

# Evaluating the Contextual Integrity of Privacy Regulations: Parents' IoT Privacy Norms Versus COPPA

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PRIVACYCON

# COPPA & “Smart” Toys

- FTC updated COPPA guidance in 2017 to include “connected toys or other Internet of Things devices”



Gray, S. Federal Trade Commission: COPPA Applies to Connected Toys. *Future of Privacy Forum* (June 2017)

# Research Questions

- Do COPPA-mandated data handling practices for smart toys align with parents' privacy norms?
- How can we test whether privacy regulations align with social and cultural privacy norms?

# Contextual Integrity Survey

- Generate 1056 descriptions of smart toy information flows using CI

## Sender

- a toy walkie-talkie
- a smart doll
- a toy robot
- ...

## Subject & Attribute

- its owner's child's location
- audio of its owner's child
- its owner's child's birthday
- ...

## Recipient

- its manufacturer
- a third-party service provider

# Contextual Integrity Survey

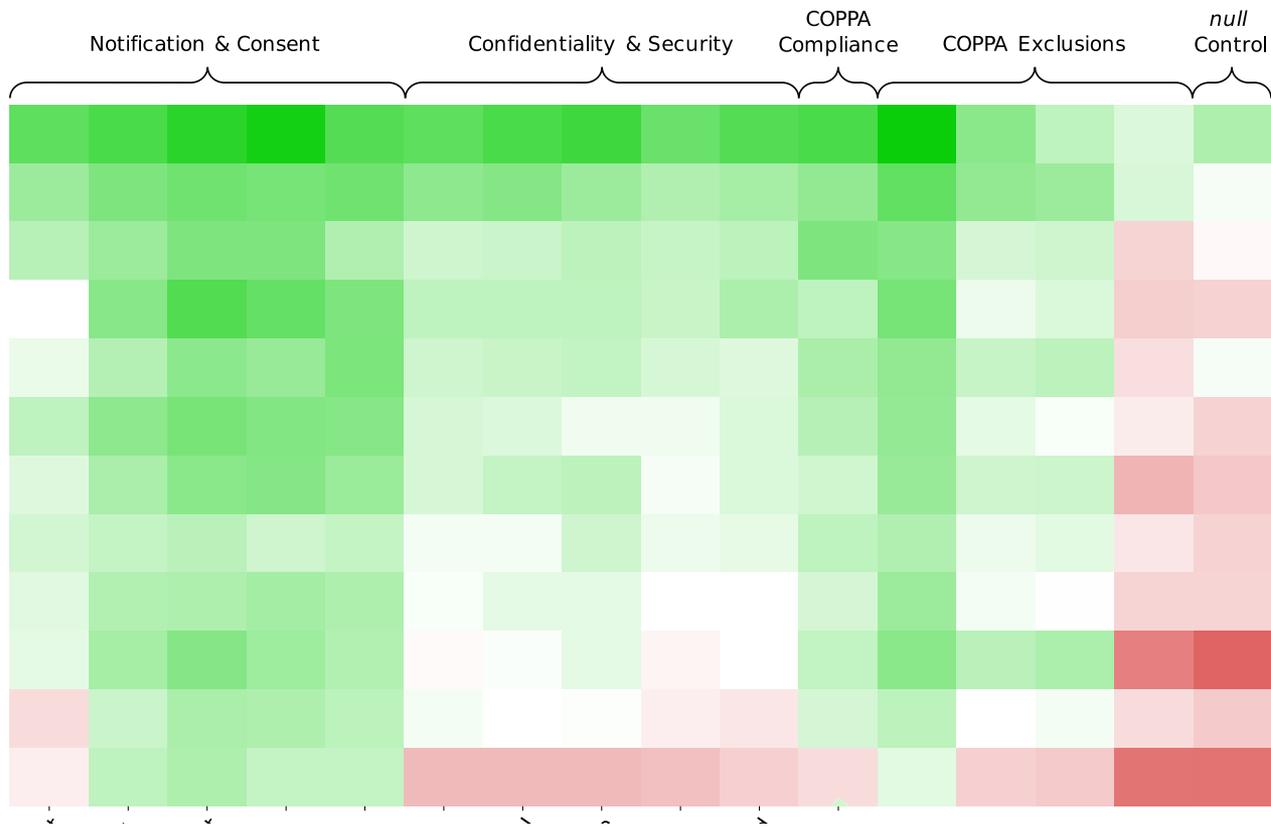
- Generate 1056 descriptions of smart toy information flows using CI

