PRIVACY LAW

CALIFORNIA LAWYERS ASSOCIATION

“Dark Patterns”

Manipulative UX Design and the Role of Regulation

March 11, 2022

FUTURE OF PRIVACY FORUM

Speaker

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Stanford Institute for Human-Centered Artificial Intelligence

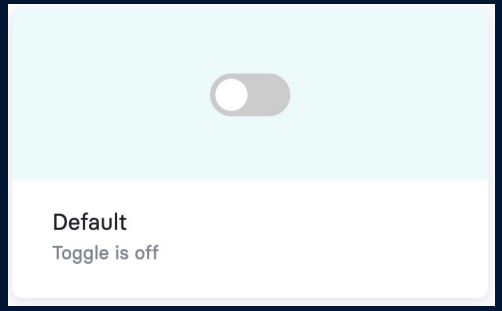
- Privacy scholar/researcher
- Ph.D information science, human-computer interaction
- 10+ years examining dark patterns in practice, as expert witness w/FTC & states
- Recent article: Jennifer King & Adriana Stephan, *Regulating Privacy Dark Patterns in Practice: Drawing Inspiration from California Privacy Rights Act*, 5 Geo. L. Tech. Rev. 2 (2021)

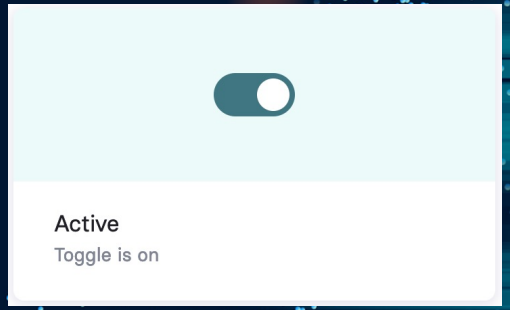
Agenda

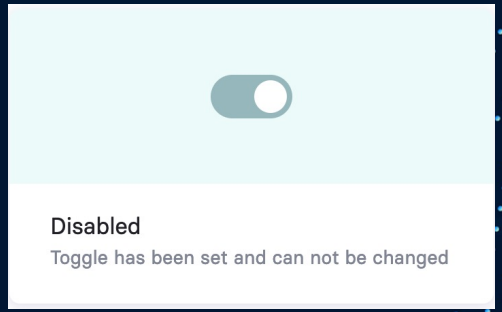
- Defining “dark patterns” (& design patterns)
- Contexts: what do they target?
- How do they work? Cognitive biases, heuristics, and persuasive design
- Types of Dark Patterns
- Examples
- Discussion/Q&A

What is a design pattern?

“Design patterns are reusable/recurring components which designers use to solve common problems in user interface design.”







Sources: https://www.interaction-design.org/literature/topics/ui-design-patterns
https://www.checklist.design/elements/toggle

What is a “dark” pattern?

“A user interface that has been carefully crafted to trick users into doing things…they are not mistakes, they are carefully crafted with a solid understanding of human psychology, and they do not have the user’s interests in mind.”

- Brignull, Dark Patterns.org

“Techniques used to manipulate users to do things they would not otherwise do.”

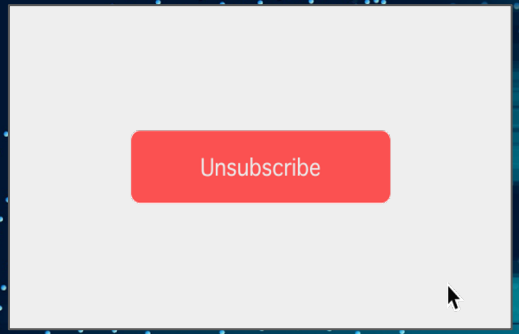
- Luguri & Strahilevitz 2021

What is a “dark” pattern?

“Dark patterns are user interface design choices that benefit an online service by coercing, manipulating, or deceiving users into making unintended and potentially harmful decisions.”

- Mathur, Mayer, & Kshirsagar 2021

Arunesh Mathur, Jonathan Mayer, and Mihir Kshirsagar in What Makes a Dark Pattern...Dark?: Design Attributes, Normative Considerations, and Measurement Methods. Conference on Human Factors in Computing Systems (CHI ’21), May 8–13, 2021, Yokohama, Japan. ACM, New York, NY, USA.



