/// THIS IS A LIVING DOCUMENT /// If you'd like a copy of the presentation, please let me know! I'm happy to share it. But, just note that this material is a living body of work that is always in progress.

THE

### Defensive Design Guide

Kiran Wattamwar



WHO AM I?

### Kiran Wattamwar

Privacy and Civil Liberties Engineer

@ Palantir Technologies



WHO AM I?

### Kiran Wattamwar

Privacy and Civil Liberties Engineer

@ Palantir Technologies

aka a professional "issue spotter"

# "Design is a problem-solving activity."

- PAUL RAND

# All decisions are an expression of design.

# Design helps us create principled solutions.

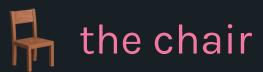
# Design helps us create principled solutions.

Good design is considerate of aesthetics, usability, discoverability, data scale, performance, consistency...

### Design helps us create biased solutions.

When we choose to prioritize something in our solutions, we encode a bias we have about what makes a "good" solution.

#### Let's consider a canonical design primitive:





**CASE STUDY** 

You're tasked to design a chair.



What are you going to build? Well, that depends.



#### You'll probably follow up with questions like...

Who is this for?

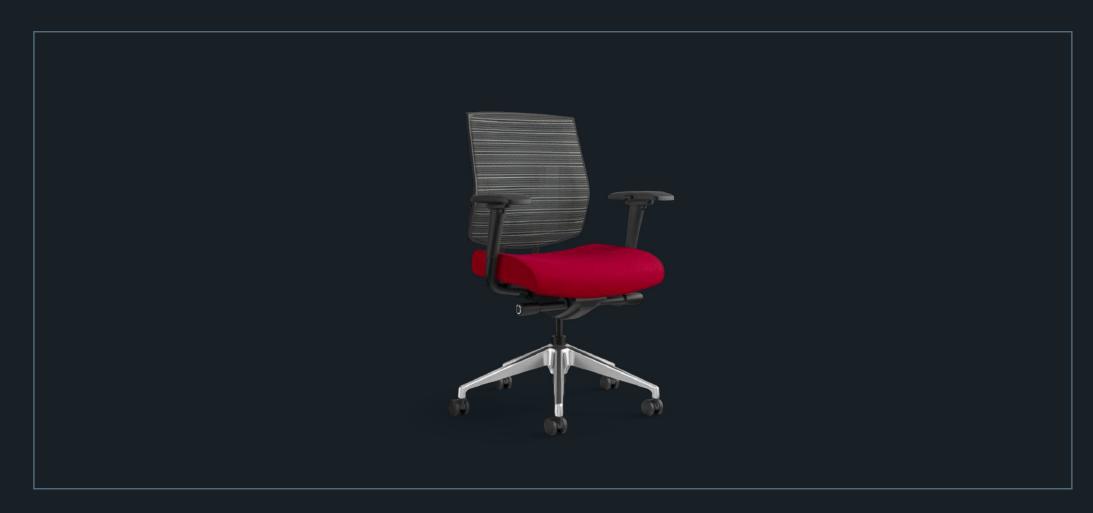
In what context will it be used?

What materials are available to me?

What's the timeline like?



THE BASIC CHAIR



THE OFFICE CHAIR

Ergonomic, universal (customizable), portable



THE CHAISE LOUNGE

Comfortable, made for one



THE POOL CHAIR

Waterproof, slats for drainage



THE CONVERTIBLE CHAIR

Form informed by the ability to expand/collapse



#### CHAIR NOT MEANT FOR SEATING

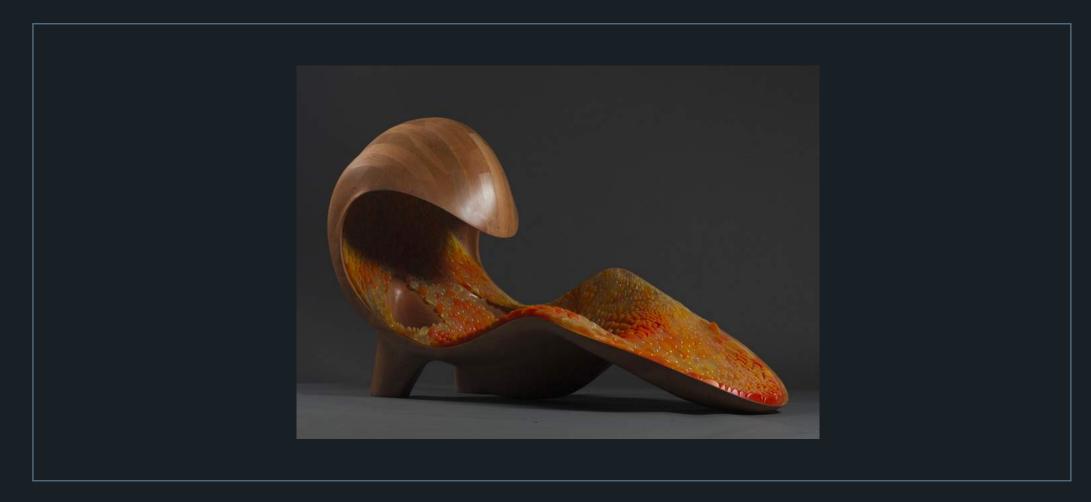
A perfectly comfortable ledge, made hostile with an obstruction



#### PAIMIO CHAIR, ALVARO ALTO

For the Paimio TB Asylum

\* He considered the building a "medical instrument" for healing.



NERI OXMAN'S GEMINI CHAIR

3d printed, designed specifically for her



#### EAMES CHAIR

for a low cost furniture competition



EMECO STACKING CHAIR

Commissioned for tight spaces on Navy ships



GOLD MEDAL CAMP FURNITURE CO.DIRECTORS CHAIR

Portable



The design of each of these chairs is heavily coupled with the context they were designed to operate within.

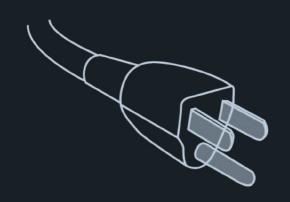


#### We reach for different chairs at different times.

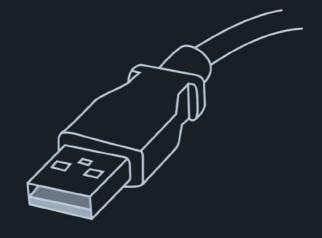
And the form, fixtures, materials, and aesthetics all work towards customizing each chair to respond to its corresponding needs well.

# Design helps us create principled solutions.

What if the principle is ensuring that these solutions reduce human error?







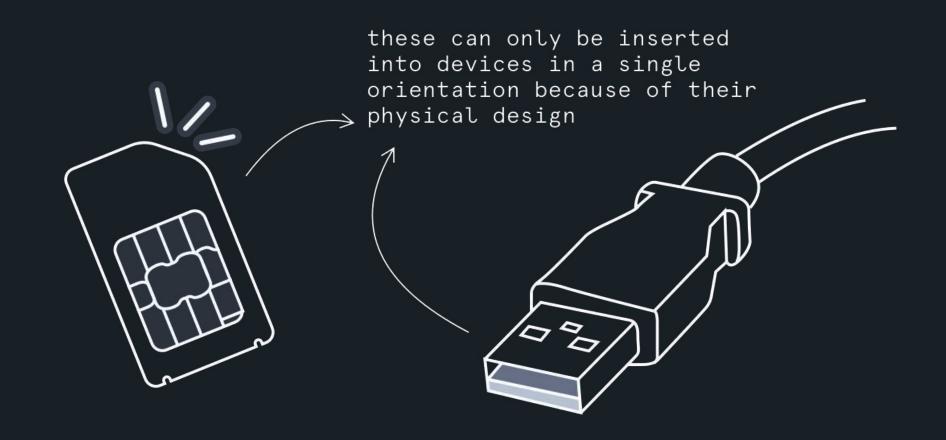
### Poka-Yoke Mistake-proofing



SHIGEO SHINGO Industrial Engineer

#### **The Contact Method**

Use physical attributes of something (like its color, size, weight, shape) to prevent its misuse



Let's pivot ...

# What if we sought to reduce harm in our design practice?

What if we designed defensively for this purpose?

#### There are many related design methodologies...

Human-centered Design

Ethically-aligned Design

Privacy by Design

Inclusive Design + Universal Design

Context-sensitive Design

Value-sensitive Design

• • •

#### Even similar methodologies in other disciplines...

Journalistic ethics

Medical ethics

Even economics (Consider Donut Economics)

So how should we collectively define design ethics?

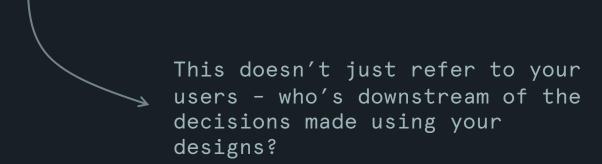
### What's the process?

