

Lecture 4: Interviews and Surveys

CS 181W

Fall 2022

Review: Types of studies

- **Interviews:** conversations with individuals
- **Focus groups:** discussions with groups
- **Surveys:** asynchronous questions

- **Experimental Studies:** randomized multi-condition studies
- **Usability Testing:** observations of tool use
- **Cognitive Walkthrough:** expert evaluation

- **Diary Studies:** contemporary record of real-world behavior
- **Observational Studies:** records of behavior in the wild

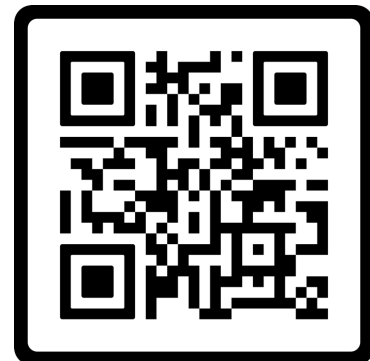
- Mixed-methods studies

Exercise: CCPA Right to Access

Design a short (< 15 min) interview exploring the right to access under CCPA

- **RQ1:** How well do California residents understand their right to access?
- ~~**RQ2:** What would a good access mechanism look like?~~

<https://tinyurl.com/4y6atndk>



Interviews

Benefits

- Obtain rich data
 - especially when unsure what you'll find
- Explore issues and new lines of inquiry on the fly
- Face-to-face or online

Limitations

- Time consuming
 - to conduct
 - to analyze
- Can't draw quantitative conclusions
- Self-reported data
 - inherently about perceptions
 - recall problems
 - hard to completely avoid bias

SURVEYS

Why do a survey?

- Obtain data from a lot of participants
 - Relatively quick, easy, unobtrusive, inexpensive
 - Can get statistically significant results
- Easy to collect data in standardized format, ready for analysis
- Results (can be) representative of population
- Gather data about attitudes, opinions, perceptions, preferences, self-reported experiences
- Can be useful for testing impact of demographic factors
- Can be useful for collecting large numbers of anecdotes

Survey Limitations

- Inherently about perceptions
- Recall problems
- hard to completely avoid bias (maybe less than interviews?)

- Want to appear normal (thus choose answer choices in the middle)

- Don't understand questions
- Interpret questions differently from you

- Speed-answering, minimal effort
- Bots

- True random sampling can be difficult and/or expensive

Types of survey questions

- Free-response text questions
 - Short response
 - Long response
- Multiple choice
- Ranking

Developing a Survey

- Keep questions as simple and jargon-free as possible
- Avoid compound questions
- Keep questions as unbiased and unjudgmental as possible
- Make sure questions are appropriate for audience

- Allow people to say they don't know
- Make sure answers are complete and non-conflicting
- Provide options that elicit a range of answers
- Be aware scale can skew responses

- Don't allow participants to finish much faster by selecting certain answers

Exercise: Survey Questions

1. When was the last time you changed your email password?

- This week
- Last week
- Last month
- Last year
- More than 1 year ago

3. How old are you?

- 20-39
- 40-69
- 70-89

2. What technique did you use last time you created a password?

- I used a name
- I used a dictionary word
- I used a random number
- I added digits and symbols

4. How often do you look at Instagram?

- Once per week
- A few times per week
- Once per day
- A few times per day

Be aware of difficulty

Do not ask respondents to perform cognitively difficult tasks (unless you are testing their ability to perform these tasks) such as ranking more than 5 items

Improve this question:

Rank the security of each password, placing a 1 next to the most secure, 2 next to the next most secure, etc.

- ieatkale88
- ilovekale88
- kale
- Love
- i<3kale88
- Kale88

Asking about gender

Recommended
approach for most
situations

Katta Spiel, Oliver L. Haimson, and Danielle Lottridge. 2019. How to do better with gender on surveys: a guide for HCI researchers. *interactions* 26, 4 (July-August 2019), 62–65. <https://doi.org/10.1145/3338283>

What is your gender?