Animation source: Wiktor Buksza, 10Clouds

California: Deceptive Design Patterns in the CPRA & CCPA

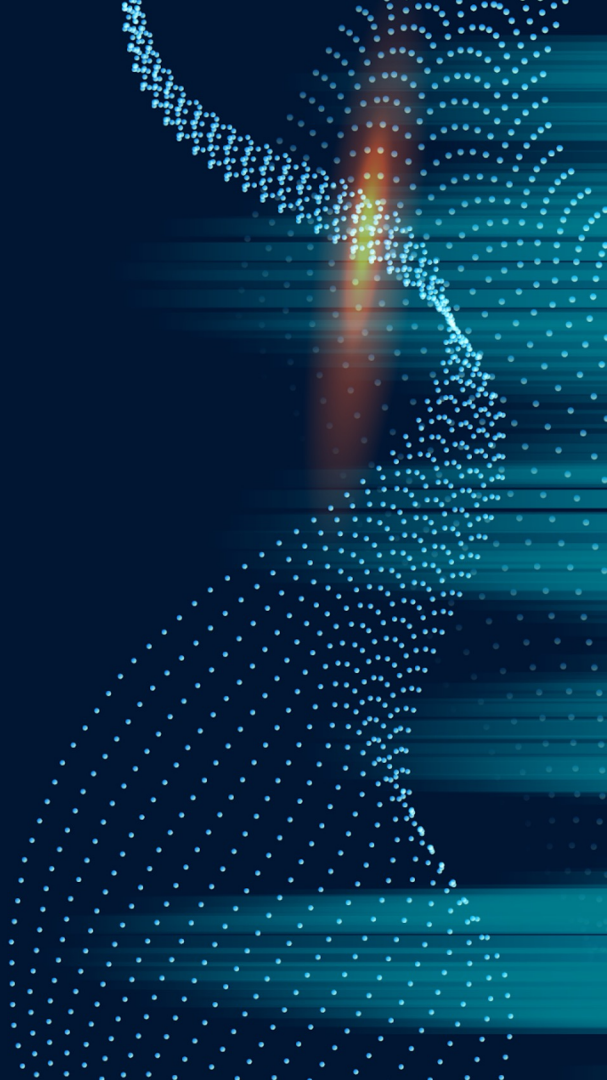
- **CPRA:**
  - The California Privacy Rights Act (CPRA) defines dark patterns as: “[a] user interface designed or manipulated with the **substantial effect** of subverting or impairing user autonomy, decision-making, or choice, as further defined by regulation.”
  - Consent means any freely given, specific, informed and unambiguous indication of the consumer's wishes… “**agreement obtained through use of dark patterns does not constitute consent**.”
- **CCPA:**
  - California Consumer Privacy Act recently updated regulations: “A business shall not use a method that is designed with the purpose or has the substantial effect of subverting or impairing a consumer’s choice to opt-out.”

Context: Where do we find them?

Three primary contexts:

- e-commerce/online shopping
- privacy/disclosure/consent
- gaming/gambling (attention & addiction)

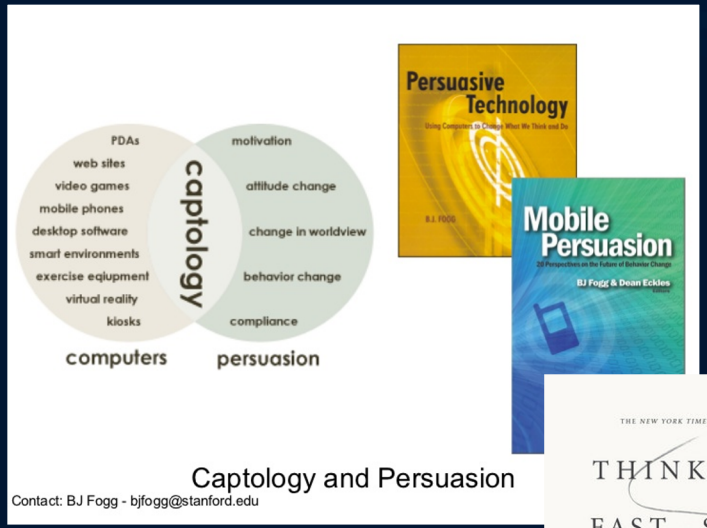
Deceptive design patterns are typically found at *decision points* -- places where individuals make a decision or execute an action -- and subject to coercion or manipulation

