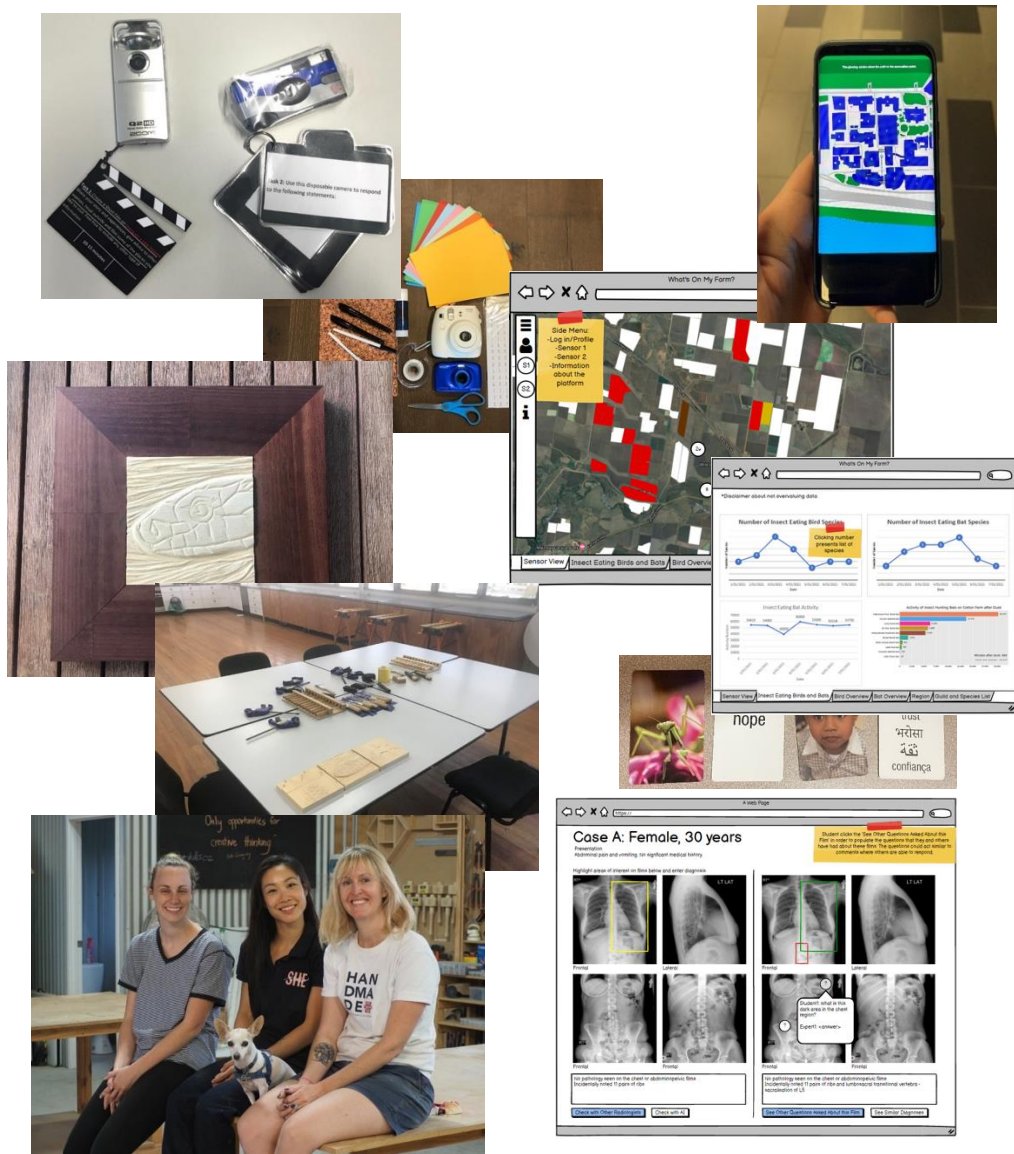


Human-Centred Design: Process, Ethics & Inclusivity

Dr Tara Capel

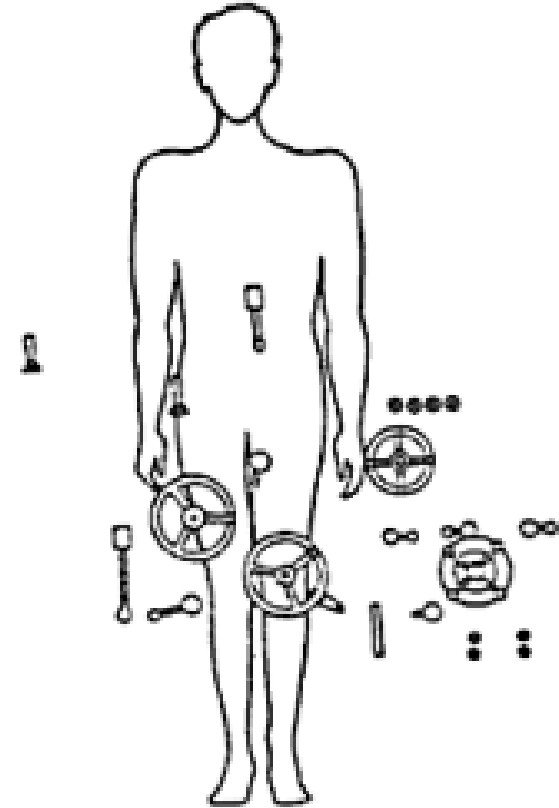
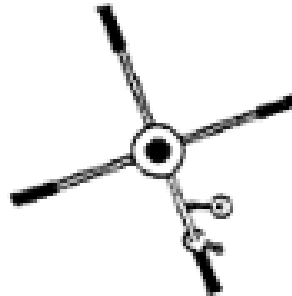
Lecturer in Design Informatics, University of Edinburgh

