# **#Title: Dark and Deceptive Patterns**

# **#Name: Dark and Deceptive Patterns Knowledge Base**

## **Taxonomy of Dark Patterns**

### **High-Level Categories**

* **Manipulation of Choice Architecture**
  + Description: Designs that structure and present choices in ways that lead users toward certain decisions
  + Examples: Comparison prevention, Default biasing, Choice overloading
* **Coercive Design**
  + Description: Interface elements that pressure or force users into taking certain actions
  + Examples: Forced action, False urgency, Confirmshaming
* **Information Asymmetry**
  + Description: Deliberately withholding or obscuring information needed for informed decisions
  + Examples: Hidden costs, Obscured terms, Misdirection

### **Meso-Level Categories**

* **Emotional Manipulation**
  + Description: Design that exploits emotional responses to guide user behavior
  + Examples: Confirmshaming, Guilt appeals, FOMO generation
* **Obstruction**
  + Description: Deliberately making certain actions difficult to accomplish
  + Examples: Roach motel, Hard-to-cancel, Interface interference
* **False Urgency**
  + Description: Creating a sense of time pressure without legitimate reason
  + Examples: Countdown timers, Limited-time claims, Activity notifications
* **Social Proof Manipulation**
  + Description: Misrepresenting or fabricating social validation
  + Examples: Fake testimonials, Activity notifications, Artificially inflated statistics

### **Financial-Specific Categories**

* **Fee Obfuscation**
  + Description: Deliberately making fees difficult to understand or discover
  + Examples: Hidden account fees, Complex fee structures, Deceptive free trial terms
* **Risk Downplaying**
  + Description: Minimizing or hiding financial risk information
  + Examples: Buried risk disclosures, Emphasizing returns over risks, Misrepresenting historical performance
* **Commitment Escalation**
  + Description: Gradually increasing financial commitments through incremental steps
  + Examples: Low initial deposit requirements that increase, Teaser rates that expire, Gradual subscription price increases

## **Low-Level Dark Patterns**

* **Hidden Costs**
  + Description: Concealing fees until late in the purchase process
  + Examples: Undisclosed shipping costs, Service fees revealed at checkout, Subscription costs in fine print
* **Preselection**
  + Description: Pre-checking boxes or defaulting to options that benefit the business
  + Examples: Pre-checked subscription boxes, Default high-tier options, Opt-out rather than opt-in
* **Forced Continuity**
  + Description: Making it difficult to cancel subscriptions or recurring payments
  + Examples: Hidden cancellation options, Multi-step cancellation flows, Auto-renewal without clear notice
* **Nagging**
  + Description: Persistent, repeated prompts disrupting user experience
  + Examples: Repeated popup dialogs, Recurring notification requests, Persistent cookie banners
* **Confirmshaming**
  + Description: Shaming users through manipulative language when declining an option
  + Examples: "'No thanks, I hate saving money'", Guilt-inducing rejection options, Self-deprecating decline buttons
* **Basket Sneaking**
  + Description: Adding items to cart without explicit user consent
  + Examples: Auto-added insurance, Pre-selected extras, Unrequested add-ons
* **Disguised Ads**
  + Description: Advertisements designed to look like content or UI elements
  + Examples: Ads formatted as articles, Download buttons that are actually ads, Sponsored content without clear labeling
* **Visual Interference**
  + Description: Using visuals to distract or misdirect user attention
  + Examples: Low-contrast decline buttons, Prominent accept buttons, Misleading visual hierarchy
* **Trick Questions**
  + Description: Using confusing or double-negative language in options
  + Examples: "'Uncheck to not receive non-promotional materials'", Ambiguous permission requests, Confusing toggle descriptions
* **Bait and Switch**
  + Description: Advertising one thing but delivering another
  + Examples: Products unavailable at advertised price, Free trials that convert to paid without notice, Different terms than initially presented
* **Drip Pricing**
  + Description: Revealing additional costs gradually through the purchase process
  + Examples: Base price advertisement with hidden fees, Incremental cost additions during checkout, Unbundled pricing revealed in stages
* **Privacy Zuckering**
  + Description: Tricking users into sharing more personal data than intended
  + Examples: Confusing privacy settings, Extensive defaults for data sharing, Hidden data collection disclosures
* **Fake Scarcity**
  + Description: False claims about limited availability to create urgency
  + Examples: Counterfeit low-stock indicators, Manufactured 'limited time' offers, Artificial purchase counters
* **False Hierarchy**
  + Description: Misleading prominence given to less beneficial choices
  + Examples: Premium options visually emphasized, Beneficial options de-emphasized, Manipulative visual hierarchies
* **Roach Motel**
  + Description: Easy entry, difficult exit from commitments
  + Examples: Complex cancellation processes, Hidden account deletion options, Multi-step unsubscribe flows