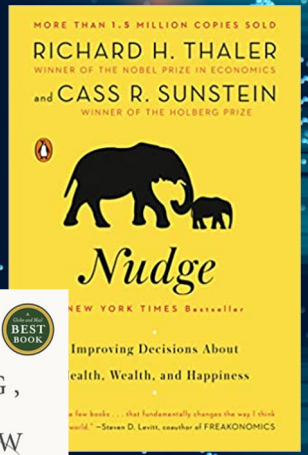


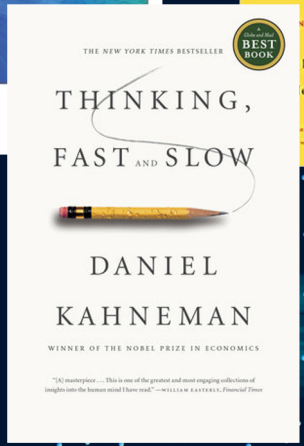
How do they work? Heuristics & Cognitive Biases

Cognitive Biases:
- Anchoring effect
- Confirmation bias
- Endowment effect

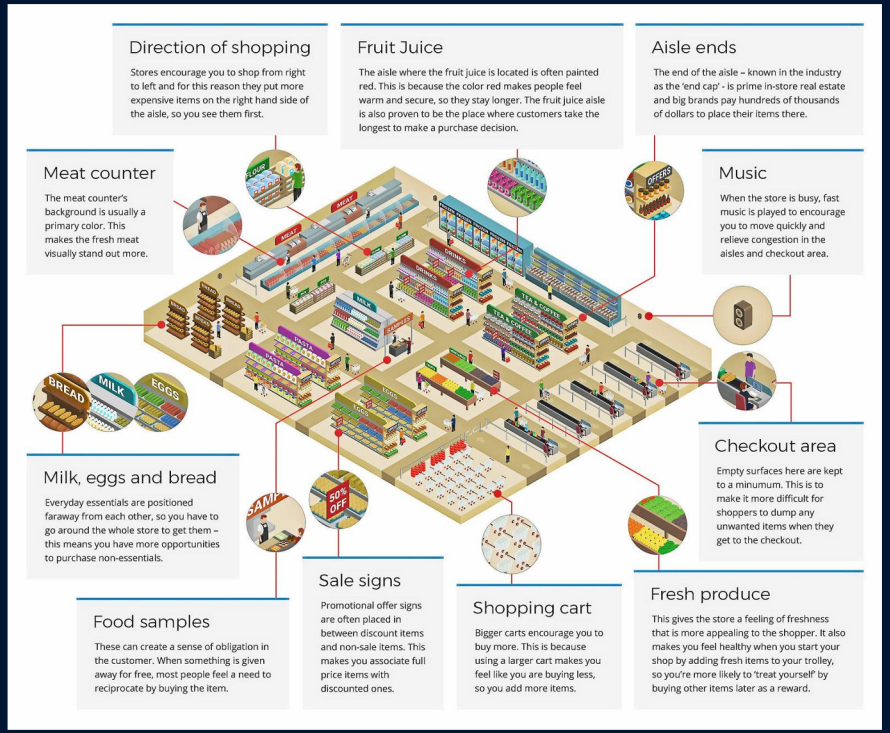
Heuristics:
- Availability heuristic
- representativeness heuristic