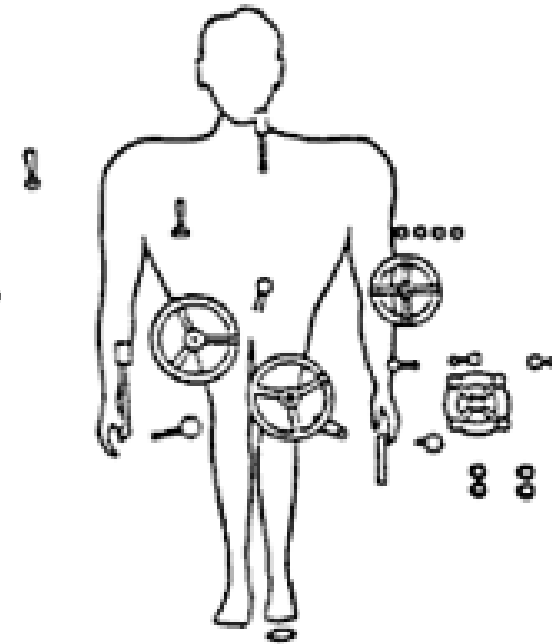
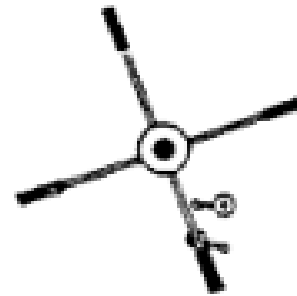


About Me

- Lecturer in Design Informatics
- PhD Human-Computer Interaction
- UX Researcher and Designer

Key Concepts of Human-Centred Design





The controls of a lathe in are not within easy reach of the average man, but are so placed that the ideal operator should be 137 cm (4.5ft) tall, 61cm (2 ft) across the shoulders and have an arm span of 234cm (8ft). (Pheasant, 1986)