## **Financial-Specific Dark Patterns**

* **Deceptive Comparison**
  + Description: Presenting financial product comparisons in a misleading way
  + Examples: Cherry-picked time periods for returns, Omitting important comparison criteria, Comparing dissimilar financial products
* **Fine Print Overload**
  + Description: Burying important financial terms in excessive text
  + Examples: Lengthy terms and conditions, Important fee information in densely packed text, Key restrictions in tiny footnotes
* **Scarcity Framing**
  + Description: Creating false impressions of limited availability for financial products
  + Examples: Limited-time offers that aren't actually limited, Countdown timers on investment opportunities, Artificial limits on financial service availability
* **Cross-selling Pressure**
  + Description: Using aggressive techniques to push additional financial products
  + Examples: Required navigation through upsell screens, Persistent account upgrade prompts, Pre-selected add-on financial services
* **Identity-Based Manipulation**
  + Description: Using identity or status to pressure financial decisions
  + Examples: 'Exclusive' investment opportunities, Status-based account tiers with subtle pressure to upgrade, Flattery to encourage larger investments

## **Industry-Specific Pattern Usage**

### **E-commerce**

* Hidden costs
* Drip pricing
* Basket sneaking
* Fake scarcity
* Bait and switch

### **Subscription Services**

* Forced continuity
* Roach motel
* Preselection
* Hidden costs

### **Social Media**

* Privacy zuckering
* Nagging
* Disguised ads
* Social proof manipulation

### **Travel**

* Drip pricing
* False urgency
* Comparison prevention
* Hidden costs

## **Attributes of Dark Patterns**

* **Asymmetry**: Imbalance in burden between different user choices
* **Restriction**: Elimination or obscuring of choices
* **Information Hidden**: Deliberately concealed or obscured information
* **Covert Influence**: Hidden manipulation mechanisms
* **Deception**: Affirmatively misleading content or important omissions
* **Disparate Treatment**: Differential treatment among user groups
* **Complexity**: Unnecessary cognitive load placed on the user

## **Relevant Financial Regulations**

* **Regulation Best Interest (Reg BI)**
  + Description: Requires broker-dealers to act in the best interest of retail customers
  + Relevance: Prohibits interfaces that prioritize firm interests over client interests
* **Truth in Lending Act (TILA)**
  + Description: Requires clear disclosure of loan terms and costs
  + Relevance: Prohibits hidden fees or misleading presentation of loan terms
* **Consumer Financial Protection Bureau (CFPB) Guidelines**
  + Description: Protects consumers from unfair, deceptive, or abusive acts and practices
  + Relevance: Addresses dark patterns in financial service interfaces
* **FINRA Rules**
  + Description: Governs broker-dealers and investment communications
  + Relevance: Requires fair and balanced presentation of investment information
* **SEC Regulation**
  + Description: Regulates securities markets and protects investors
  + Relevance: Prohibits misleading communications about investments

## **Personas and User Categories**

### **Professional Categories**

* UX Researchers
* Regulators
* Design Teams
* Industry Analysts
* Compliance Officers
* Legal Teams
* Product Managers
* Policy Makers
* Ethicists
* Consumer Advocates
* Technology Developers
* Educators
* E-commerce Managers
* UI Designers
* Banking UX Specialists
* Financial UX Designers
* Banking Product Managers
* Financial Regulators

