“Dark Patterns”
Manipulative UX Design
and the Role of Regulation

Future of Privacy Forum Webinar
March 24, 2021
**Future of Privacy Forum**

### The Supporters
- **175+** Companies
- **25+** Leading Academics
- **15+** Advocates and Civil Society
- **5** Foundations

### The Mission
- Bridging the policymaker-industry-academic gaps in privacy policy
- Developing privacy protections, ethical norms, & responsible business practices

### The Workstreams
- Connected Cars
- Student Data
- Location & Ad Tech
- Internet of Things
- Ethics & De-identification
- Smart Cities
Agenda

- Intro: A (Brief) Look at Legislative Proposals
- 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
- Key Considerations for Policymakers

Discussion/Q&A
California Consumer Privacy Act (CCPA) - Attorney General Regulations

- Finalized 2020-2021
- Regulations require that companies “shall not use [an Opt Out of Sale method] that is designed with the purpose or has the substantial effect of subverting or impairing a consumer’s choice to opt-out.”

California Privacy Rights Act (CPRA):

- Amends the CCPA (passed 2020, effective 2023)
- Defines dark patterns: “[a] user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decision-making, or choice . . .
- “... agreement obtained through use of dark patterns does not constitute consent.”
Introduction: Why Now? 2/3

- **Washington Privacy Act, SB 5062:**
  - Would prohibit the use of a “dark pattern” — “a user interface design or manipulated with the substantial effect of subverting or impairing user autonomy, decision-making, or choice.” §101(10).

- **CA SB 980:**
  - §2(4). “Dark Pattern” is “a user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decisionmaking, or choice.”

- **SAFE DATA Act, S. 4626:**
  - §206. “Conduct Prohibited”, includes, “to design, modify, or manipulate a user interface with the purpose or substantial effect of obscuring, subverting, or impairing user autonomy, decision making, or choice to obtain consent or user data”
Introduction: Why Now? 3/3

- Ongoing focus of the Federal Trade Commission
- Enforces Section 5 of the FTC Act (deceptive or unfair commercial practices)
  - Tapjoy (2021) (gaming) — involved misleading promises of in-game rewards
  - Age of Learning (2020) (educational subscription) — involved misrepresentation that a service was “free” and tactics that made it very difficult for users to cancel a subscription.
  - Path (2013) (social networking) – FTC alleged company offered deceptive “Add Friends” feature. The feature gave users three options: “Find friends from your contacts;” “Find friends from Facebook;” or “Invite friends ... by email or SMS.” However, Path automatically collected users’ contacts even when users eschewed the “Find friends from your contacts” option. ($800,000 settlement)
- April 29, 2021: FTC Workshop: “Bringing Dark Patterns to Light”
Dr. Jen King
Privacy & Data Policy Fellow, 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
What is a design pattern?

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

Sources:
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


Animation source: Wiktor Buksza, 10Clouds
Context: Where do we find them?

Three primary contexts:
- e-commerce/online shopping
- privacy/disclosure/consent
- attention/gaming (addiction)

E-commerce and disclosure/consent are typically decision points -- places where individuals must make a decision or execute an action -- and subject to coercion or manipulation.
What are the limits of permissible persuasion?
How do they work? Heuristics & Cognitive Biases

Heuristics:
- Availability heuristic
- Representativeness heuristic

Cognitive Biases:
- Anchoring effect
- Confirmation bias
- Endowment effect
## Types of Dark Patterns: Dark Patterns at Scale (Mathur, et. al.)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Asymmetric</td>
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<tr>
<td></td>
<td>Does the user interface emphasize particular choices more than others?</td>
</tr>
<tr>
<td>2.</td>
<td>Covert</td>
</tr>
<tr>
<td></td>
<td>Does the interface steer the user to make certain purchases or choices without their knowledge?</td>
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<tr>
<td>3.</td>
<td>Restrictive</td>
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<td></td>
<td>Does the user interface restrict the number of choices available to the user?</td>
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<tr>
<td>4.</td>
<td>Hides Information</td>
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<td></td>
<td>Does the user interface obscure information or delay the presentation of key information?</td>
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<tr>
<td>5.</td>
<td>Deceptive</td>
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<td>Does the interface use misleading statements, or omissions, to induce false beliefs?</td>
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# Persuasion vs. Deception, Coercion, and Manipulation

<table>
<thead>
<tr>
<th>Deception</th>
<th>Coercion</th>
<th>Manipulation</th>
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<tr>
<td>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”</td>
<td>Coercion influences someone “by constraining their options, such that their only rational course of action is the one the coercer intends.”</td>
<td>Manipulation is hidden influence: “intentionally and covertly influencing [one’s] decision-making, by targeting and exploiting their decision-making vulnerabilities.”</td>
</tr>
</tbody>
</table>

Privacy: LinkedIn - Contact Harvesting
(pre MSFT acquisition)

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

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CONFIRM

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

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- Flat-screen TV
- More

**I'll reserve**

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- No registration required
- No booking or credit card fees!

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Privacy: Coercive (& Confusing!?) Consent

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Privacy: Bundled Consent
Dark patterns in the physical world

Facilitating their rise: 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.”

California: Dark 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.”
Consent Example
(Let’s vote!)

Is this an example of neutral (i.e., not coercive or manipulative) design? Vote: YES, NO, UNCERTAIN
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?
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Questions?

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Thank you to Srivats Shankar ~ FPF Policy Intern
Discussion

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Tanya Forsheit, Chair of the Privacy & Data Security Group at Frankfurt Kurnit