Technology-centric design --> **human-centred design**

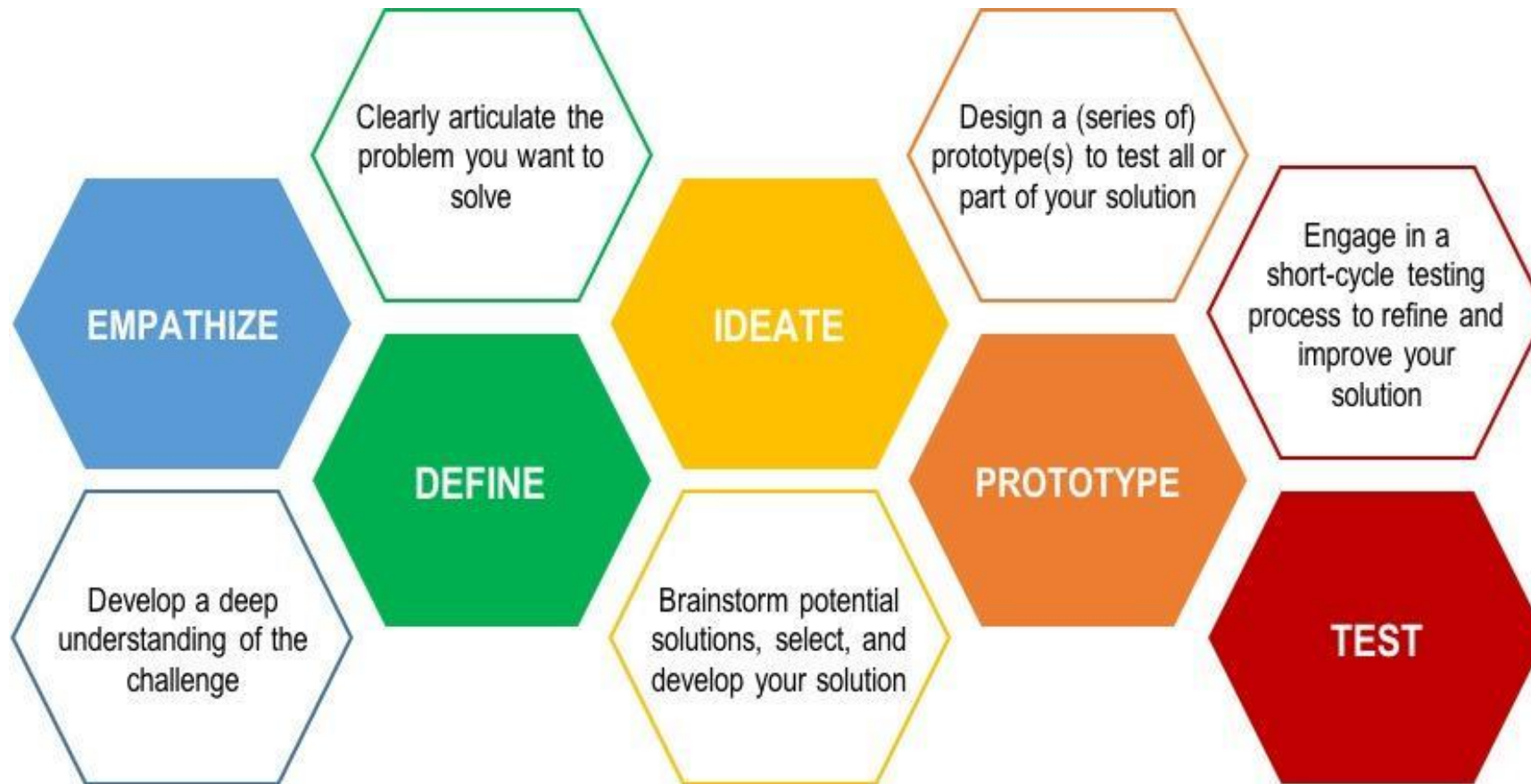
Principles of Human-Centred Design

(also known as *User-Centred Design*, *User Experience Design*, *Design Thinking*)

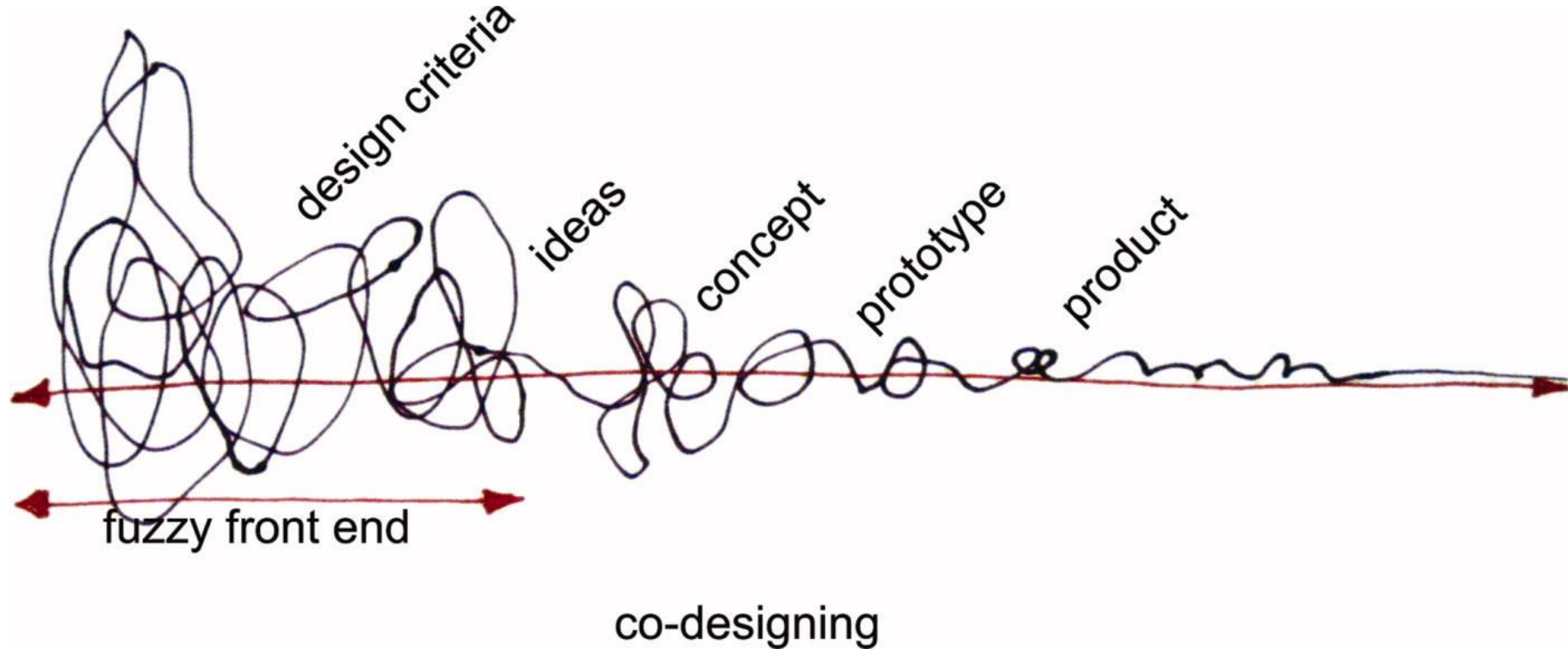
- **Human-centred:** focused on people, activities and context from the project start
- **Participative:** involving target users as members of the design team
- **Empirical:** evaluating usability and user experience in trial studies with end users
- **Iterative:** designing, evaluating, and redesigning as a regular cycle until results satisfy the user experience needs
- **Integrated:** (agile) software development, marketing, training, websites, ...