- woman
- man
- prefer not to disclose
- prefer to self describe _____

Likert scales (aka Rating scales)

For opinion (concern, fun, difficulty, etc.) scales or agreement scales, put neutral in the middle (E.g.: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree)

If you are asking multiple **Likert scale** questions, try to use the same size scale throughout (3, 5, 7, 100, etc.)

Agreement scales can allow for more consistency than a custom scale for every question

Change these to questions with a consistent agreement scale

How easy or difficult is it for you to remember your email account password?
Very difficult, somewhat difficult, neither easy nor difficult, somewhat easy, very easy

How pleasant or annoying is it for you when you have to change your password?
Very annoying, somewhat annoying, neither annoying nor pleasant, somewhat pleasant, very pleasant

SA-6 - Measure of Security Attitudes

- 6 items, 5-point scale, measured from Strongly disagree to Strongly agree
 - I seek out opportunities to learn about security measures that are relevant to me.
 - I am extremely motivated to take all the steps needed to keep my online data and accounts safe.
 - Generally, I diligently follow a routine about security practices.
 - I often am interested in articles about security threats.
 - I always pay attention to experts' advice about the steps I need to take to keep my online data and accounts safe.
 - I am extremely knowledgeable about all the steps needed to keep my online data and accounts safe.

Cori Faklaris, Laura Dabbish, and Jason I. Hong. (2019). [A Self-Report Measure of End-User Security Attitudes \(SA-6\) \(Links to an external site.\)](#). SOUPS 2019.

Security Behavior Intentions Scale

SeBIS - 16-item scale, 4 sub-scales (never, rarely, sometimes, often always)

- Password generation
 - Example: I use different passwords for different accounts that I have.
- Device securement
 - Example: I use a password/passcode to unlock my laptop or tablet.
- Updating
 - Example: When I'm prompted about a software update, I install it right away.
- Proactive awareness
 - Example: When browsing websites, I mouseover links to see where they go, before clicking them.

Serge Egelman and Eyal Peer. 2015. Scaling the Security Wall: Developing a Security Behavior Intentions Scale (SeBIS). CHI 2015.

Internet Users' Information Privacy Concerns (IUIPC)

Series of 10 Likert questions (7 point scale) — Strongly disagree to strongly agree

1. Consumer online privacy is really a matter of consumers' right to exercise control and autonomy over decisions about how their information is collected, used, and shared.
2. Consumer control of personal information lies at the heart of consumer privacy.
3. I believe that online privacy is invaded when control is lost or unwillingly reduced as a result of a marketing transaction.
4. Companies seeking information online should disclose the way the data are collected, processed, and used.
5. A good consumer online privacy policy should have a clear and conspicuous disclosure.
6. It is very important to me that I am aware and knowledgeable about how my personal information will be used.
7. It usually bothers me when online companies ask me for personal information.
8. When online companies ask me for personal information, I sometimes think twice before providing it.
9. It bothers me to give personal information to so many online companies.
10. I'm concerned that online companies are collecting too much personal information about me.

System Usability Scale (SUS)

- Series of 10 Likert questions (5-point or 7-point) — Strongly disagree to strongly agree
 - Produces aggregate score on scale [0,100]
- | | |
|--|---|
| <ul style="list-style-type: none">▪ I think that I would like to use this system frequently. | <ul style="list-style-type: none">▪ I thought there was too much inconsistency in this system. |
| <ul style="list-style-type: none">▪ I found the system unnecessarily complex. | <ul style="list-style-type: none">▪ I would imagine that most people would learn to use this system very quickly. |
| <ul style="list-style-type: none">▪ I thought the system was easy to use. | <ul style="list-style-type: none">▪ I found the system very cumbersome to use. |
| <ul style="list-style-type: none">▪ I think that I would need the support of a technical person to be able to use this system. | <ul style="list-style-type: none">▪ I felt very confident using the system. |
| <ul style="list-style-type: none">▪ I found the various functions in this system were well integrated. | <ul style="list-style-type: none">▪ I needed to learn a lot of things before I could get going with this system. |

Short usability scales

- Net Promoter Scale (1 question, 10-point scale)
 - How likely are you to recommend this website/product/service to a friend or relative?
- Single Ease Question (1 question, 7-point scale)
 - Overall, this task was? (very difficult to very easy)