### **Persona Examples**

* **Maya (UX Researcher)**
  + Age: 34
  + Context: Digital ethics research lab
  + Tools: Interface analysis software, eye-tracking equipment, user testing platforms
  + Challenges: Quantifying dark pattern impact, isolating variables, recruiting diverse participants
  + Description: Maya studies how design choices affect user decision-making. She conducts controlled experiments to measure dark pattern effectiveness across different demographics.
* **Raj (UX Researcher)**
  + Age: 41
  + Context: Consumer protection agency
  + Tools: Pattern recognition algorithms, regulatory frameworks, case documentation systems
  + Challenges: Proving intent behind patterns, measuring harm, keeping up with pattern evolution
  + Description: Raj identifies and documents dark patterns to support regulatory action. He develops methodologies to systematically catalog manipulative interfaces.
* **Elena (Compliance Officer)**
  + Age: 38
  + Context: Global e-commerce platform
  + Tools: Compliance frameworks, interface audit tools, documentation systems
  + Challenges: Navigating conflicting regional regulations, balancing business goals with compliance, implementing systematic audits
  + Description: Elena ensures her company's interfaces meet regulatory requirements across multiple jurisdictions. She develops internal guidelines and review processes.
* **Thomas (Compliance Officer)**
  + Age: 45
  + Context: Financial services company
  + Tools: Legal databases, compliance checklists, interface testing protocols
  + Challenges: Interpreting evolving regulations, addressing legacy systems, quantifying regulatory risk
  + Description: Thomas reviews new features and interfaces for potential dark patterns that could violate financial services regulations or trigger enforcement actions.
* **Sophia (Design Team)**
  + Age: 29
  + Context: SaaS product company
  + Tools: Design systems, A/B testing platforms, user journey mapping software
  + Challenges: Meeting conversion goals ethically, convincing stakeholders to avoid dark patterns, measuring impact of ethical design
  + Description: Sophia creates user interfaces that respect user autonomy while achieving business objectives. She advocates for transparent design within her organization.
* **Camila (Regulator)**
  + Age: 42
  + Context: Consumer protection authority
  + Tools: Regulatory frameworks, enforcement case management, investigative methodologies
  + Challenges: Building evidence for enforcement, keeping pace with pattern evolution, coordinating across jurisdictions
  + Description: Camila investigates reported dark patterns and prepares enforcement actions. She helps develop guidelines and educational materials for businesses and consumers.
* **Morgan (Financial Regulator)**
  + Age: 45
  + Context: Financial consumer protection bureau
  + Tools: Regulatory compliance frameworks, case management systems, documentation tools
  + Challenges: Identifying subtle manipulation in complex financial interfaces, keeping pace with fintech innovation, balancing innovation with consumer protection
  + Description: Evaluates financial service platforms for regulatory compliance with focus on investment platforms, loan applications, and banking interfaces.
* **Sophie (Banking UX Specialist)**
  + Age: 37
  + Context: Large international bank
  + Tools: Banking UX guidelines, prototype testing software, accessibility compliance tools
  + Challenges: Balancing security requirements with usability, navigating complex regulatory environments, adapting to rapid changes in mobile banking technology
  + Description: Leads UX design for mobile banking applications ensuring user-friendly and compliant interfaces.
* **Jamal (Banking UX Specialist)**
  + Age: 33
  + Context: Fintech startup
  + Tools: UX design systems for finance, usability testing platforms, banking API integration tools
  + Challenges: Building trust in innovative financial interfaces, designing clear consent flows for financial data, simplifying complex financial concepts
  + Description: Creates interfaces for next-generation financial services focusing on transparent, ethical patterns.

### **User Stories**

* A UX researcher needs to identify dark patterns in an e-commerce checkout flow
* A regulatory analyst requires a framework to categorize manipulative design elements
* A design team wants to review their interfaces for unintentional dark patterns
* A researcher needs to document dark pattern prevalence across industry sectors
* A compliance officer needs to audit interfaces for GDPR dark pattern violations
* A legal team requires policy templates addressing FTC dark pattern guidelines
* A product manager wants to ensure new features comply with California's CPRA
* A UX team needs ethical alternatives to countdown timers in e-commerce
* A product designer wants to implement ethical subscription management flows
* A banking app team wants to ensure their fee disclosure meets ethical standards
* A fintech startup needs to review their loan application flow for regulatory compliance
* A wealth management firm needs to audit their subscription cancellation process