How to apply HCD in practice

Human-Centred Design (Stanford model)



Human-Centred Design Process in the Real World



Sanders EB, Stappers PJ. Co-creation and the new landscapes of design. Co-design. 2008 Mar 1;4(1):5-18 <https://doi-org.ezp01.library.qut.edu.au/10.1080/15710880701875068>

Co-Designing with Women at a Community Centre



Self-Reporting Probe Kits

- Collaborated with a non-profit community centre
- 15 women were given camera packs with video camera, disposable camera and prompts



Findings

- Participants engaged in making activities, such as knitting and craft, to support wellbeing
- Participants had stories, experiences and advice they wished to share with other women

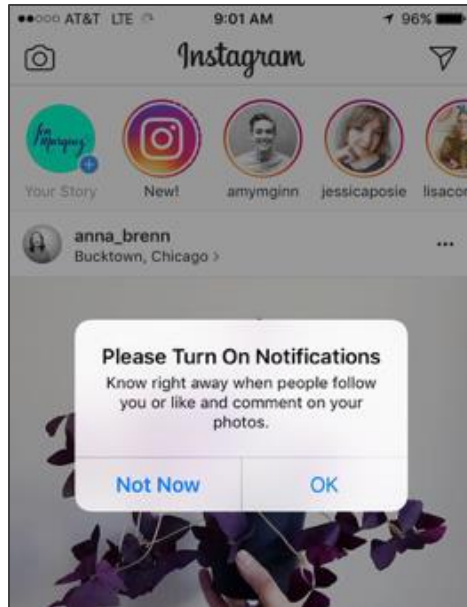


Design Implications

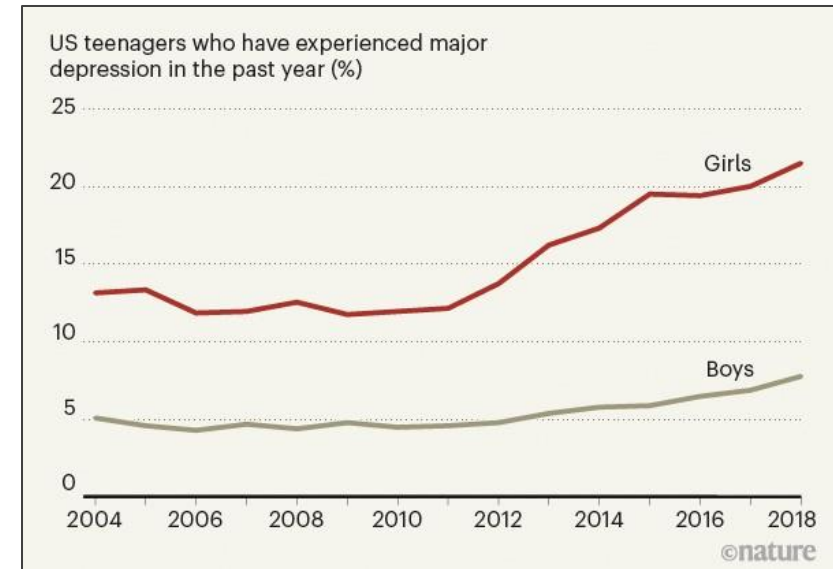
- Participants suggested an online community platform within a women-only space
- Tried the creation of an e-zine

Human-Centred Design and Ethics

There is also a dark side of human-centred design



- Dark patterns of UX design trick users into doing things that benefits the company rather than the user, like turning on notifications
- <https://darkpatterns.uxp2.com/pattern/instagram-no-option-for-no/>
<https://www.deceptive.design/>



- UX design is essential in social media to drive engagement and to make a profit. But there is a hidden cost to our wellbeing, such as an increase in the rates of depression, anxiety and self-harm
- <https://www.nature.com/articles/d41586-020-00296-x>

Examples of Dark Patterns

Confirm Shaming

LOFT

WE'RE GIVING YOU

30% OFF*

YOUR FULL-PRICE PURCHASE

Enter Your Email Here

GET MY 30% OFF

NO THANKS, I PREFER TO PAY FULL PRICE

*VALID IN US ONLY | EXCLUSIONS APPLY

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You'll be notified about the latest tips, sales, and discounts, so you and everyone you know can stay alive.

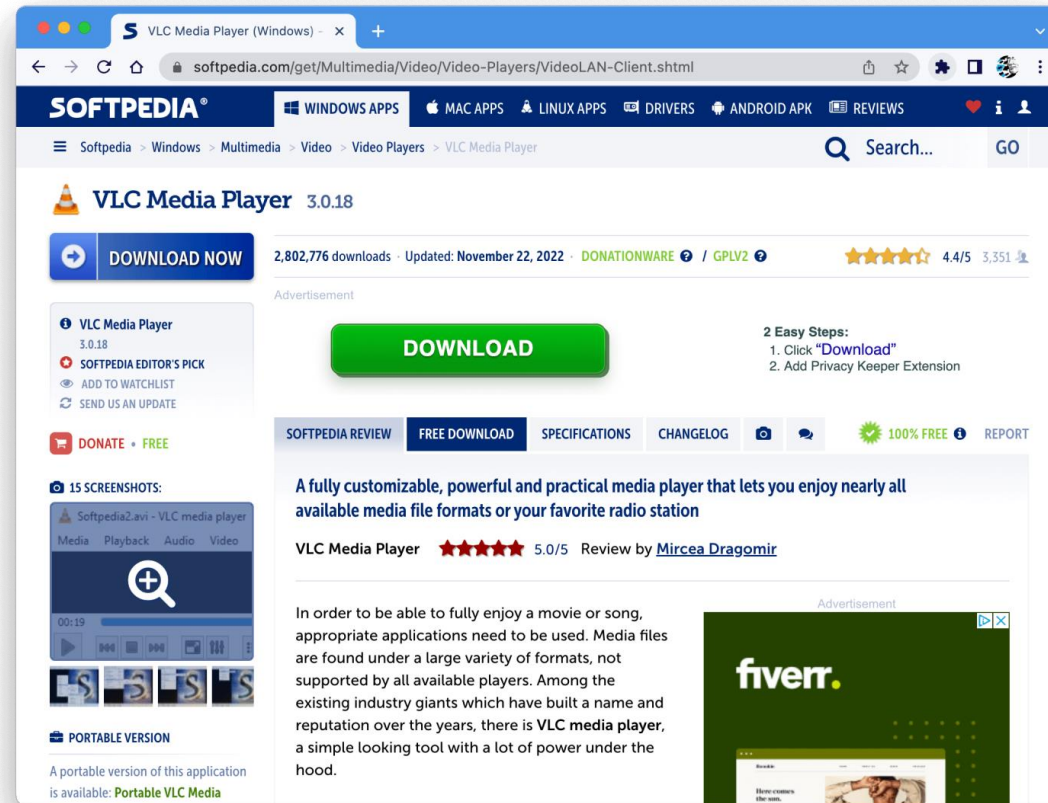
no, I prefer to bleed to death [Allow](#)