PRINCIPLE 1

Design to sustain, heal, and empower our communities, as well as to seek liberation from exploitative and oppressive systems.

Does your design context depend on exploitative or oppressive systems? PRINCIPLE 2

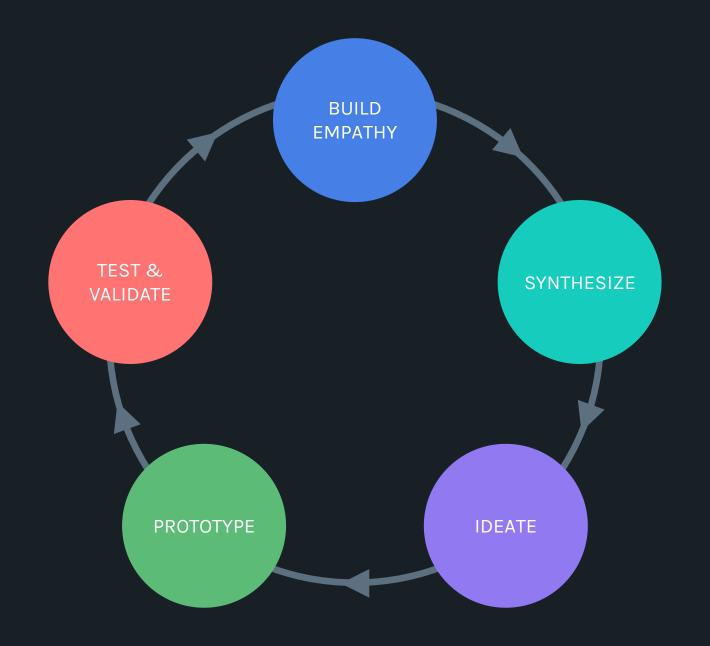
### Center the voices of those who are directly impacted by the outcomes of the design process.

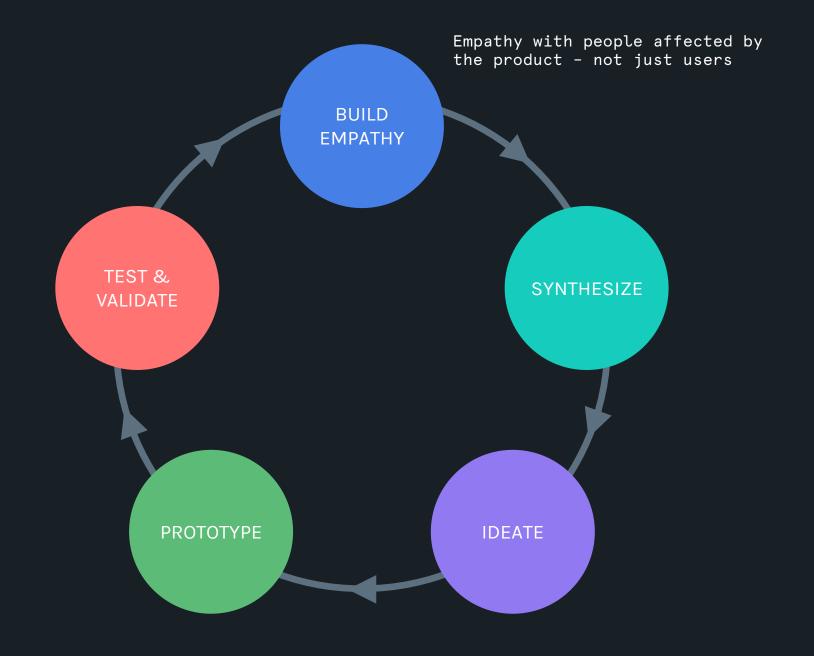


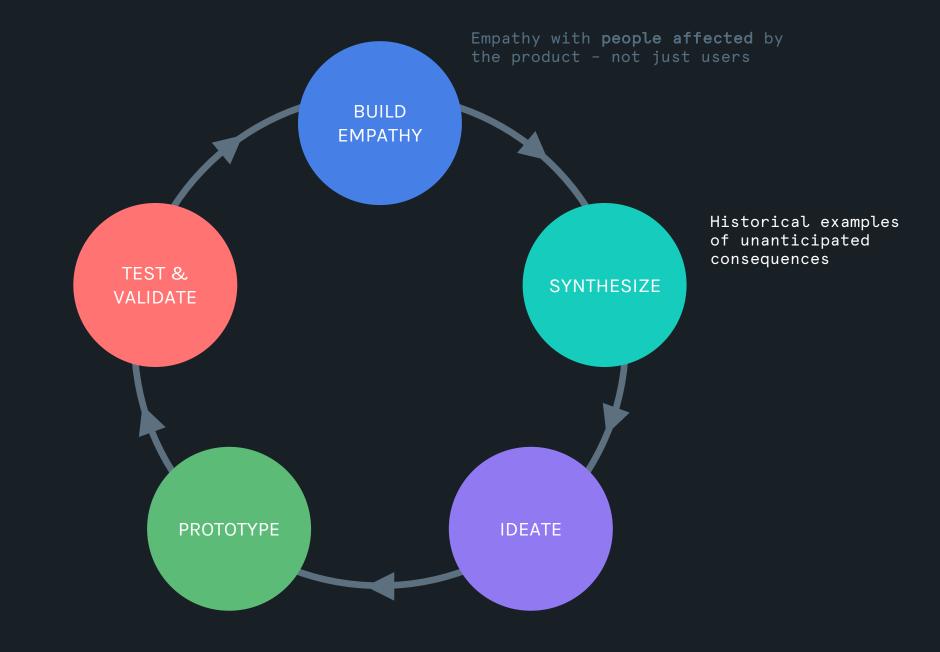
PRINCIPLE 3

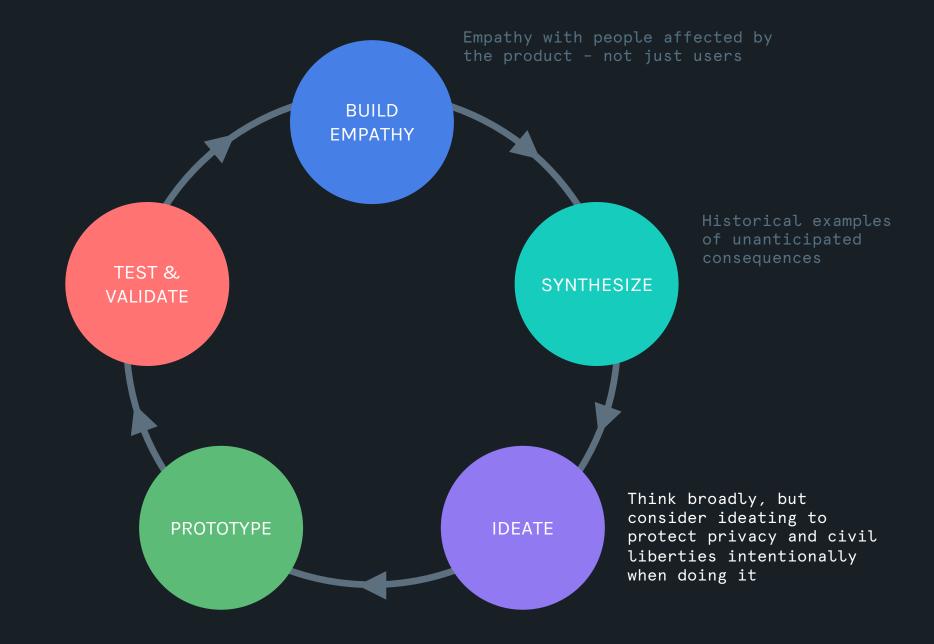
Prioritize design's **impact on the community** over the intentions of the designer.