Manipulative design in the physical world: supermarkets

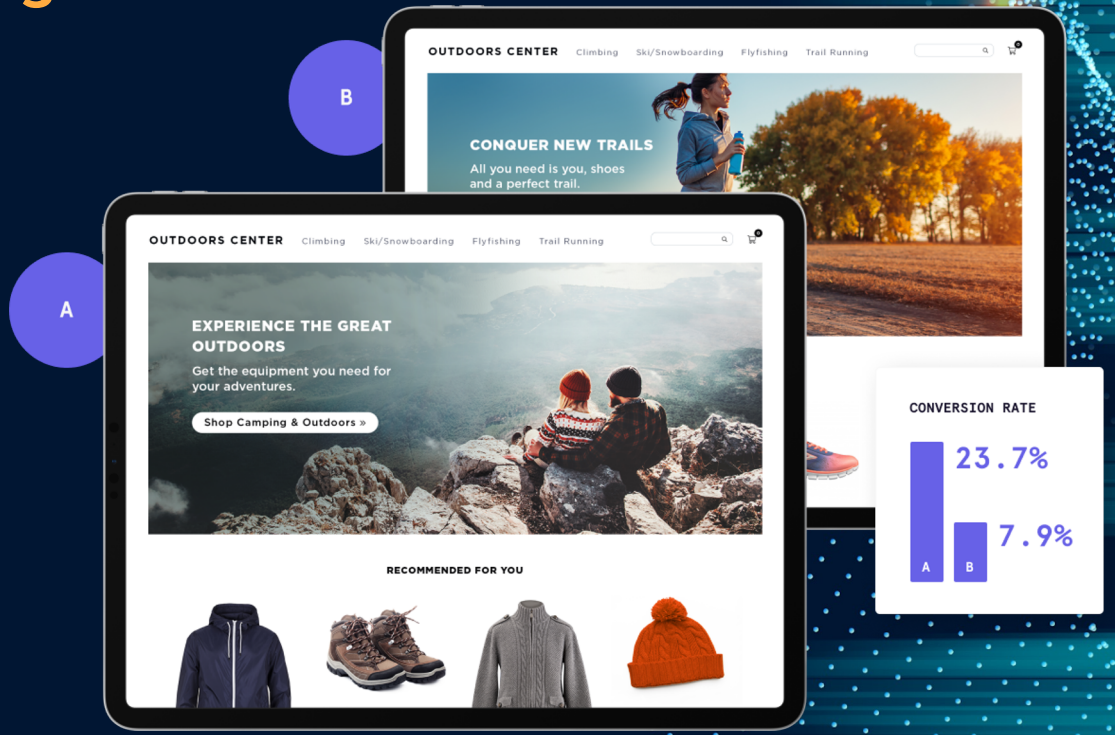


https://www.theoaklandpress.com/lifestyles/why-your-local-grocery-store-is-designed-like-a-casino/article_3e45cf5f-8822-5772-a43e-7b490dd9c686.html

How did we get here?
A/B Testing at Scale

“A/B testing is a methodology to compare two or more versions of an experience to see which one performs the best relative to some objective measure.”

Rochelle King, Elizabeth Churchill, and Caitlin Tan. Designing With Data. Sebastapol, CA: O’Reilly Media, Inc. 2017.



Persuasion vs. Deception, Coercion, and Manipulation

Deception

Planting of false beliefs (form of manipulation); FTC: “a representation, omission, or practice is deceptive if it is likely to mislead consumers acting reasonably under the circumstances”

Coercion

Coercion influences someone “by constraining their options, such that their only rational course of action is the one the coercer intends.”

Manipulation

Manipulation is hidden influence: “intentionally and covertly influencing [one’s] decision-making, by targeting and exploiting their decision-making vulnerabilities.”

Susser, D. & Roessler, B. & Nissenbaum, H. (2019). Technology, Autonomy, and Manipulation. Internet Policy Review, 8(2).

Types of Dark Patterns:

Dark Patterns at Scale
(Mathur, et. al.)

1. Asymmetric

Does the user interface emphasize particular choices more than others?

2. Covert

Does the interface steer the user to make certain purchases or choices without their knowledge?

3. Restrictive

Does the user interface restrict the number of choices available to the user?