LORE ▾

<https://uxbooth.com/articles/ux-dark-patterns-manipulinks-and-confirmshaming/>

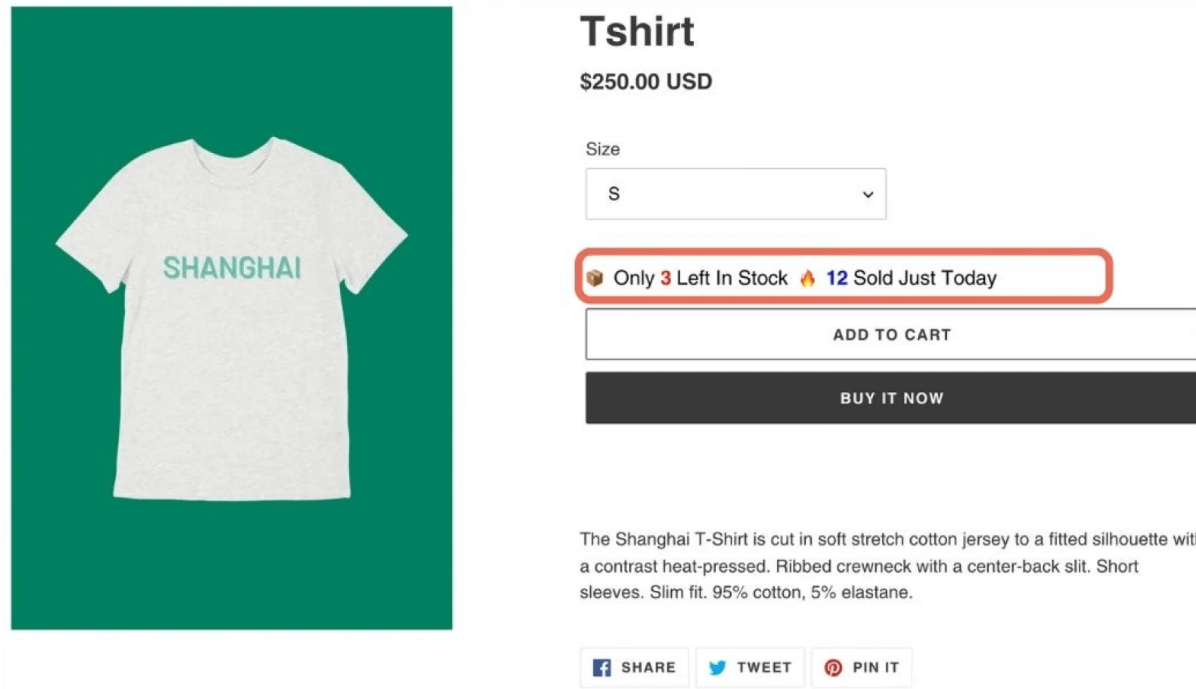
<https://www.deceptive.design/types/confirmshaming>

Disguised Ads



<https://www.deceptive.design/types/disguised-ads>

Fake Scarcity/FOMO



<https://www.deceptive.design/types/fake-scarcity>

Fake Urgency

Hurry up! Sale ending in:

00 11 59 46

Days

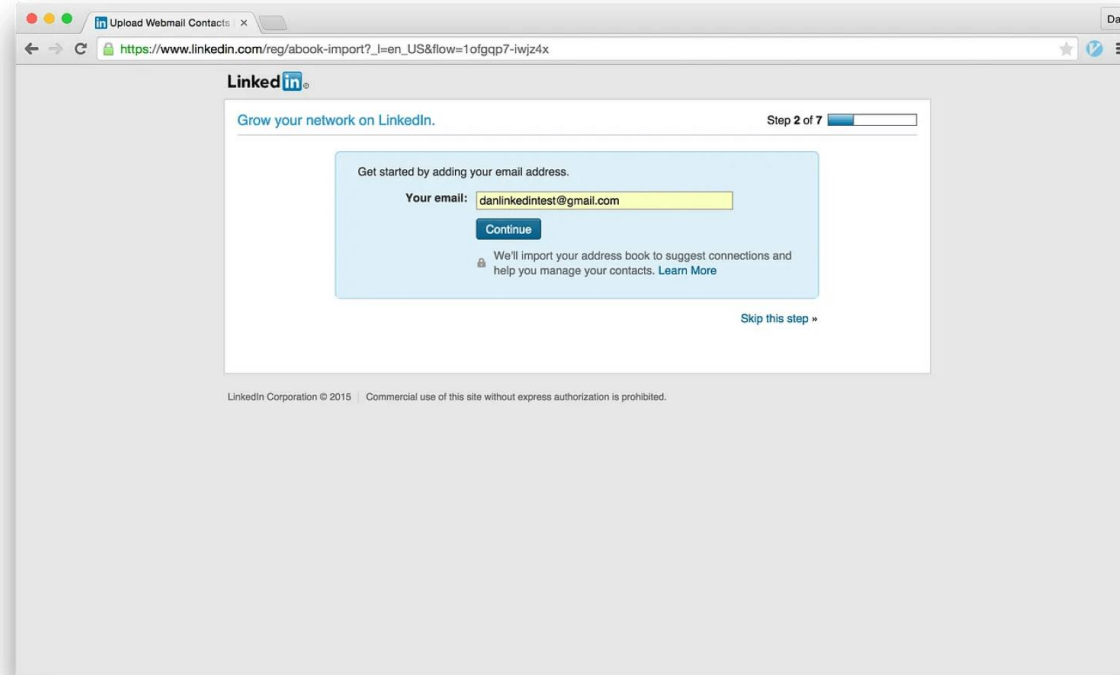
Hrs

Mins

Sec

Sale Ends Once The Timer Hits Zero!

Forced Action



<https://www.deceptive.design/types/forced-action>

Hard to Cancel/Roach Motel

The New York Times

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If you are on the monthly payment plan, we will stop charging your account starting next month. If you are on the annual payment plan, you will receive a prorated refund.

[See cancellation policy »](#)

What happens to my account?

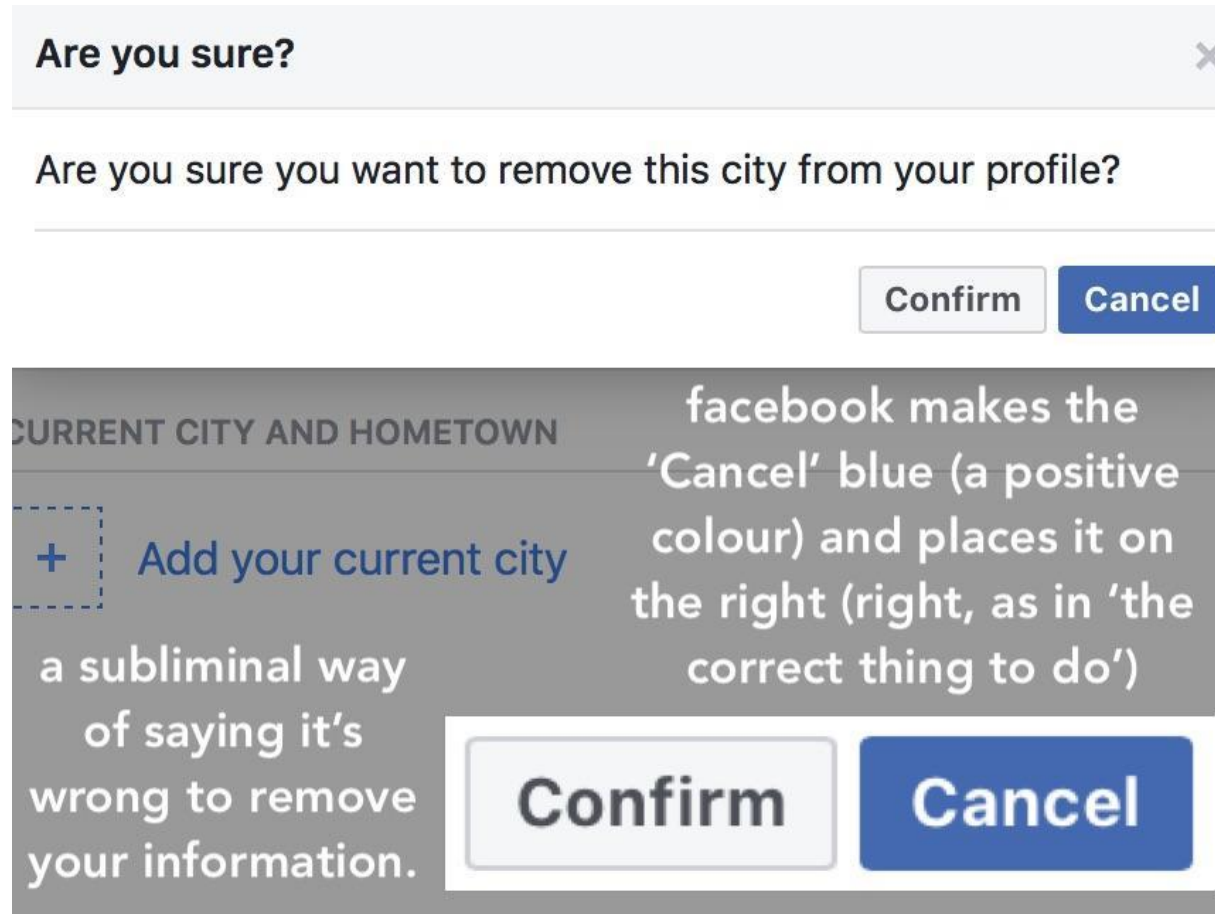
You will continue to have unlimited access for any remaining time on your pre-paid billing cycle. Thereafter, you can access NYTimes.com as a visitor and read limited articles each month for free. To receive unlimited articles each month you will need to re-subscribe.