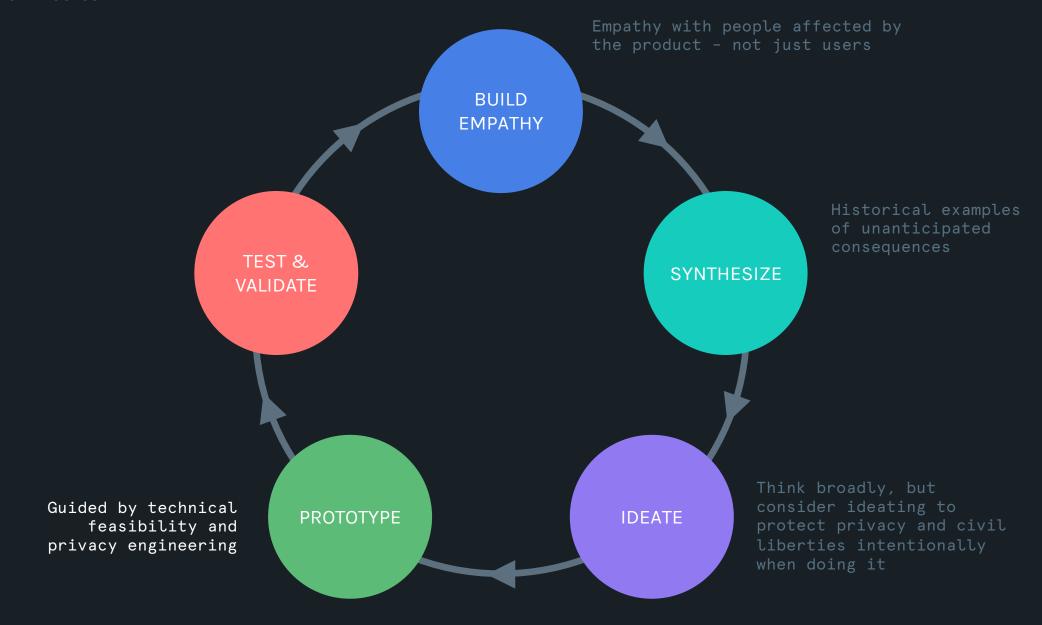
Even if we carry positive intent, are the outcomes of our design choices as expected?

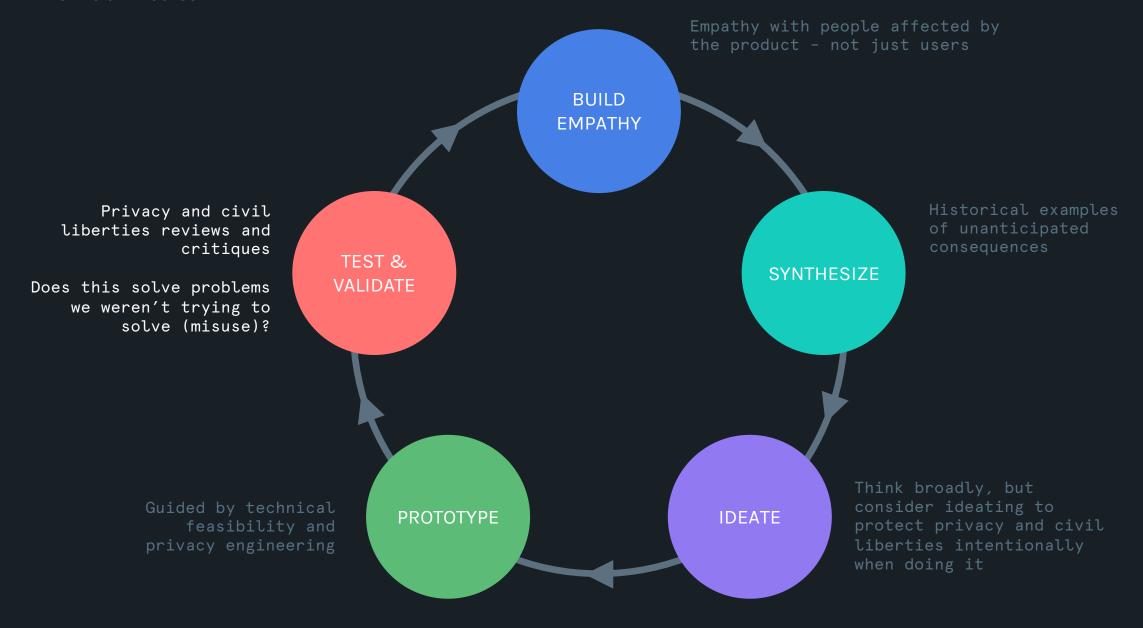












# Case Studies

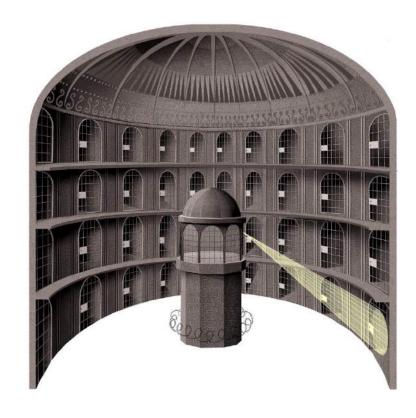
on how design can be used to protect against misuse, privacy intrusions, and the erosion of agency

PART 1

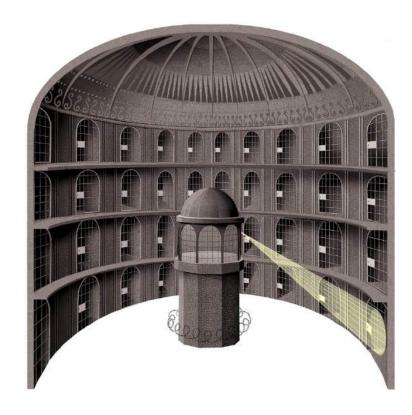
# Surveillance

designing for privacy





Design can profoundly impact the way people live and act. Consider Jeremy Bentham's Panopticon.



Bentham's panopticon was created to maximize surveillance and minimize inmate privacy.

This prison design features a central watch tower, and though guards cannot watch all inmates at once, the inmates cannot identify if they are being watched, impacting their behavior.

# "new mode of obtaining power of mind over mind"

Jeremy Bentham

#### **US** immigration

• This article is more than 2 months old

# "Traumatizing and abusive": Immigrants reveal personal toll of ankle monitors

While Biden defends electronic bands as alternative to detention, advocates urge proper legal help for immigrants show up to court

#### Sarah Betancourt

**☞@sweetadelinevt**Mon 12 Jul 2021 10.03 EDT









#### Most viewed



US Afghanistan withdrawal a 'logistical success but strategic failure', Milley says



Squid Game: the hellish horrorshow taking the whole world by storm



Gibraltar cave chamber discovery could shed light on Neanderthals' culture

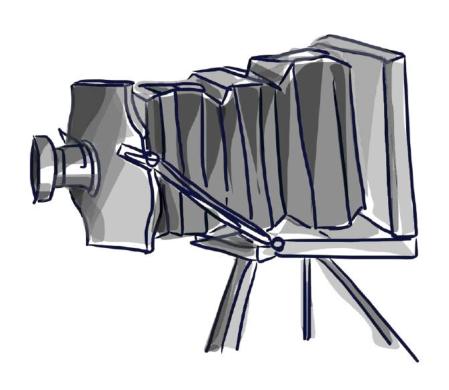


Surreal scenes and broken dreams: 2021's best street photography - in pictures



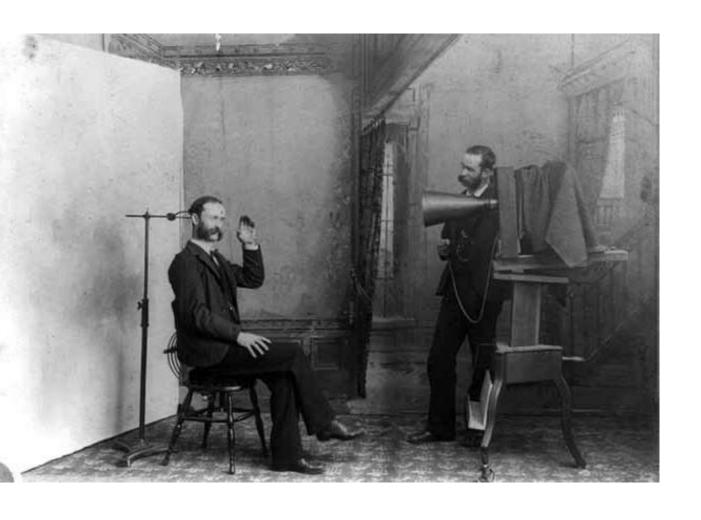
Judge rules in Wisconsin teen's favor after sheriff threatened jail over Covid post

# All decisions are ultimately expressions of design.



#### A CASE STUDY

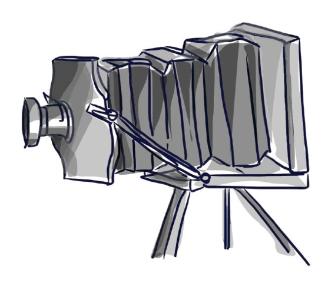
Let's dig deeper into a specific example of how design transforms a system, and its broad impacts.



Before digital imagers, exposures could take several minutes (even hours).

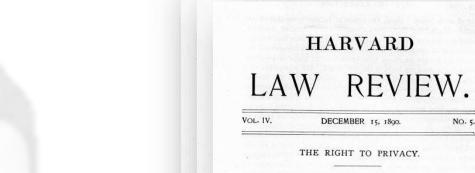
The subject of a photograph needed to stay still for just as long, making the photography of passing strangers in public virtually impossible.

Commissioned photographs were expensive, elaborate, and private events.



With digital cameras, exposure was instantaneous. Portable cameras made capturing private persons easier, and could lead to the circulation of private information without consent.