Be cognizant of length

- Determine how long it will take to complete survey
- Provide appropriate pay or other incentives
- Prioritize and eliminate questions that are less important
- Consider dividing your sample randomly and giving different participants different questions to reduce length of survey
- Consider running multiple surveys or giving participants a break between survey parts if survey is very long

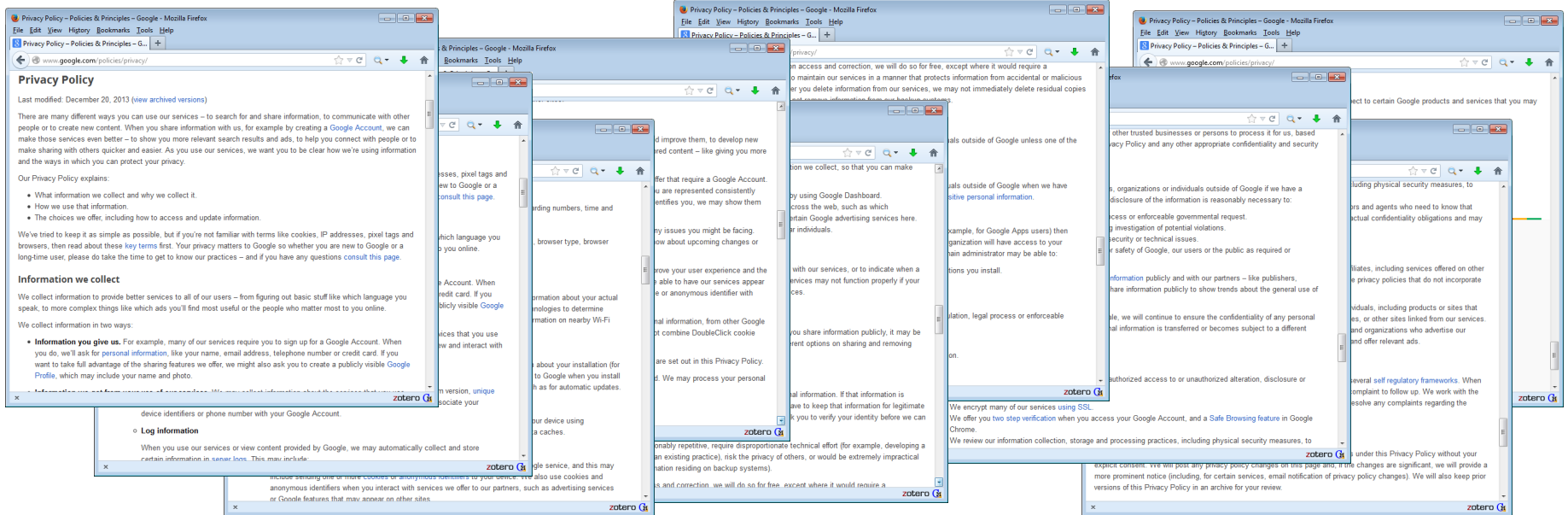
Attention check questions

- Traditional attention check questions trap participants who aren't paying attention (e.g. the answer to next question is 3)
 - Participants get good at spotting these
 - Participants pass the check but still don't pay attention
 - Participants don't trust you or your survey
 - You may systematically remove people who miss these traps, adding bias to your sample
 - Better: check for meaningful answers to free response questions
-

Pilot, pilot, pilot!

