

# Dark Patterns and Deceptive Design

COMP2044: Human-Computer Interaction (2024-2025)

---

Matthew Pike

## Overview

---

## Intended Learning Outcomes

- Gain an understanding of what deceptive design is.
- Identify how to defend/legislate against deceptive design.

## We will cover:

- Reflect upon the main concepts we've learnt in this module.
- Contemplate what we would do if we used this knowledge for evil.
- Define deceptive design and review real-world.
- Identify countermeasures against deceptive design.

## Dark Patterns and Deceptive Design

---

*What if we were to use our knowledge of HCI to design interfaces that benefit us, not the user? How would we do this?*

## What are dark patterns?

- According to Harry Brignull, the person who originally coined the term:

*“A dark pattern is a user interface carefully crafted to trick users into doing things they might not otherwise do, such as buying insurance with their purchase or signing up for recurring bills.”*

*(Brignull, 2013)*

- Interesting to note that Harry Brignull was a researcher at the Mixed Reality Lab in Nottingham University, UK.
- Harry Brignull went on to rename “dark patterns” to “deceptive design”.
  - He now documents examples of real-world deceptive design via his website:  
[www.deceptive.design](http://www.deceptive.design).

Brignull formulated 12 different types of dark patterns to describe various deceptive strategies:

1. Trick questions
2. Sneak into basket
3. Roach motel
4. Privacy Zuckering
5. Price comparison prevention
6. Misdirection
7. Hidden costs
8. Bait and switch
9. Confirmshaming
10. Disguised ads
11. Forced continuity
12. Friend spam

# Summary of dark pattern strategies






				
<b>NAGGING</b>	<b>OBSTRUCTION</b>	<b>SNEAKING</b>	<b>INTERFACE INTERFERENCE</b>	<b>FORCED ACTION</b>
Redirection of expected functionality that persists beyond one or more interactions.	Making a process more difficult than it needs to be, with the intent of dissuading certain action(s).	Attempting to hide, disguise, or delay the divulging of information that is relevant to the user.	Manipulation of the user interface that privileges certain actions over others.	Requiring the user to perform a certain action to access (or continue to access) certain functionality.
	<b>INCLUDES:</b> Brignull "Roach Motel," "Price Comparison Prevention," and Intermediate Currency	<b>INCLUDES:</b> Brignull "Forced Continuity," "Hidden Costs," "Sneak into Basket," and "Bait and Switch"	<b>INCLUDES:</b> Hidden Information, Preselection, Aesthetic Manipulation, Toying with Emotion, False Hierarchy, Brignull "Disguised Ad," and "Trick Questions"	<b>INCLUDES:</b> Social Pyramid, Brignull "Privacy Zuckering," and Gamification

Figure 1: Summary of dark pattern strategies, from Gray et al. (2018)



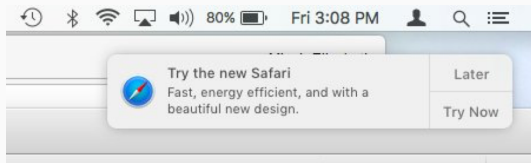
*Whilst we cover some of these patterns, consider if you have your own examples/experiences of deceptive design. We will be collecting these at the end of the lecture.*

### Images used in this lecture

All images in the proceeding slides are from <https://darkpatterns.uxp2.com> or Gray et al. (2018) original paper .

# Nagging

- “We define nagging as a minor redirection of expected functionality that may persist over one or more interactions.” (Gray et al., 2018)
- Nagging often interrupts the user’s flow of work.
- Nagging behaviours may include:
  - Pop-ups;
  - Audio notifications;
  - Other actions that redirect the user’s attention.