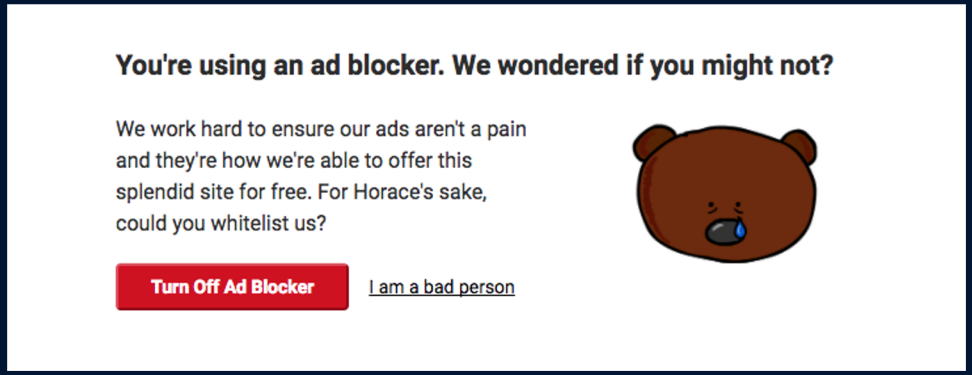
4. Hides Information

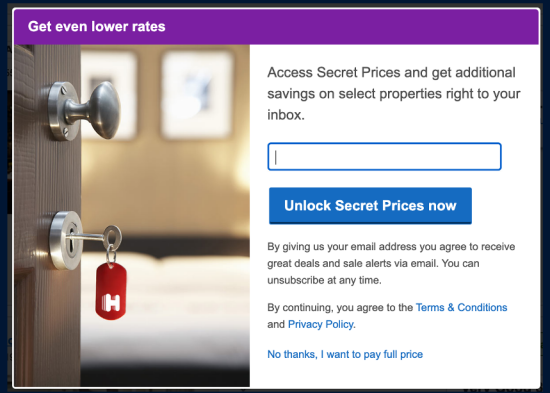
Does the user interface obscure information or delay the presentation of key information?

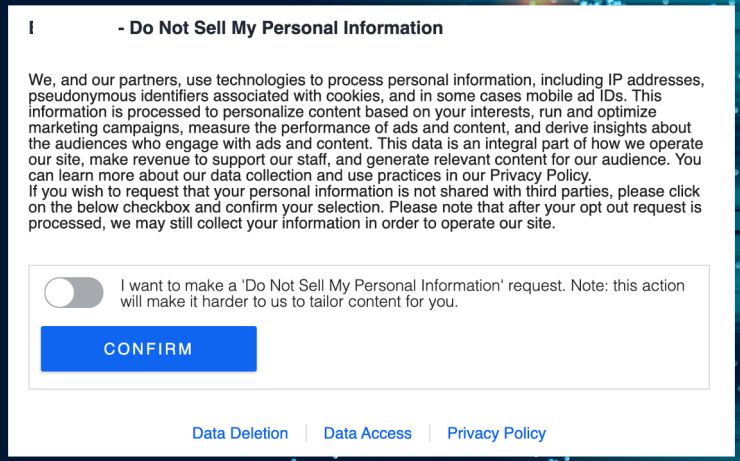
5. Deceptive

Does the interface use misleading statements, or omissions, to induce false beliefs?

Guiltshaming/Confirmshaming

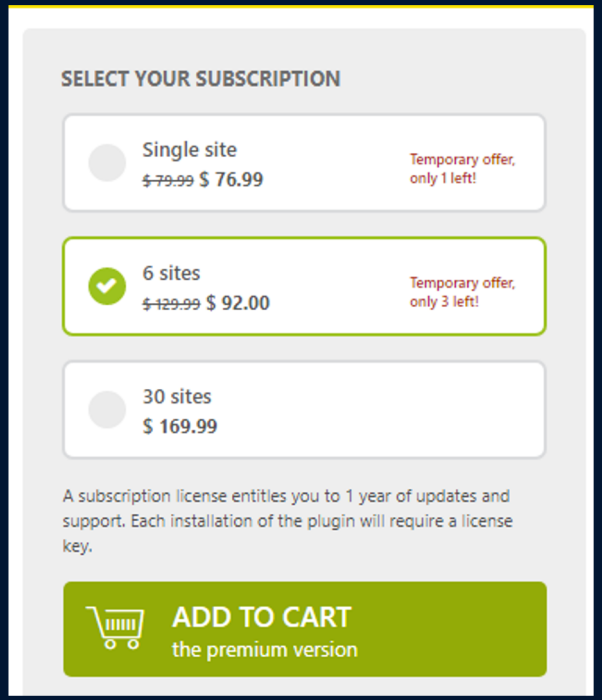


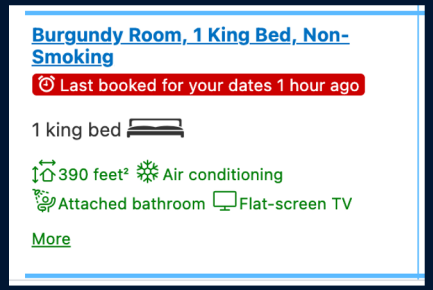


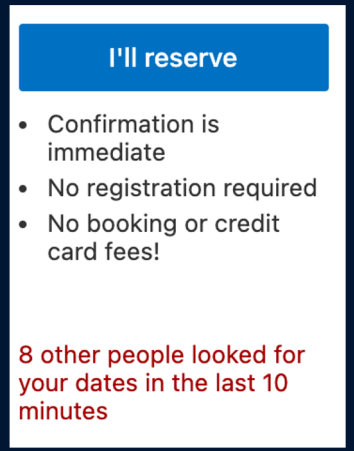


Source: https://medium.com/beautiful-code-smart-design-by-10clouds/5-common-ux-dark-patterns-interfaces-designed-to-trick-you-61fdede9718c