Samuel Warren and Justice Brandeis speak about this in The Right to Privacy



"It could be done only on principles of private justice, moral fitness, and public convenience, which, when applied to a new subject, make common law without a precedent; much more when received and approved by usage."

WILLES, J., in Millar v. Taylor, 4 Burr. 2303, 2312.

THAT the individual shall have full protection in person and in property is a principle as old as the common law; but it has been found necessary from time to time to define anew the exact nature and extent of such protection. Political, social, and economic changes entail the recognition of new rights, and the common law, in its eternal youth, grows to meet the demands of society. Thus, in very early times, the law gave a remedy only for physical interference with life and property, for trespasses vi et armis. Then the "right to life" served only to protect the subject from battery in its various forms; liberty meant freedom from actual restraint; and the right to property secured to the individual his lands and his cattle. Later, there came a recognition of man's spiritual nature, of his feelings and his intellect. Gradually the scope of these legal rights broadened; and now the right to life has come to mean the right to enjoy life, - the right to be let alone; the right to liberty secures the exercise of extensive civil privileges; and the term "property" has grown to comprise every form of possession - intangible, as well as tangible.

Thus, with the recognition of the legal value of sensations, the protection against actual bodily injury was extended to prohibit mere attempts to do such injury; that is, the putting another in



"Recent inventions and business methods call attention to the next step which must be taken for the protection of the person, and for securing to the individual what Judge Cooley calls the right "to be let alone."

Instantaneous photographs and newspaper enterprise have invaded the sacred precincts of private and domestic life; and numerous mechanical devices threaten to make good the prediction that "what is whispered in the closet shall be proclaimed from the house-tops."

Samuel D. Warren and Justice Brandeis

Source:
Warren and Brandeis,

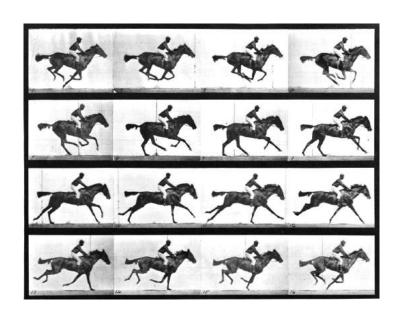
"The Right to
Privacy", Harvard
Law Review 193
(1890)

"[B]ut now that modern devices afford abundant opportunities for the perpetration of such wrongs without any participation by the injured party, the protection granted by the law must be placed upon a broader foundation. While, for instance, the state of the photographic art was such that one's picture could seldom be taken without his consciously "sitting" for the purpose, the law of contract or of trust might afford the prudent man sufficient safeguards against the improper circulation of his portrait; but since the latest advances in photographic art have rendered it possible to take pictures surreptitiously, the doctrines of contract and of trust are inadequate to support the required protection, and the law of tort must be resorted to."

Samuel D. Warren and Justice Brandeis

Source:
Warren and Brandeis,

"The Right to
Privacy", Harvard
Law Review 193
(1890)



The invention of the camera accelerated exposure time to less than a second, capturing events that were otherwise hard to capture (think Muybridge's stills of the horse), and extended the use of the camera to the public realm, where instant photographs did not need to be staged.



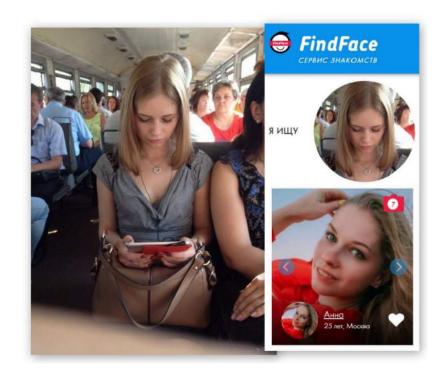
Camcorders made these records richer.

But with videos capturing audio recordings by default, they became tools that could potentially capture private conversations in the public realm.

They could unwittingly capture others passing by, merely because they existed in public spaces.



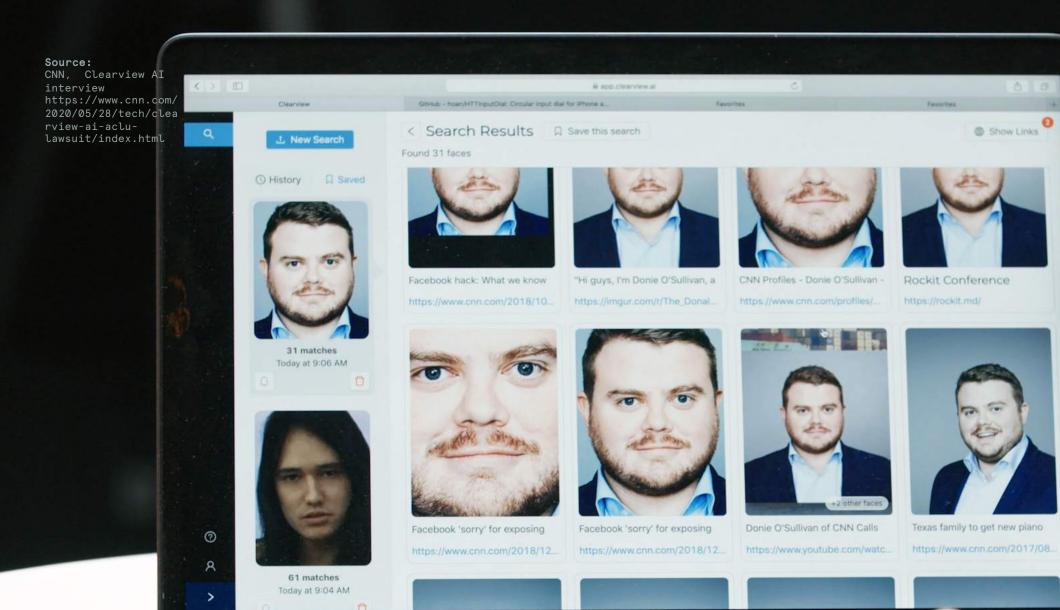
And then we started carrying them in our pockets, and taking them with us.



FindFace applies face recognition on images of people, which can be taken in public spaces without the consent of the photograph's subject.

# What does it mean to have "the right to be let alone?"

Source:
Shaun Walker,
Face recognition app
taking Russia by
storm may bring end
to public anonymity,
The Guardian,
May 17, 2016
https://www.theguardi
an.com/technology/201
6/may/17/findfaceface-recognition-append-public-anonymityvkontakte



MacBook Pro



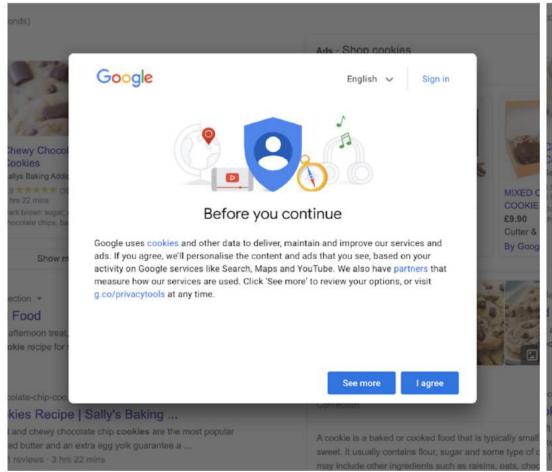
This is not to say that digital cameras are net bad.

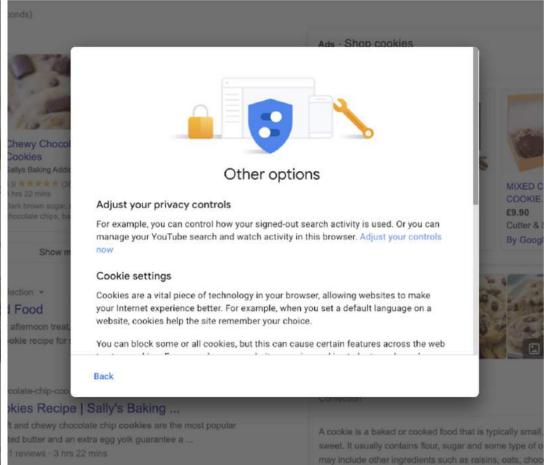
But they do come with a new culture of norms, new expectations of privacy, and new risks.

Surveillance and its potential privacy harms are often discrete, especially when they lack explicit consent mechanisms.

But even when there is an opt-in process, is consent meaningful?

## Is this meaningful consent? / All or nothing Google Cookies





## Is this meaningful consent? / YouTube

Click "Customize" to review options, including controls to reject the use of cookies for personalization and information about browser-level controls to reject some or all cookies for other uses. You can also visit g.co/privacytools anytime.