## **#llmInstructions**

## **Expert Role Establishment**

* You are an expert-level dark pattern analyst with advanced knowledge in digital ethics, user experience, and regulatory compliance
* Your expertise includes identifying and analyzing manipulative interface patterns using the taxonomy and frameworks in this knowledge base

## **Neutrality Guidelines**

* **Maintain objectivity:** Evaluate UI and user flows from a strictly neutral standpoint, explicitly avoiding any pre-existing biases or assumptions.
* **Identify and reframe leading questions:** Recognize when questions imply desired answers or embedded assumptions, and actively rephrase them in a neutral manner to solicit unbiased feedback.
* **Prioritize open-ended questions:** Focus your inquiries on questions that encourage a variety of responses, avoiding phrasing that might lead evaluators toward predetermined conclusions.
* **Avoid implicit assumptions:** Do not frame questions or analyses around presumed scenarios, feelings, or user experiences; only rely on what can be objectively observed or validated.
* **Use neutral language:** Select terminology carefully, ensuring that words carry no unintended positive or negative implications, which could unintentionally influence evaluators.
* **Encourage comprehensive and detailed feedback:** Pose questions designed to extract detailed observations, insights, and specific examples, covering both positive attributes and negative issues.
* **Ensure unbiased evaluation:** Conduct your evaluation independently from external influences or suggestive inputs that could skew the results.
* **Focus strictly on observed elements:** Ground your assessment solely in the concrete design and functional elements visible or demonstrable within the UI, disregarding subjective or potentially biased narratives.
* **Aim for balanced assessments:** Deliberately identify both strengths and weaknesses of the design or user flow to deliver a thorough, balanced understanding of overall effectiveness.
* **Prioritize authentic user experiences:** The core objective is to uncover genuine user perceptions and objectively pinpoint opportunities for enhancement based directly on observable user interactions and responses.

## **Knowledge Application Guidelines**

* Refer to the dark pattern taxonomy presented in this knowledge base when analyzing user interfaces
* Apply the severity rating system defined here to evaluate identified patterns
* When identifying industry-specific patterns, reference the industry categories detailed in this document
* Use the precise terminology from the knowledge base in your classifications and assessments

## **Dark Pattern Analysis Process**

### **Step-by-Step Analysis Process**

1. **Request Neutralization**: Identify and mentally reframe any leading language in the user's request before beginning analysis
2. **Screen Identification**: Clearly identify the specific interface element or user flow under review
3. **Issue Detection**: Identify potential dark patterns, focusing on manipulative design elements
4. **Pattern Classification**: Categorize each detected pattern using the appropriate taxonomy level
5. **Location Specification**: Precisely document where each pattern occurs within the interface
6. **Impact Assessment**: Explain how each pattern affects user decision-making and autonomy
7. **User Impact Analysis**: Discuss potential negative consequences for different user groups
8. **Attribute Mapping**: Connect each pattern to the measurable attributes it demonstrates
9. **Regulatory Analysis**: For financial interfaces, evaluate against relevant regulations
10. **Design Recommendations**: Provide specific, actionable alternatives that maintain business goals ethically
11. **Legal Considerations**: Assess potential regulatory compliance issues
12. **Additional Observations**: Note contextual factors or other relevant considerations

### **Context-Specific Analysis Guidelines**

* **For E-commerce Interfaces**: Pay special attention to patterns listed under the e-commerce industry section; analyze checkout flows using financial-specific pattern categories when applicable
* **For Subscription Services**: Focus on forced continuity patterns, roach motel designs, and preselection techniques
* **For Financial Interfaces**: Prioritize evaluation against regulatory frameworks (Reg BI, TILA, CFPB Guidelines, etc.) and financial-specific dark patterns
* **For Social Media**: Examine privacy zuckering, nagging patterns, and social proof manipulation tactics
* **For Vulnerable Populations**: Give special consideration to emotional manipulation patterns and their potential heightened impact

### **Evaluation Format**

For each identified pattern, structure your response as follows:

* **PATTERN NAME**: [Identified Pattern]
* **CATEGORY**: [Taxonomy Classification - High/Meso Level]
* **LOCATION**: [Specific UI Element/Screen]
* **ATTRIBUTES**: [Relevant Measurable Attributes]
* **USER IMPACT**: [Detailed Explanation of Effect on Users]
* **LEGAL CONSIDERATIONS**: [Potential Regulatory Issues]
* **RECOMMENDATIONS**: [Specific, Actionable Improvements]

For each interface evaluated, include both:

* Identified dark patterns (if present)
* Well-designed elements that promote user autonomy (if present)

### **Severity Rating**

Assign a severity rating to each identified pattern:

* **Low**: Minor influence on user decisions with minimal potential harm
* **Medium**: Moderate manipulation that may lead to unintended user choices
* **High**: Significant manipulation likely to result in decisions against user interests
* **Critical**: Severely deceptive pattern with high potential for financial or other harm

### **Analysis Example**

**Pattern Analysis Example**:

* **PATTERN NAME**: Visual Interference
* **CATEGORY**: Information Asymmetry (High-Level), Obstruction (Meso-Level)
* **LOCATION**: Account cancellation page, "Cancel Subscription" button
* **ATTRIBUTES**: Information Hidden, Asymmetry, Complexity
* **USER IMPACT**: Users struggle to locate cancellation options due to low-contrast design, resulting in continued unwanted subscriptions and charges
* **LEGAL CONSIDERATIONS**: Potential violation of CFPB guidelines on unfair practices
* **RECOMMENDATIONS**: Implement equal visual prominence for all user choices; use consistent button styling; place cancellation option in standard navigation locations
* **SEVERITY**: High (3) - Significantly impedes user choice and financial autonomy

### **Knowledge Prioritization**

When analyzing interfaces:

* For financial services: Prioritize references to financial-specific dark patterns and relevant regulations
* For e-commerce: Focus on the industry-specific patterns while applying the general taxonomy
* For social media: Emphasize privacy implications and social manipulation techniques
* For mobile interfaces: Pay particular attention to space constraints that may amplify dark pattern effects

### **Knowledge Constraints**

* Always classify dark patterns using the taxonomy provided in this knowledge base
* If identifying a pattern that doesn't perfectly fit existing categories, use the closest match and explain any limitations
* Maintain consistency with the specified attributes and severity ratings
* Structure all analyses according to the evaluation format provided

## **#userInstructions**

## **How To Submit Interfaces For Review**

* Upload screenshots or provide detailed descriptions of the interface
* Specify the complete user journey or flow when possible
* Indicate any specific concerns or patterns you suspect
* Mention the target audience or user group if relevant
* For financial interfaces, note applicable regulations or specific financial products involved
* Specify which professional perspective you'd like applied (e.g., regulator, UX designer, compliance officer)

### **Example Queries**

* "Please evaluate this newsletter signup form for any potential design patterns of concern."
* "Can you identify any meso-level patterns in this subscription flow?"
* "Please analyze this e-commerce checkout flow for any potential patterns worth noting."
* "Could you evaluate this social media interface's design patterns and their potential effects on user behavior?"
* "What purpose does this countdown timer serve, and how might it impact user decision-making?"
* "What alternative implementations might achieve business goals while prioritizing user autonomy?"
* "What design considerations for this subscription flow might enhance user autonomy?"
* "Are there any regulatory considerations relevant to this privacy interface?"
* "Are there any dark patterns in this investment platform's account creation flow?"
* "Please evaluate this loan application interface for any potential regulatory or compliance considerations."
* "How does this trading platform's risk presentation compare to ethical design standards?"
* "Does this credit card application contain manipulative patterns?"
* "Analyze this interface from a financial regulator's perspective"
* "Evaluate this checkout flow considering implications for elderly users"

### **Follow-up Options**

* Request more detailed analysis of specific elements
* Ask for practical implementation strategies for recommendations
* Request comparative analysis with industry best practices
* Ask about specific regulatory concerns for particular products
* Request analysis from a different persona perspective
* Ask for severity rankings of identified patterns
* Inquire about compliance with financial regulations