## Transmission principles from FTC's 6-step COPPA compliance plan

- if its privacy policy permits it
- if its owner has given verifiable consent
- if its owner can revoke their consent, review, or delete the information collected
- if it implements reasonable procedures to protect the information collected
- if the information is stored for as long as is reasonably necessary for the purpose for which it was collected
- ...



# Transmission Principle Category

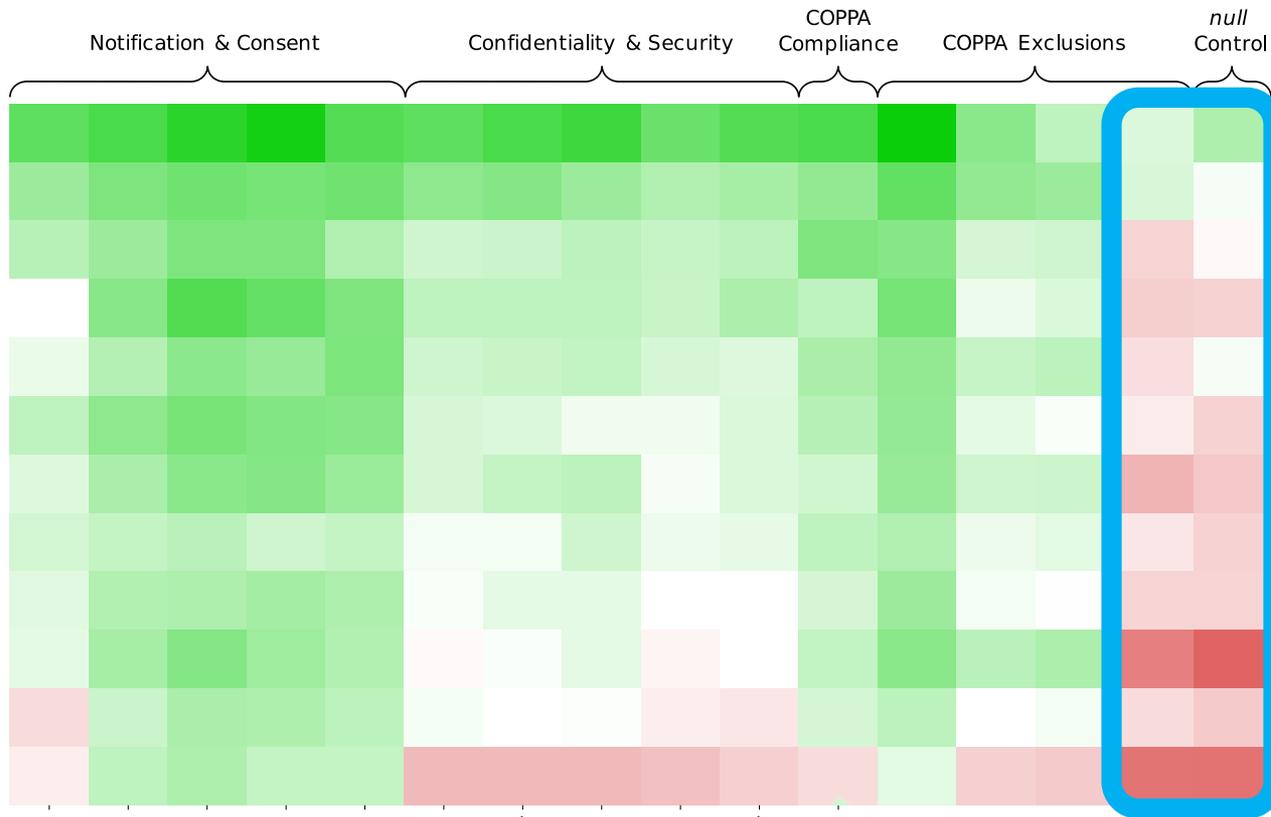


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# Compare acceptability scores

