attorney to understand.” (GovID-CR)

Takeaways

- Uploading physical gov-IDs to third-party verifiers may lead to substantial adult non-completion (~75% did not age verify)
- Privacy reassurances alone are insufficient to enhance trust
- Data minimization may improve willingness to complete age verification
- Identity wallets may improve the situation IFF they are reliable and privacy protective (selective disclosure), but not yet widely available

Short tech report:

sarahscheffler.net/ageverif2026



Full paper to appear:

Lin et al. *What Adults Will (and Won't) Do to Prove Their Age: Empirical Evidence from a Deceptive Web Experiment*. USENIX Security 2026.