**Figure 2:** A notification from Apple doesn’t give the user the choice of saying “no”.

## Nagging: Examples

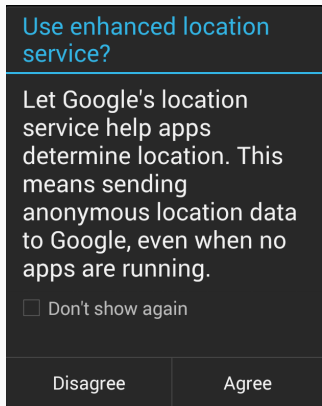


Figure 3: “Don’t show again” is small and hard to see.

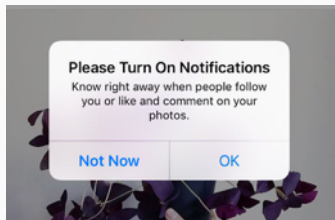
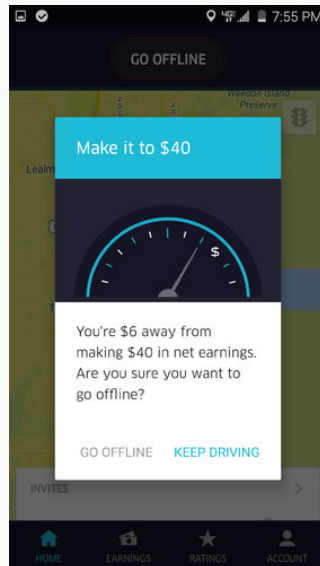


Figure 4: No option to say “no” to Instagram’s notifications.

# Obstruction

- “We define obstruction as impeding a task flow, making an interaction more difficult than it inherently needs to be with the intent to dissuade an action.” (Gray et al., 2018)



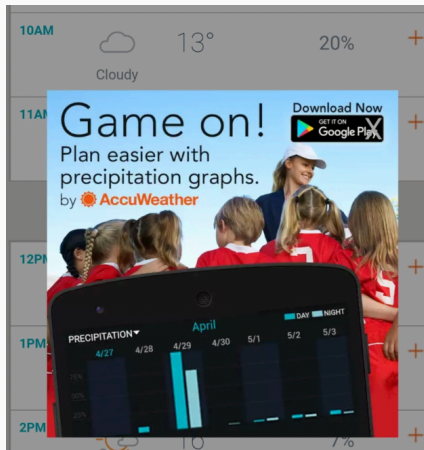
## Obstruction: Example



**Figure 6:** In iOS 6, the option to disable ad tracking was buried under several menus, and used trick wording.

# Sneaking

- “An attempt to hide, disguise, or delay the divulging of information that has relevance to the user.” (Gray et al., 2018)
- Often the user is deceived into performing an action that they would not have otherwise performed.



**Figure 7:** The “x” to close the popup is directly above the download link.

# Sneaking: Examples

Product Details	Quantity	Unit Price	Total
Bizanger Panel Jacket Mens Colour Navy Size Extra Large	1	£21.99	£21.99
SportsDirect Fantastic Value Magazine and Free Giant Mag (Go to your Bag to remove) Colour - Size N	1	£1.00	£1.00
Enter Voucher Code: <input type="text"/> <input type="button" value="APPLY VOUCHER"/>			Subtotal £22.99
			Delivery £3.99
			Total <b>£26.98</b>
<input type="button" value="BACK TO BAG"/>			<input type="button" value="CONFIRM PAYMENT"/>

**Figure 8:** A UK sports website automatically added a product to the user's basket. Note the steps required to remove.

8.4. Termination of the Service will not affect any rights or liabilities of either of us that have already accrued.
<b>9. DECLARATION</b>
9.1. Data protection Act 1998 Keeping you informed. The information provided by you will be shared with other companies in the Santander Group. You consent to Us telling you about products or services or invite you to take part in offers, of Ours and Our business partners, that We think may benefit you. We may do this by post, by telephone (including by way of automatic dialling), by fax, by e-mail, by SMS text message or via Our web site. If you do not wish to receive this information, please tick the box but remember that this shall preclude you from receiving any of Our special offers or promotions. We shall, of course, continue to inform you about any important changes to the Terms under which your account/service is operated. <input type="checkbox"/>
9.2. You understand that you can request in writing, by telephone, by fax and/ or e-mail not to receive any details of Santander Corporate Banking's products and services. Communications should be addressed to The Manager, Customer Accounts Services, Santander Corporate Banking, Bridle Road, Bootle, L30 4GB.
<b>10. INTERPRETATION</b>
10.1. The headings to the clauses of these Terms are for ease of reference only and shall not affect the interpretation or construction of these Terms.