- With and without COPPA data collection practices
- Across parameters & participant demographics

Transmission Principle Category



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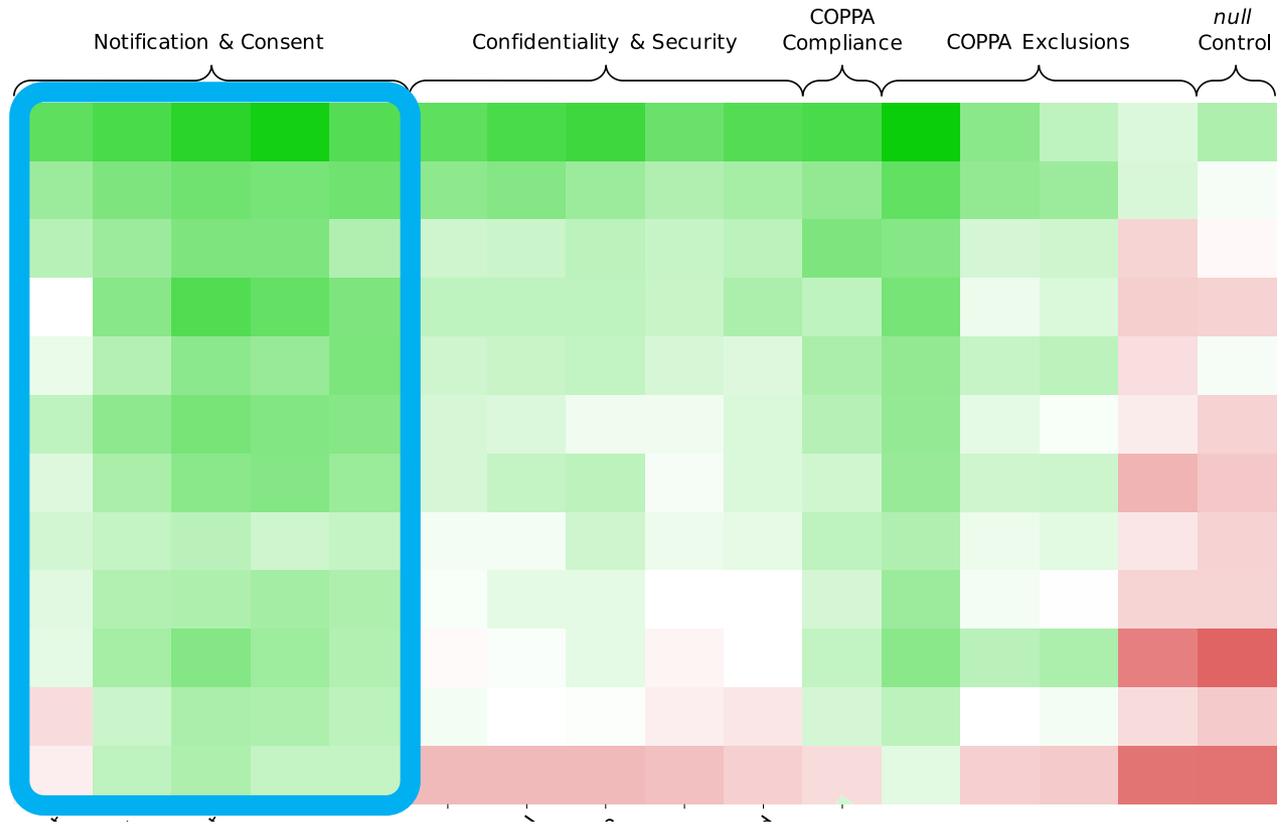


# Results: Norms & COPPA

- COPPA data handling practices made unacceptable flows significantly more acceptable