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Hard to Cancel/Roach Motel



https://www.reddit.com/r/darkpatterns/comments/9g8rnk/facebook_makes_the_'Cancel'_blue_a_positive_colour_and_places_it_on_the_right_right_as_in_'the_correct_thing_to_do'/

Obstruction

facebook



← BACK



Required: Review your data settings

Personal data laws are changing in the European Union, and we want to make it easy for you to view some of your data settings.

Please take a few minutes to review these updates and make choices about some specific data settings.

Here's what we'll ask you to review:

- How we use personal data from advertisers, app developers and publishers to show you relevant ads
- An option for turning on face recognition
- Our updated Terms, Data Policy and Cookie Policy

GET STARTED

We show you better ads by using data from advertisers, app developers and publishers

We care about protecting your privacy. We don't sell your data, and we've designed our ad system so that we can show you relevant and useful ads without telling advertisers who you are. To show you better ads, we use data that advertisers, app developers and publishers provide us about your activity off Facebook Company Products. This data includes your use of these partners' websites and apps, and certain offline interactions with them, such as purchases. You control whether we use this data to show you ads. To confirm that we can use this data to decide which ads to show you, select Accept and Continue. If you don't want us to use this data to decide which ads to show you, select Manage Data Settings.

MANAGE DATA SETTINGS

ACCEPT AND CONTINUE

You control whether we use data from partners to show you ads

Data from advertisers, app developers and publishers about your activity off Facebook Company Products helps us show you relevant and useful ads. It includes your use of these partners' websites and apps, and certain offline interactions with them, such as purchases.

This setting applies to ads that we show you across Facebook Company Products, including Facebook and Instagram, as well as on websites, apps and devices that use our advertising services.

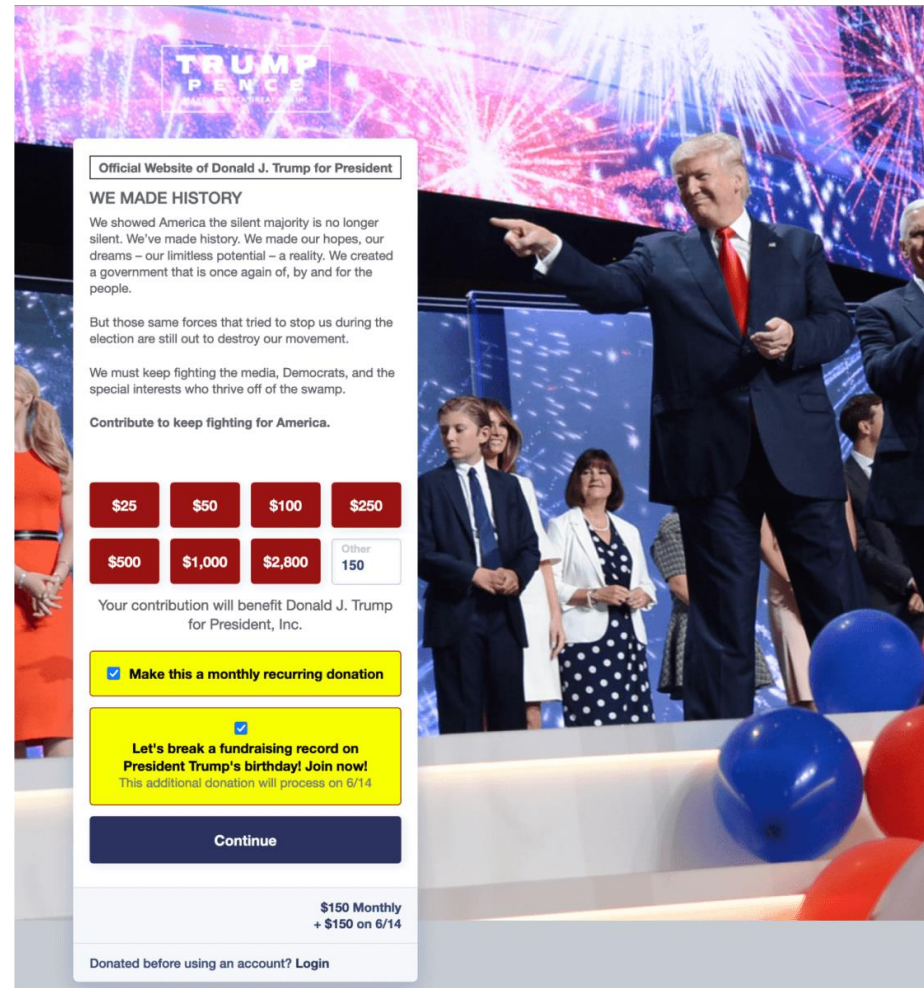
Ads based on data from partners:

Allowed
Ads will be more relevant to you

☒

SAVE

Preselection



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Official Website of Donald J. Trump for President

WE MADE HISTORY

We showed America the silent majority is no longer silent. We've made history. We made our hopes, our dreams – our limitless potential – a reality. We created a government that is once again of, by and for the people.