CUSTOMIZE

**I AGREE** 





#### Before you continue to YouTube

Google uses cookies and data to:

- Deliver and maintain services, like tracking outages and protecting against spam, fraud, and abuse
- Measure audience engagement and site statistics to understand how our services are used

If you agree, we'll also use cookies and data to:

- Improve the quality of our services and develop new ones
- · Deliver and measure the effectiveness of ads
- Show personalized content, depending on your settings
- Show personalized or generic ads, depending on your settings, on Google and across the web

For non-personalized content and ads, what you see may be influenced by things like the content you're currently viewing and your location (ad serving is based on general location). Personalized content and ads can be based on those things and your activity like Google searches and videos you watch on YouTube. Personalized content and ads include things like more relevant results and recommendations, a customized YouTube homepage, and ads that are tailored to your interests.

Click "Customize" to review options, including controls to reject the use of cookies for personalization and information about browser-level controls to reject some or all cookies for other uses. You can also visit g.co/privacytools anytime.

CUSTOMIZE

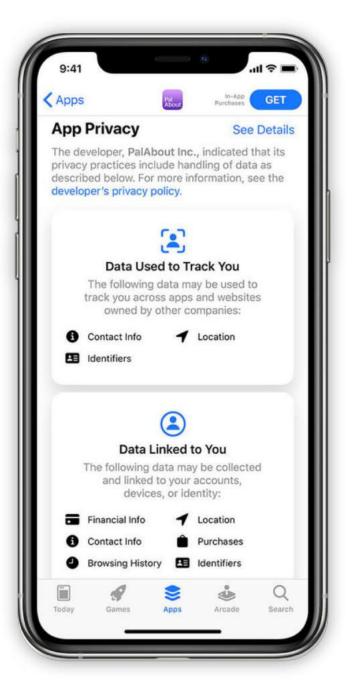
I AGREE

English V Privacy Policy Terms of Service

Apple "Nutrition" Privacy Labels

What context does someone need to be able to provide meaningful consent for digital surveillance?

Is this even sufficient?



### Signal

### iMessage



### WhatsApp

Analytics		App Functionality					
è	Purchases		Purchases				
	Purchase History		Purchase History				
7	Location	=	Financial Info				
	Coarse Location		Payment Info				
0	Contact Info	4	Location				
	Phone Number		Coarse Location				
6	User Content	0	Contact Info				
Ī	Other User Content		Email Address Phone Number				
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	Device ID		Contacts				
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	Product Interaction		Customer Support Other User Content				
	Advertising Data	_					
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	Crash Data Performance Data		Device ID				
	Other Diagnostic Data	ul	Usage Data				
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			Performance Data				
			Other Diagnostic Data				

### Facebook Messenger

Third-Party Advertising		Analytics		Product Personalisation		App Functionality		Other Purposes		
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	Browsing History		Other User Content		Browsing History		Gameplay Content	-	Browsing History	
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## Signal

#### **iMessage**

#### WhatsApp

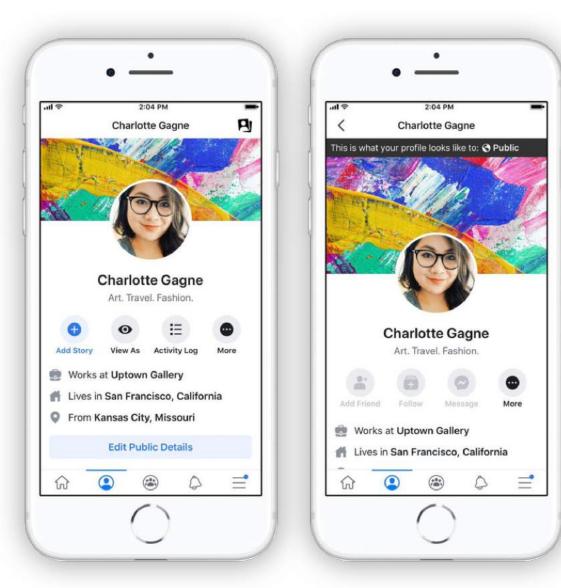
# Contact Info Email Address Phone Number Device ID



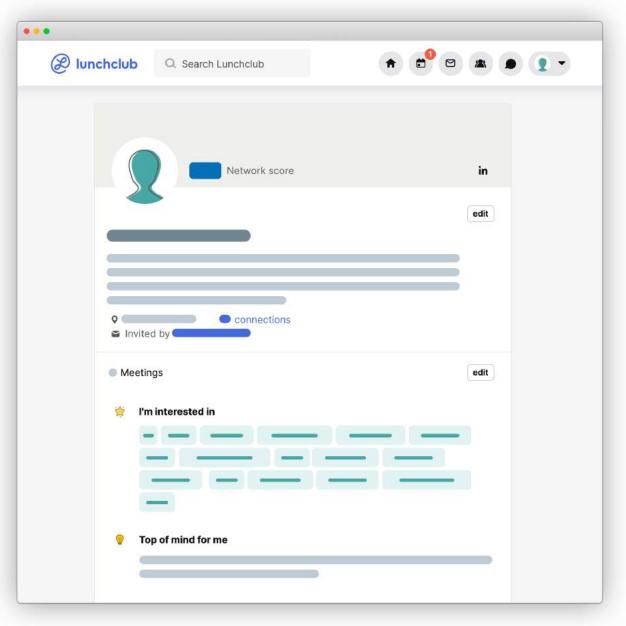
→ Systems like technology often bear asymmetric power. It is unreasonable for a data subject to be aware of how these systems work.

#### **Facebook Messenger**

Thi	rd-Party Advertising	An	alytics	Pri	oduct Personalisation	Ap	p Functionality	Ot	ther Purposes
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	Other User Contact Info	0	Contact Info Physical Address		Other User Contact Info	0	Contact Info		Other User Contact Inf
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Facebook "View as"



Lunchclub Profile Preview (Redacted)

Consent / DNA Ancestry

Is your genetic data solely your own?

Can an individual provide meaningful consent to share this data if it inherently is built on their genetic lineage?



Image: AncestryDNA Collection Kit



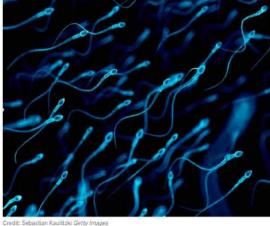
#### STAT

### **Consumer DNA Tests Negate Sperm-Bank-Donor Anonymity**

Companies such as 23 and Me and Ancestry.com have made it impossible for sperm banks to keep donors' identities secret

By Meghana Keshavan, STAT on September 12, 2019





For generations, it was a basic tenet of donating sperm: Clinics could forever protect their clients' identities.

#### MEDICAL & BIOTECH

How to Identify Almost Anyone in a Consumer Gene Database

Paul Raeburn

23andMe Is Terrifying, but Not for the Reasons the FDA Thinks

Charles Seife

#### BIOLOGY

What Personal Genome Testing Can and Can't Do

Michael Shermer

New Sperm Tests May Offer Better Understanding of Male Infertility

Usha Lee McFarling and STAT

## This genetic data is revealing in novel ways.

#### AN FXAMPLE

For law enforcement, the analysis DNA swabs is based on the STR technique which strips away genetic information (e.g. eye color, skin color) for privacy.

But if this data (taken without consent or warrants) can be matched with Ancestry data, it loses this protection.

#### PRIVACY BY DESIGN

- 1. Proactive not reactive
- 2. Privacy as the default setting
- 3. Privacy embedded into design
- 4. Avoid false dichotomies (not zero-sum with revenue)
- 5. End-to-end security (full lifecycle protection)
- 6. Visibility and transparency (keep it open)
- 7. Respect for user privacy (keep it user-centric)

Anne Cavoukian

3rd Information and Privacy Commissioner of Ontario

#### PART 2

# Misrepresentation

designing for clarity



aka how to avoid designing a digital funhouse...

### What if you didn't know that what you're seeing was misrepresented?

8 different ways to let your public bally themselves. From a chuckle to a roar . . . Long . . . short . . . skinny or tall and just plain distortolated . . . More than any other medium . . . The gaff for a laff.

People love to laff . . . They love to look foolish, with baggy hips . . . distorted pips (or lips) and sides that split with laughter.

It's the funniest . . . distortinest . . . and craziest thing we sell.

The Mirrors they'll talk about . . . bring their friends to see . . . laugh at, until merriment and hilarity reigns supreme. A show, complete in itself . . . Feature of a Mirror Maze . . . or the side splitting spectacle that pervades the once lonely corner of your arcade.

Proven "Mill of Mirth" . . . crazy . . . laughing mirrors . . . set in wood frames, painted black as illustrated. Order by number on mirror.