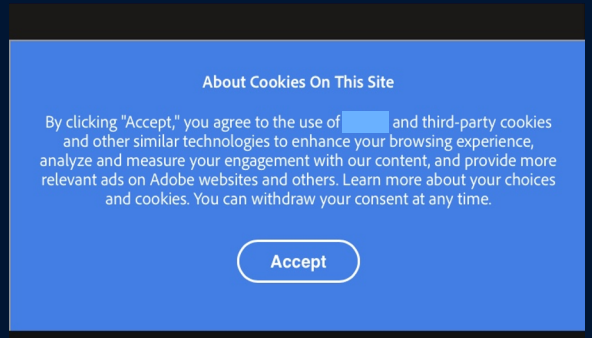
Deceptive: False Urgency

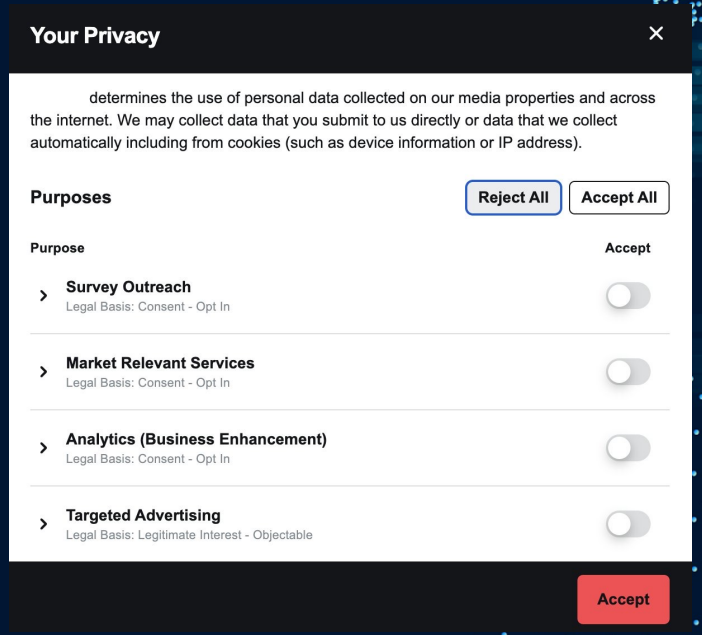


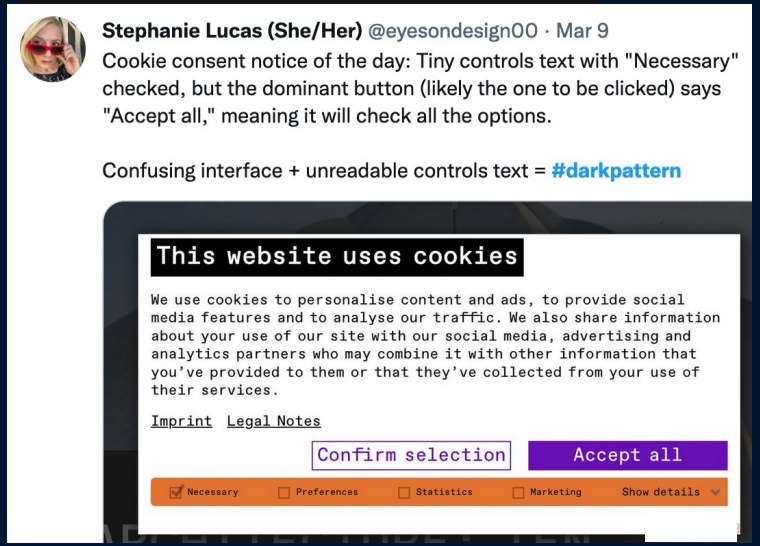




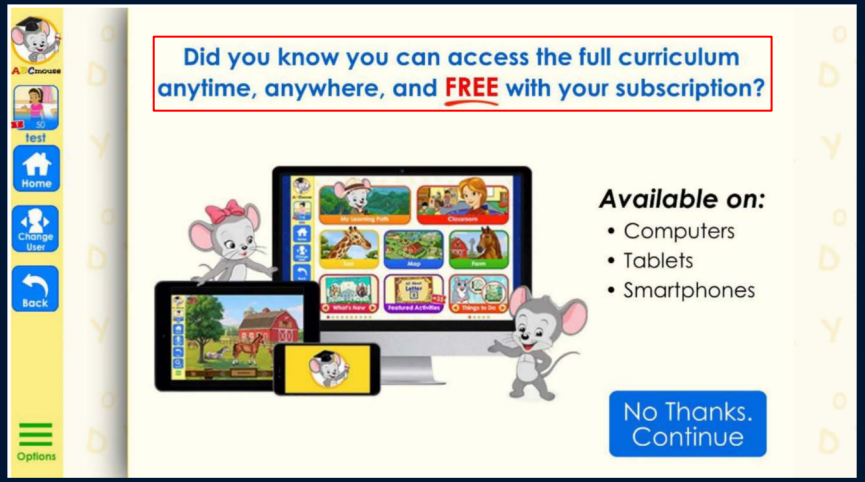