- You won't get it 100% right the first time
- Take the survey yourself and see how long it takes
- Watch people complete survey and see if anything confuses them
- Give the survey to a small sample and check timing and look for unexpected results

Example: Privacy Terms

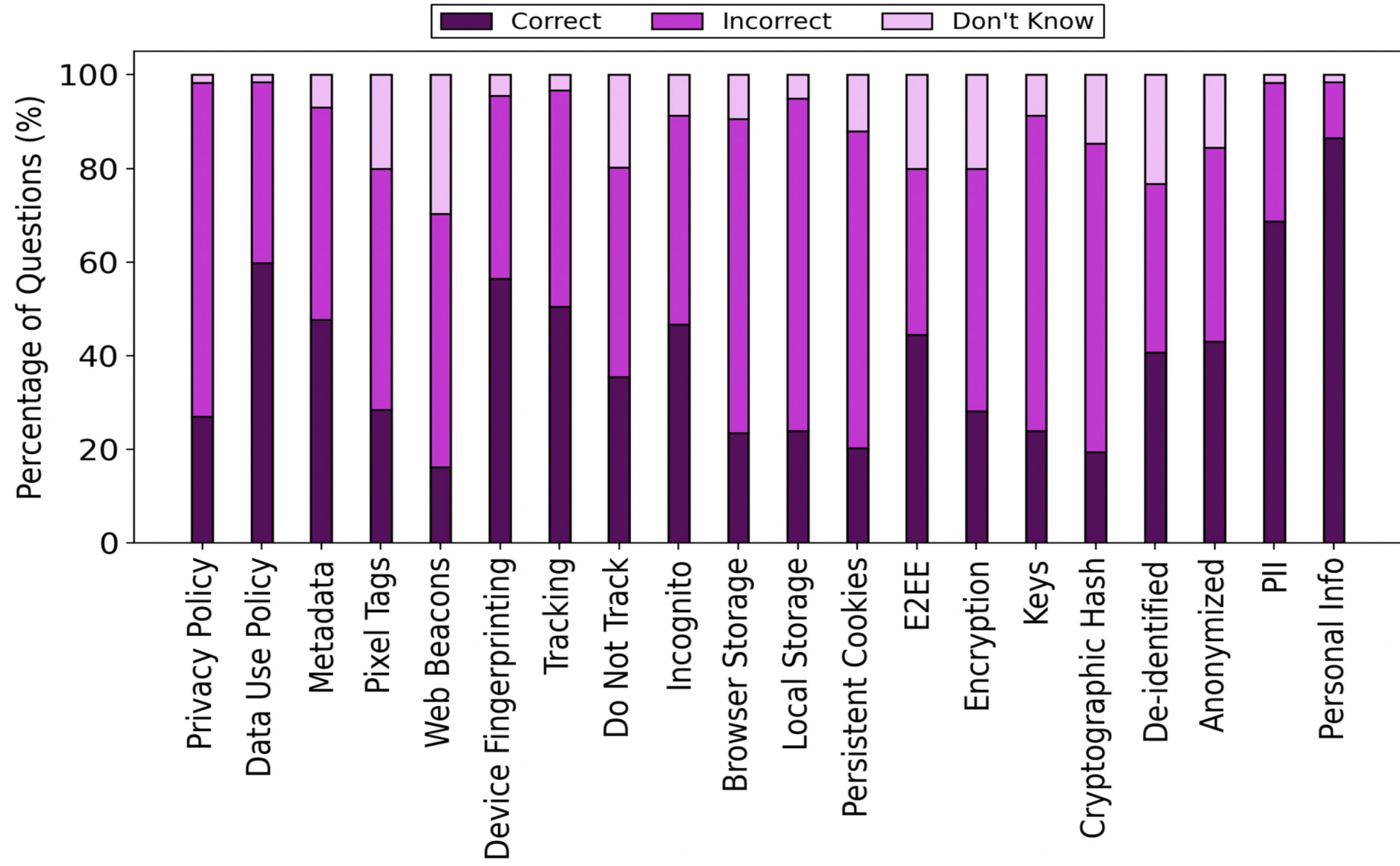


By using our site, you agree to our use of cookies as per our Privacy Policy

Example: Privacy Terms

Imagine that a company's data use policy states that, "We use pixel tags and other similar technologies." What is the most accurate definition of pixel tag in this context?