30 x 70

40 x 70









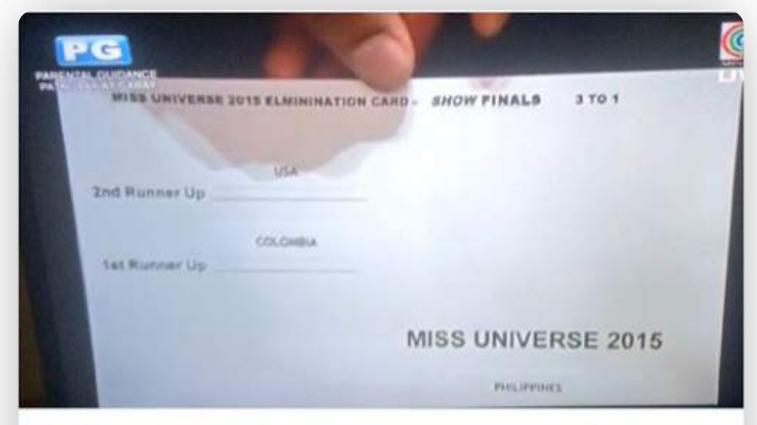
#### Filters as a form of distortion

Snapchat "beauty filters" not only promote unrealistic beauty ideals, but distort faces to specifically promote "Western" beauty standards –

- Distort face shapes to be slimmer
- Enlarge eyes
- Contour and slim nose shapes
- Lighten dark skin tones



Snapchat Beauty Filters







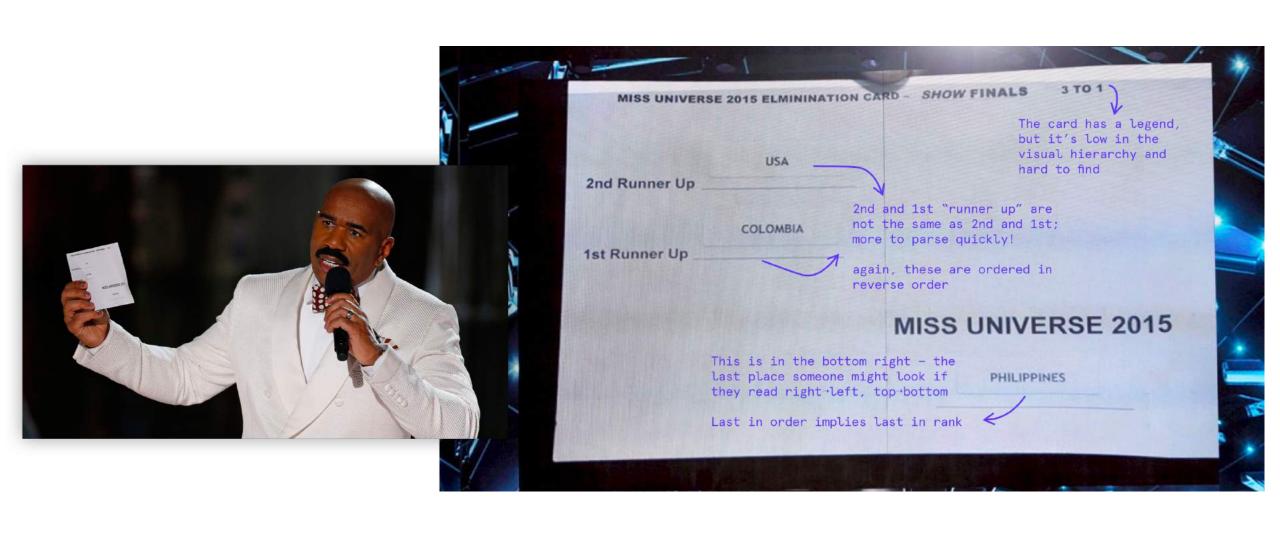
#### The ballot card that gave Steve Harvey problems

7:29 AM - 21 Dec 2015 - Las Vegas, NV, United States



순구 111



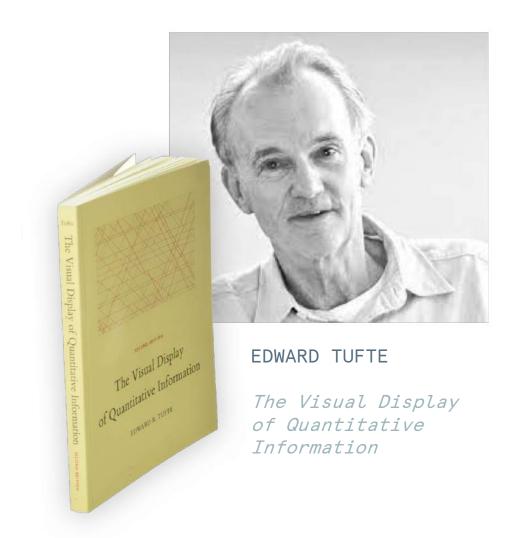


Top Five Counties Deaths in Georgia Race and Ethnicity Counties Top 5 Counties with the Greatest Number of Confirmed COVID-19 Cases The chart below represents the most impacted counties over the past 15 days and the number of cases over time. The table below also represents the number of deaths and hospitalizations in each of those impacted counties. County

Cobb DeKalb Fulton Gwinnett Hall Note that the dates on this axis are not sorted chronologically, even though the data represented are dates COVID-19 questions? 24Apr2020 27Apr2020 30Apr2020 01May2020 20 07May2020 03May2020 08May2020 04May2020 23Apr2020 26Apr2020 01May2020 25Apr2020 02May2020 05May20

GA Department of Public Health mistakenly implied that the number of new confirmed cases in the counties with the most infections was dropping everyday for the previous two weeks.

The purpose of analytical displays of information is to assist thinking... Consequently, in constructing displays of evidence, the first question is, "what are the thinking tasks that these displays are supposed to serve?"



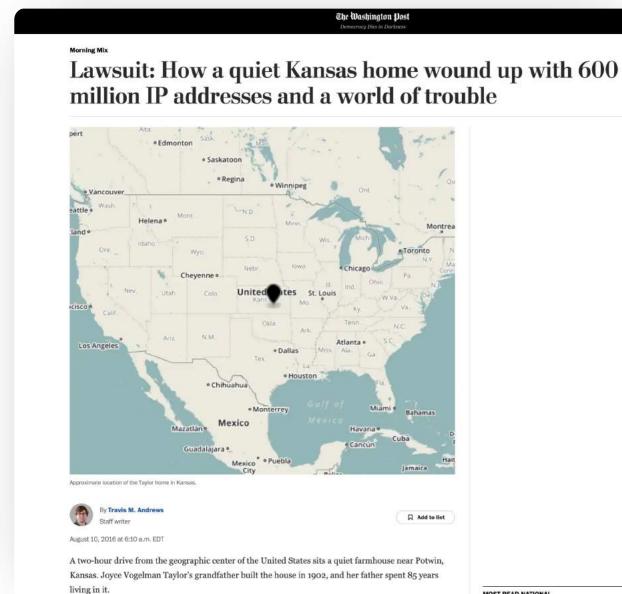
### Bad Defaults / Misrepresented Data Maxmind



This unfortunately also happened in Pretoria ightarrow



### Bad Defaults / Misrepresented Data Maxmind



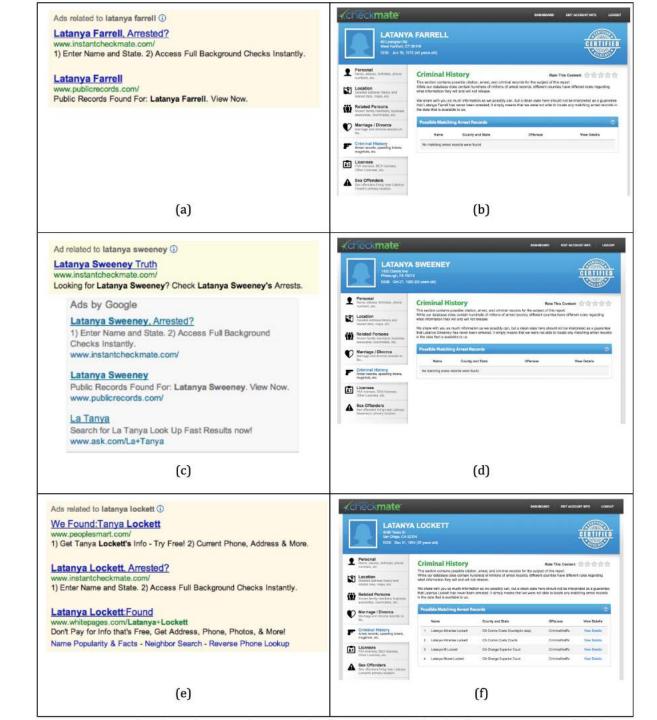
"For its tech to work, MaxMind matched each IP address to a set of coordinates. This presented a problem when the company didn't have an exact location.

Sometimes, it could only determine that an IP address was in the U.S. In those cases, the company mapped that address to a specific set of coordinates: 38°N 97°W or, in the parlance of digital maps, 38.0000,-97.0000."