Privacy: Coercive (& Confusing!?) Consent

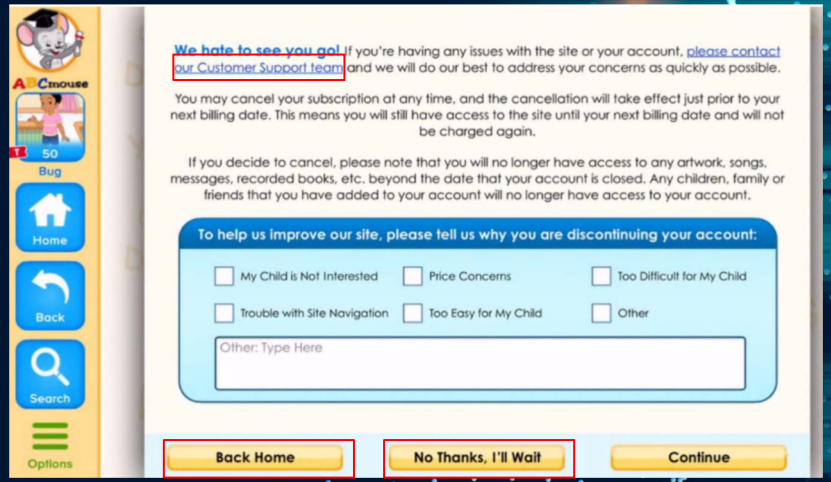




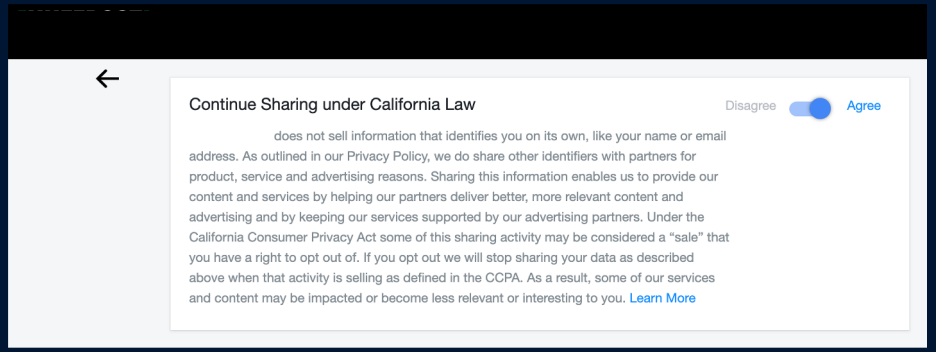


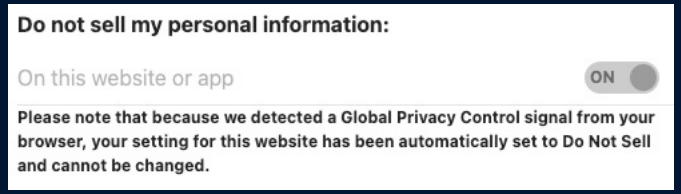
FTC Action: Age of Learning, Inc. (ABCmouse)