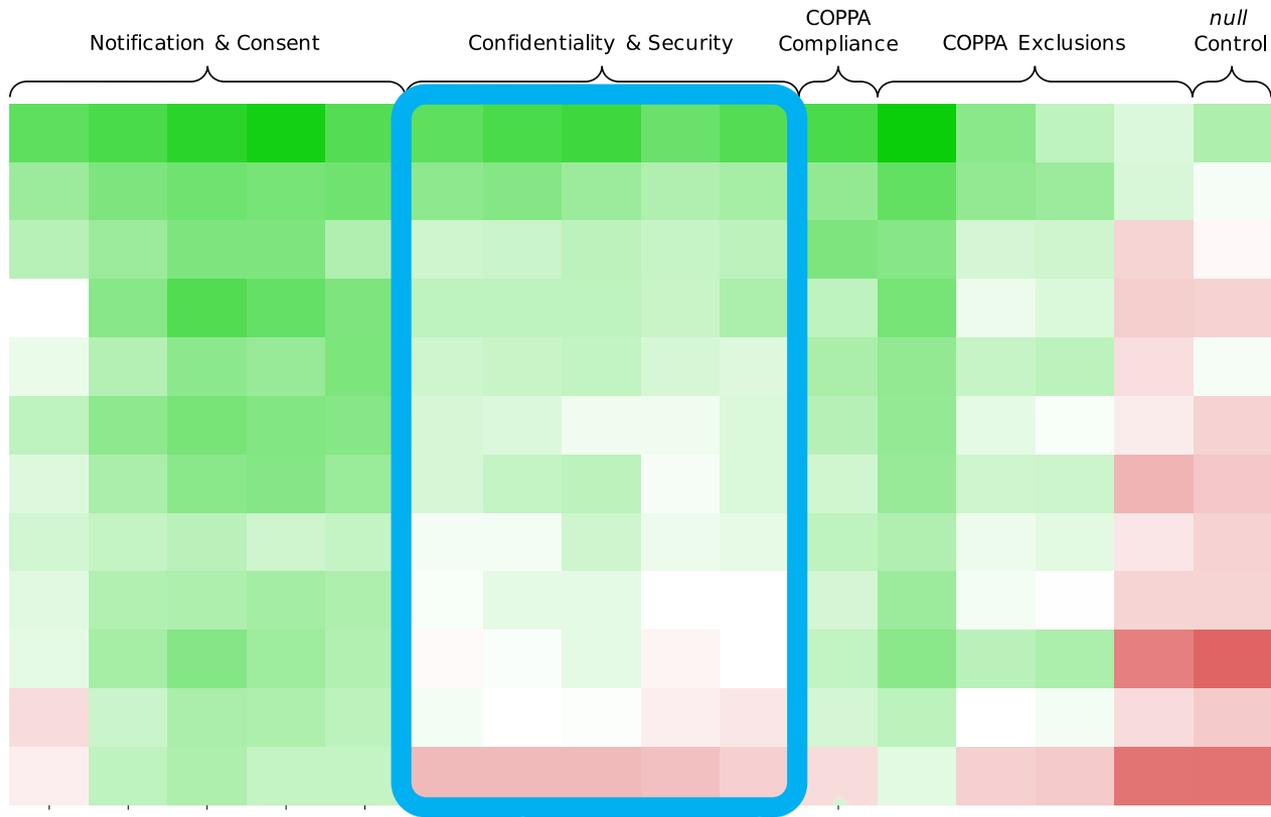
- COPPA guidelines are broad, leaving room for implementation variations
- Many smart toys still do not comply

# Transmission Principle Category



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Transmission Principle Category



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# Results: Notification & Consent

- Notification & consent > confidentiality & security for information flow acceptability

- Existing consent mechanisms are ineffective

# Results: COPPA Familiarity

- The 67% of participants familiar with COPPA were more accepting of data collection in general

- False sense of security?

# Takeaways

- Regulation can help align data collection with privacy norms
- Variations across user demographics, implementations, and other contextual factors must be taken into account

# Future Work

- CI survey method → Other privacy regulation
- Longitudinal surveys → Norm changes over time
- Larger sample sizes → Reliability & diversity

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