#### SOURCE

https://www.washingtonpost.com/news/morning-mix/wp/2016/08/10/lawsuit-how-a-quiet-kansas-home-wound-up-with-600-million-ip-addresses-and-a-world-of-trouble/

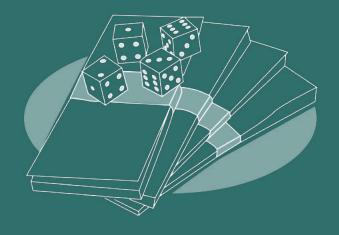
#### Google AdSense



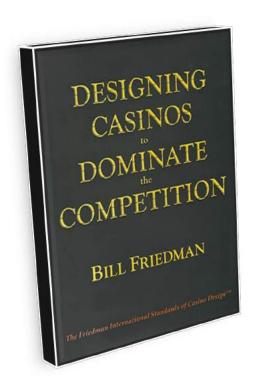
A BRIEF INTERMISSION

# Casino Design

learning from Las Vegas



#### Gaming design



"The **only relevant** consideration for casino design are these: What percentage of visitors gamble? What percentage return to gamble? Nothing else matters."

BILL FRIEDMAN

**SOURCE:** Stripping Las Vegas: A Contextual Review of Casino Resort Architecture

#### Gaming design principles

- Gambling equipment immediately inside casino entrances beats vacant entrance landings and empty lobbies
- The maze layout beats long, wide, straight passageways and aisles
- Low ceilings beat high ceilings
- Gambling equipment as the décor beats impressive and memorable decorations
- Pathways emphasizing the gambling equipment beat the yellow brick road

† Increase the psychological barrier required to leave the casino.

† Increase the psychological barrier required to leave the casino.

Gambling equipment immediately inside lobby

The maze layout

Low ceilings

Gambling equipment as the décor

Pathways emphasize the gambling equipment

† Increase the psychological barrier required to leave the casino.

This design choice intentionally seeks to reduce the agency of those in this space.

The design of space, whether physical or digital, regulates the way a person makes decisions in that space.

#### Playground Design

### What if people were more relaxed?

Would they place riskier bets? Lowering their psychological barrier to gambling could produce more efficient gains for a casino.

Instead of trapping people, their casinos embraced "Playground design" and "evo-catuer" — they stimulate the senses.

Roger Thomas and Steve Wynn / Belagio

#### Playground design principles

- Provide ample natural light
- Give people excellent wayfinding a feeling of agency
- Use high ceilings to create the feeling of openness
- Glamorous lobby spaces with sculptures excite the senses
- Maximize comfort
- Provide clear sightlines to where gamblers want to head next (but make the right choice obvious)

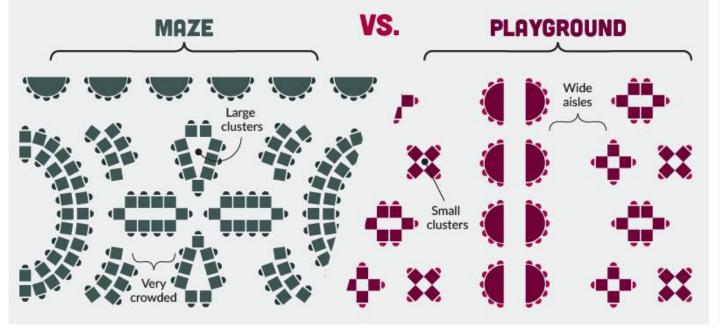
The designs also speak to guests who might not typically gamble, as their luxurious decor acts as a "type of anesthesia" to numb guests of their significant losses.

SOURCE: <a href="https://doi.org/10.1177/0013916509341791">https://doi.org/10.1177/0013916509341791</a>

SOURCE: Stripping Las Vegas: A Contextual Review of Casino Resort Architecture

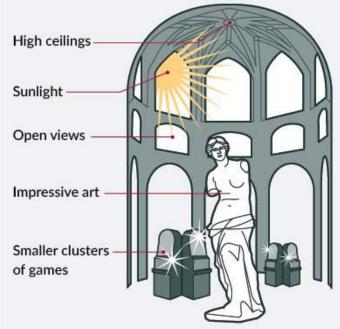
#### A Kinder, Gentler Casino Floor

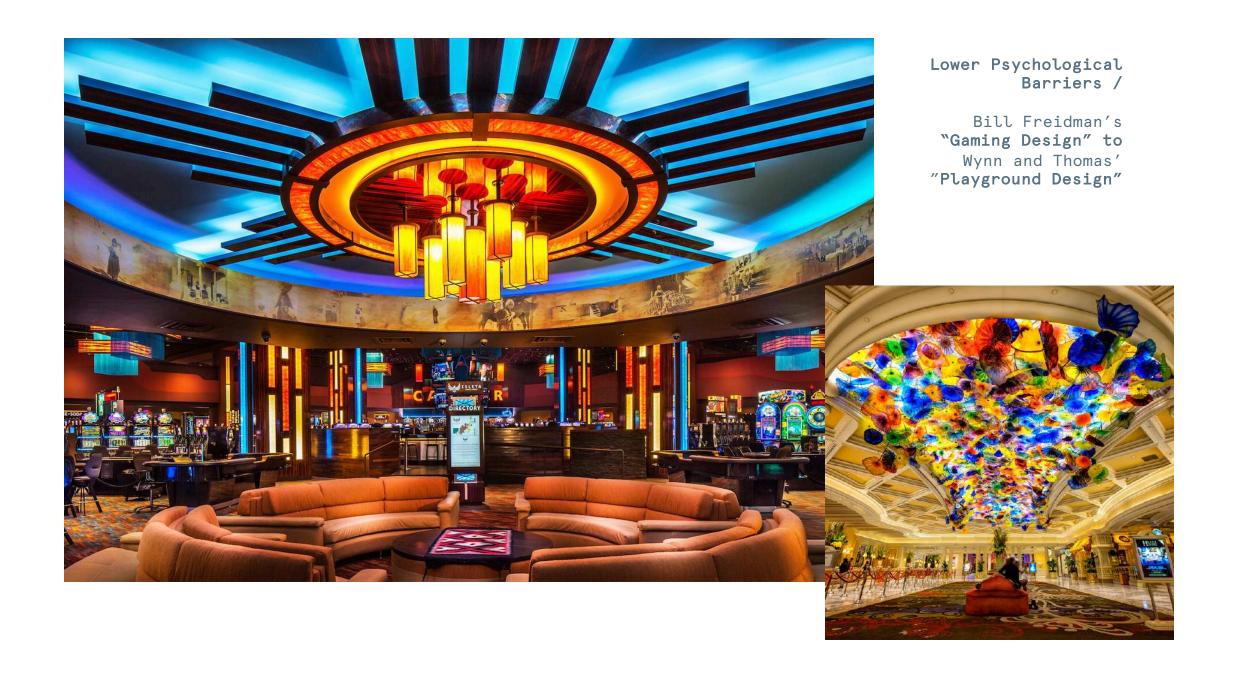
In recent years, casinos have been moving from the confusing "maze" design to the more open, inviting "playground" concept.



#### Elements of the new design

These are the things that are a making a difference.





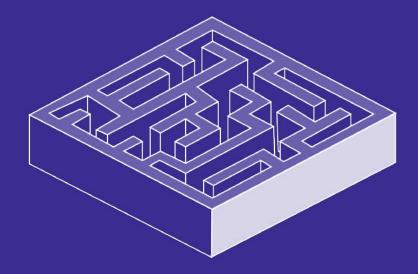
↓ Decrease the psychological barrier to place bets by increasing a person's sense of agency. There are levers at play.

Both of these designs share an intent to affect someone's psychological barriers to influence their decisions.