But those same forces that tried to stop us during the election are still out to destroy our movement.

We must keep fighting the media, Democrats, and the special interests who thrive off of the swamp.

Contribute to keep fighting for America.

\$25 **\$50** **\$100** **\$250**

\$500 **\$1,000** **\$2,800** Other
150

Your contribution will benefit Donald J. Trump for President, Inc.

☒ **Make this a monthly recurring donation**

☒ **Let's break a fundraising record on President Trump's birthday! Join now!**
This additional donation will process on 6/14

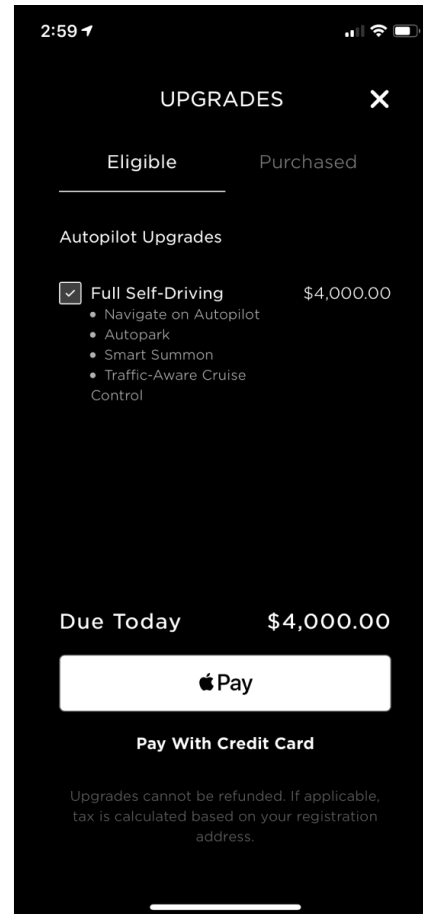
Continue

\$150 Monthly
+ \$150 on 6/14

Donated before using an account? [Login](#)

<https://www.deceptive.design/types/preselection>

Visual Interference



<https://www.deceptive.design/types/visual-interference>

Activity

- On the next slide are 2 screenshots of real-life interfaces using dark patterns
- Work in pairs to identify the dark patterns in each example and suggest how they would redesign them to be more ethical
- Class discussion

⌵ Just Died In Your Arms - YouT... Content Class Collaborate - Week 1 - rec... Membership Cancellation Request

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<https://www.reddit.com/r/assholedesign>



Allow Instagram to use your app and website activity?

To provide a better ads experience, we need permission to use future activity that other apps and websites send us from this device. This won't give us access to new types of information. [Learn more](#) about how we limit our use of your activity if you turn off this device setting, and related settings on Instagram.

Make Ads Less Personalized

Make Ads More Personalized

Inclusive and Accessible Design

Inclusive and Accessible Design

- **Inclusive Design** –
a design methodology that enables and draws on the full range of human diversity
- **Accessibility** –
the qualities that make an experience open to all
- If we start the design process from our own abilities and biases, we end up with products designed for people of a specific gender, age, language ability, tech literacy and physical ability
- Designing for inclusivity opens up products and experiences to more people with a wider range of abilities

Inclusive Design Principles

- **Recognise Exclusion** –
exclusion can occur when we design from our own biases, we are responsible for knowing when our designs cause exclusion
- **Learn from Diversity** –
people adapt to different situations, understanding these adaptations is the key to real insights
- **Solve for one, extend to many** –
inclusive design connects different people who have similar circumstances, consequently benefitting a wider range of people

The Role of Human-Centred Design

- Inclusive and accessible design highlights the importance of user research to gain insights into diverse user groups
- Through human-centred design we can understand users' needs and challenges
- Encourages empathy to design with end-users in mind, considering their diverse backgrounds, abilities and preferences
- Emphasises the role of user testing and iterative design to ensure inclusivity
- Encourages collaboration and feedback from diverse user groups throughout the design process

Accessibility Guidelines and Standards

- Web accessibility standards: Web Content Accessibility Guidelines (WCAG)
- Principles:
 - Perceivable – UI components and information are presented in a way that people can perceive
 - Operable – UI components and navigation are operable
 - Understandable – operation of UI and information is understandable
 - Robust – content can be interpreted reliably by a wide variety of end-users, including assistive tech
- Guidelines and Success Criteria
- Sufficient and Advisory Techniques
- All of these layers work together to provide guidance on making web content more accessible

References:

<https://www.w3.org/TR/WCAG21/>

Activity

- Prompt: for 2 minutes think of an example of a time you had difficulty with a technology/interface/something else
- In groups of 4-5 pick from the examples discussed and identify issues of accessibility and inclusion
- Answer the following questions:
 - What could the lack of an accessible option cause? What could be the consequences for the user?
 - How could the design be made more inclusive? Or how might you redesign the technology altogether?
- Class discussion

Questions?