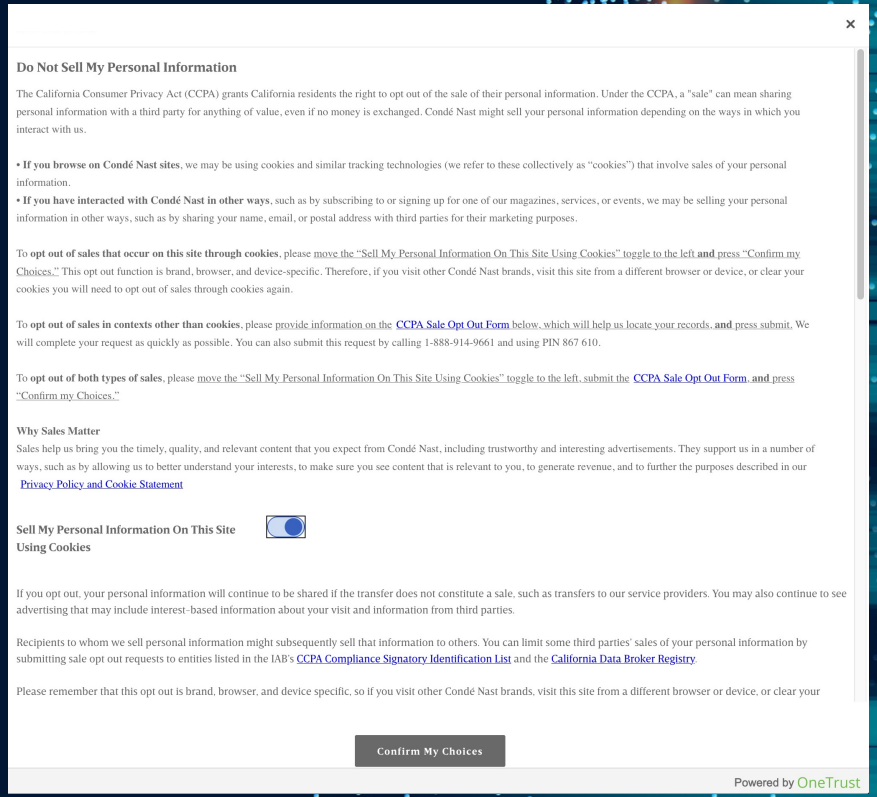




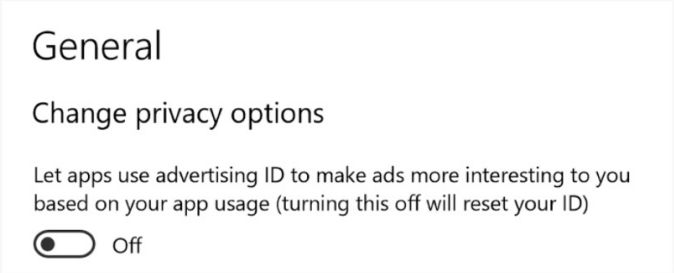
CCPA Do Not Sell







Do Not Sell: Yes or No? On or off?



Is this toggle on or off? In [redacted], a state descriptor (the word Off) is used to identify the current state of the toggle (off). Unfortunately, this descriptor is ambiguous: because the word Off appears on the right of the switch and the toggle dot is on the left, users can also interpret the state of the toggle as on (that is, away from the label Off).

Source: https://www.nngroup.com/articles/toggle-switch-guidelines/

If using toggles, then make them clearer

Note: radio buttons may be a better choice than a toggle

CCPA Do Not Sell My Personal Information Right

May we sell your personal information?

No: do not sell my personal information

CCPA Do Not Sell My Personal Information Right

May we sell your personal information?

Yes: you may sell my personal information

Considerations for Lawmakers

- Is current FTC Section 5 authority enough to address dark patterns generally? Or is expanded authority necessary? For example, to cover “manipulative design.”
- Empirical considerations: how to measure, and by whom?
- Identifying the “dark” vs. the “gray”: what defines the line between permissible persuasion and manipulation/coercion?
- Are neutral designs a realistic and enforceable option, particularly at decision points, such as opt-ins/outs?
- What are the implication for Privacy by Design? How is success in privacy measured?
- How does the CPRA’s “effect” standard differ from a potential “intent” standard? Which standard is most measurable/enforceable?