**Figure 9:** A UK bank had a hidden checkbox buried in the terms of service.



## Interface Interference

*“Manipulation of the user interface that privileges specific actions over others, thereby confusing the user or limiting discoverability of important action possibilities.”*  
(Gray et al., 2018)

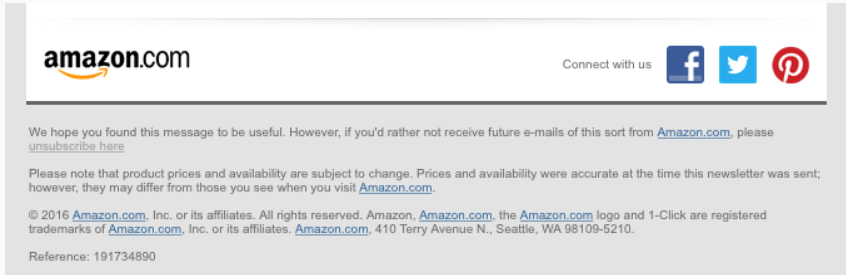
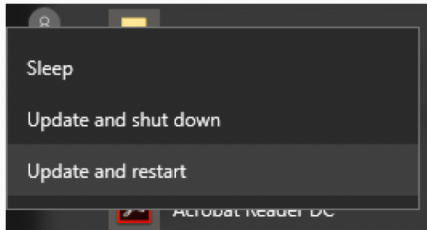


Figure 10: Grey text on grey background for the “Unsubscribe” link on Amazon.

- “any situation in which users are required to perform a specific action to access (or continue to access) specific functionality”. (Gray et al., 2018)
- Often disguised as something that will benefit the user or as a “required” step in the process.



**Figure 11:** Windows forces users to restart their computer after installing updates.

How can we defend against  
deceptive design?

---

*How can we defend against deceptive design?*

- As HCI researchers, UX designers and developers, we have a responsibility to consider the ethical implications of our work.
- A balance must be struck between the needs of the user and the needs of the business.
- When does a design become deceptive versus a design that is simply trying to maximise success?
- Who decides what is deceptive and what is not?



## Chinese Law and Deceptive Design

I'm keen to develop a better understanding of the Chinese legal system and how it relates to deceptive design. If you have any resources or suggestions, please let me know!

- Naturally, we may turn to the legal system to help us regulate deceptive design. However, it is difficult to legislate against deceptive design - it is often subjective and difficult to prove.

- In the UK, the Consumer Rights Act 2015 states that:
  - “A business must not mislead consumers by hiding material information or presenting it in an unclear, unintelligible, ambiguous or untimely manner.”
  - What is “material information”?
    - “information that the consumer needs to make informed decisions in relation to a product”.
- The European Commission is introducing laws specifically targeting deceptive design:
  - “The EU says that, as a rule, cancelling subscriptions should be as easy as signing up for them.”

## References

---



## Recommended Reading

- The Design of Everyday Things by Donald Norman
  - <https://mitpress.mit.edu/9780262640374/the-design-of-everyday-things/>
- NNGroup's Articles:
  - <https://www.nngroup.com/articles/>
- Harry Brignull's Website on Deceptive Design:
  - <https://www.deceptive.design>
- Practitioner-identified examples of deceptive design:
  - <https://darkpatterns.uxp2.com>

Brignull, H. (2013). Dark patterns: Inside the interfaces designed to trick you. *The Verge*, 29.

Gray, C. M., Kou, Y., Battles, B., Hoggatt, J., & Toombs, A. L. (2018). The dark (patterns) side of UX design. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1–14.