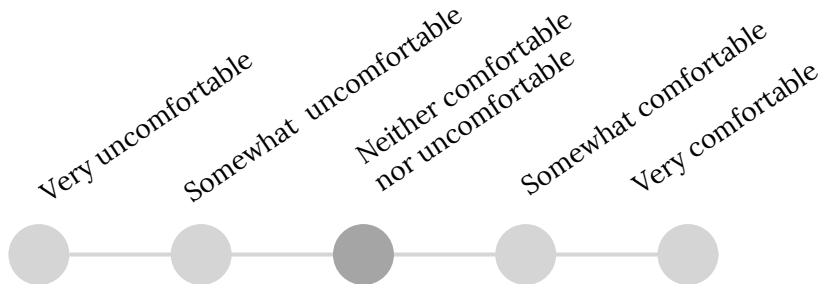
- 29%** • A way to monitor which sites users visit using a small image
- A way to identify an image
- 51%** • A small piece of color in an image
- A way to identify which people or objects are in an image
- 20%** • I don't know



Technical Version

How comfortable would you be using a product or service if the data use policy says

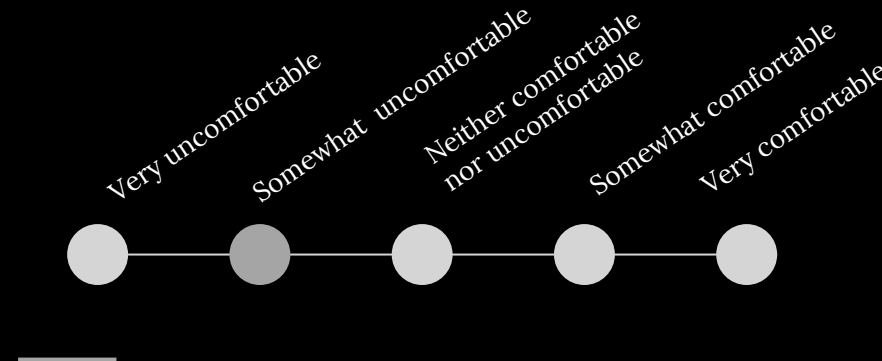
“We use **pixel tags to collect information**”?

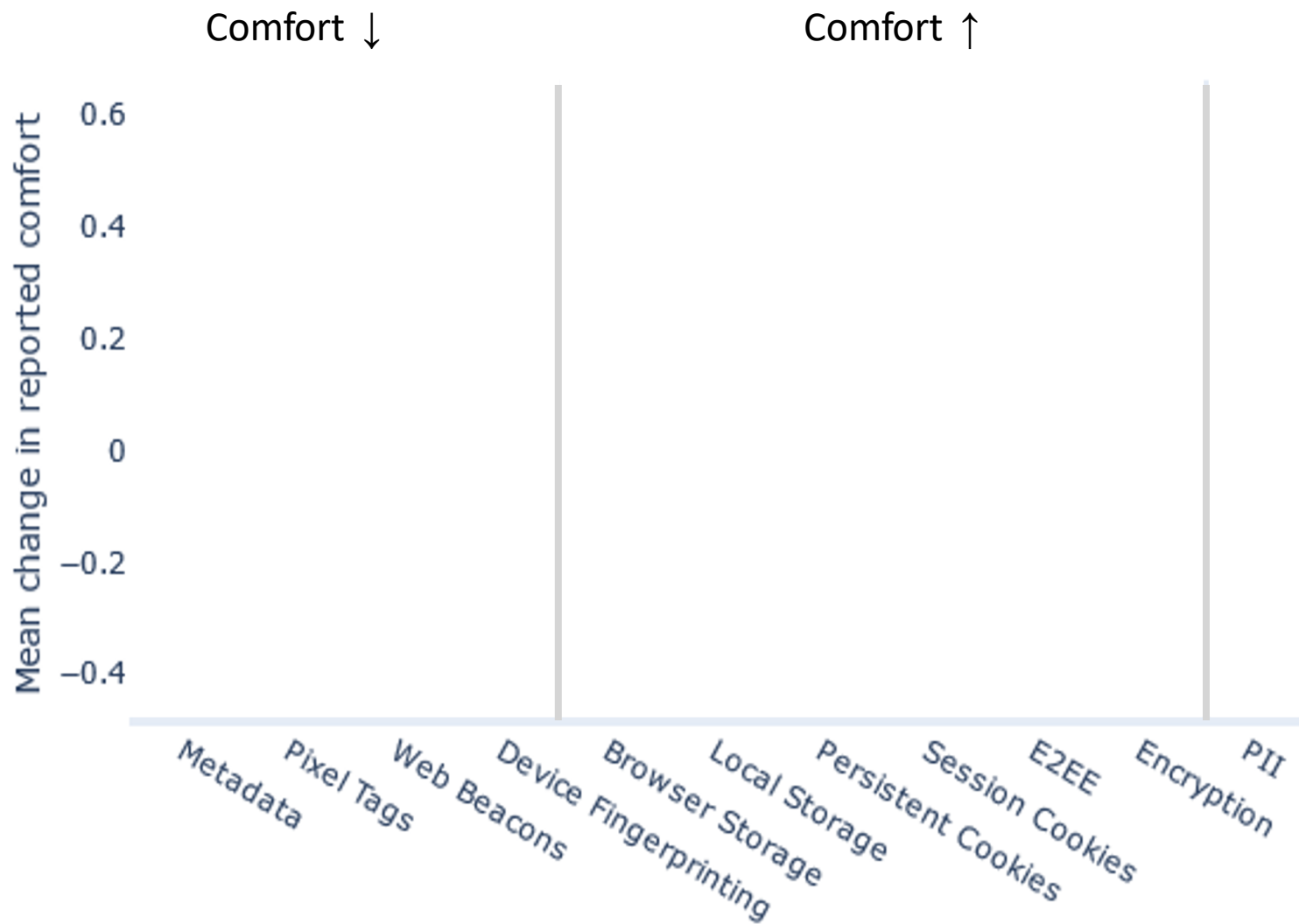


Explanatory Version

How comfortable would you be using a product or service if the data use policy says

“We **monitor user behaviors across different websites using invisible images and other website elements**”?



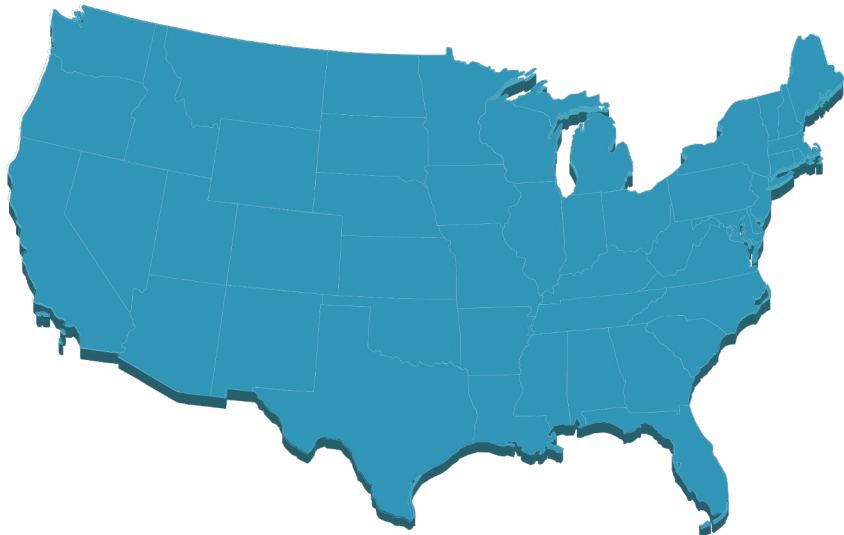


Exercise: Write a survey

Design a short (~5 min) survey exploring.... TBD

Generalizability

Ideal



Best Practice



Pew Research Center

Ways to deploy a survey

- Phone call
- Mail paper
- Hand out paper
- Tablet
- Email
- Smartphone
- Online

Why crowdsource?

- Inexpensive
- Access to fairly diverse participant pool
- Fast participant recruitment
- Easy to pay participants
- Can contact participants for follow-up without collecting their PII



39.1 %

Of MTurk sample failed
free-response attention check

<1 %

Of Prolific samples failed
free-response attention check

Data Quality



Demo

Let's run a survey on Prolific...

Surveys