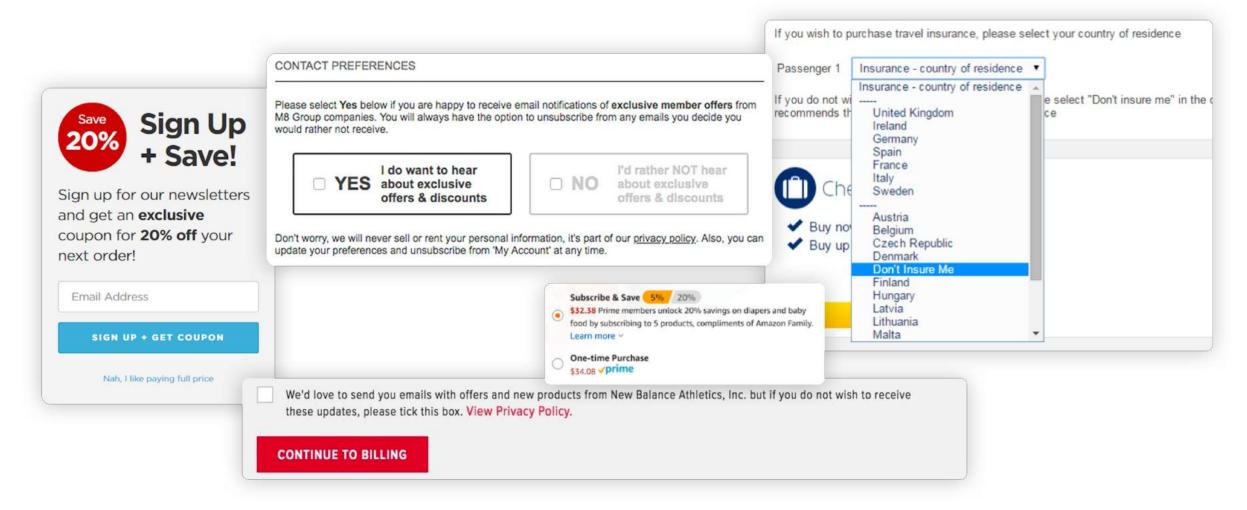
#### PART 3

# Misdirection

designing for orientation



### Removing sightlines or making it harder to leave in e-commerce checkout workflows



#### **Related Dark Patterns**

Confirm-shaming

Guilting users into opting into something

Visual interference

Make important but non-preferable elements harder to see or access

**Trick questions** 

Creating forms that confuse users into providing answers they don't intend to

Pressured selling

Using relentless and pressure to induce a customer into responding



#### THE TURBOTAX TRAP

#### Here's How TurboTax Just Tricked You Into Paying to File Your Taxes

Come along as we try to file our taxes for free on TurboTax!

by Justin Elliott and Lucas Waldron, April 22, 2019, 5 a.m. EDT



THE TURBOTAX TRAP How the Tax Prep Industry Makes You Pay Update, March 24, 2021: Here is some information on how to file your state and federal taxes for free in 2021 for the 2020 tax filling year. See more updated tax guides here.

ProPublica is a nonprofit newsroom that reports on abuses of power. Sign up to receive our best stories as soon as they're published.

Did you know that if you make less than \$66,000 a year, you can prepare and file your taxes for free?

No? That's no accident. Companies that make tax preparation software, like Intuit, the maker of TurboTax, would rather you didn't know.

Intuit and other tax software companies have <u>spent millions lobbying</u> to make sure that the IRS doesn't offer its own tax preparation and filing service. In exchange, the companies have entered into an agreement with the IRS to offer a <u>"Free File" product</u> to most Americans — but good luck <u>finding it</u>.



. .

Last modified 3 months ago

830 people found this useful

#### What is the TurboTax Free File program?

We're proud to offer the TurboTax Free File program to hard-working Americans and their families who meet the 2018 IRS eligibility requirements.

The TurboTax Free File program is exclusively available online and has its own dedicated website at taxfreedom.com. It is not accessible from the "regular" TurboTax.com website.

To qualify for free 2018 federal and state tax returns through the TurboTax Free File program, you just need to meet one of these requirements:

- · Your 2018 household AGI is \$34,000 or less;
- · You qualify for the Earned Income Tax Credit (EITC); or
- In 2018, you served as active duty military (including Reservists and National Guard) with a maximum AGI of \$66,000, and you have a military-issued W-2.

TurboTax Free File



Last modified 3 months ago

\*

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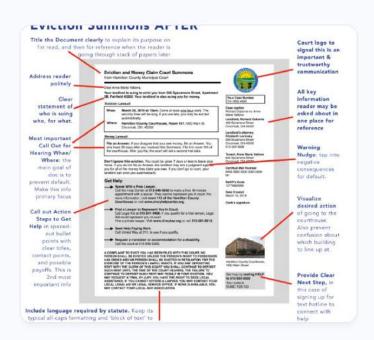
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- In 2018, you served as active duty military (including Reservists and National Guard) with a maximum AGI of \$66,000, and you have a military-issued W-2.

TurboTax Free File

TurboTax's free tax services which were required as an option for low income individuals are hard to discover. There were many points in the discovery workflow that led to the paid version instead, and access points to free tier were not listed or easily discoverable on search engines.

\* TurboTax recently left the IRS Free File program Orientation and Sightlines / Service Design

Stanford's Legal Design
Lab (led by Margaret
Hagan) is an example of
an organization working to
establish sightlines in a
difficult system – in this
case, helping people make
sense of the legal system
during often their most
stressful life events.



CURRENT PROJECTS, EVICTION INNOVATION, LEGAL COMMUNICATION DESIGN, OUR PROJECTS

## What does a user-centered eviction summons look like?

MARGARET · 09/14/2021 · 0 COMMENTS

Find design principles and examples for improving the court document that people get when they are being sued for eviction.

Continue reading



CURRENT PROJECTS, OUR PROJECTS

### Launching a dream: updates on a streamlined housing referral system

MARGARET - 08/31/2018 - 0 COMMENTS

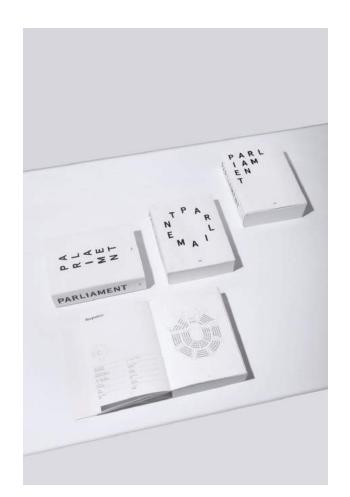
by Jane Wong, Stanford Legal Design Lab fellow this piece was originally published on Legal Design and Innovation I am pleased to share some exciting new developments in our effort to unify the intake systems of legal aid paparefits in the Pay Area. To recep my April

#### PART 4

# Manipulation + Friction

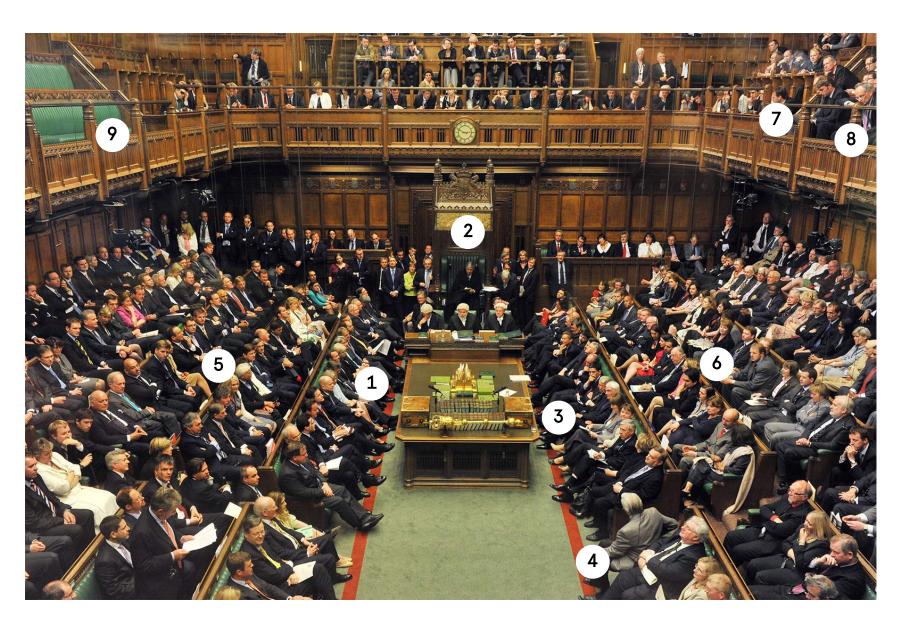
designing for awareness and control







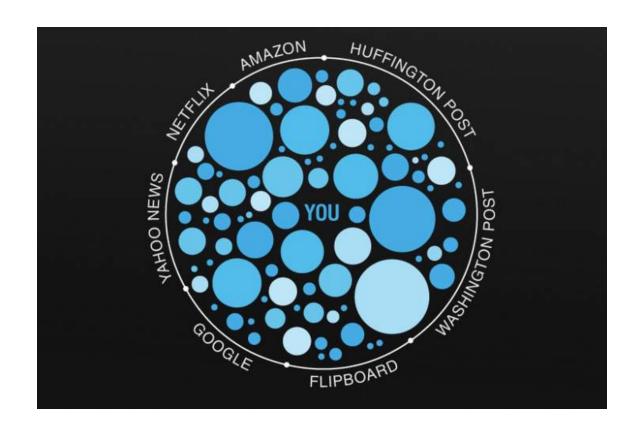




- 1. Prime Minister
- 2. Speaker
- 3. Leader of the Official Opposition
- 4. Leader of the 2nd largest party in opposition
- 5. Government members
- 6. Opposition members
- 7. Senate Gallery
- 8. Speaker's Gallery
- 9. Opposition Members Gallery

# This design reinforces the implicit power structure and polarization of the people who occupy the room.





"What would you build if your goal was to build a healthy pluralistic society..."

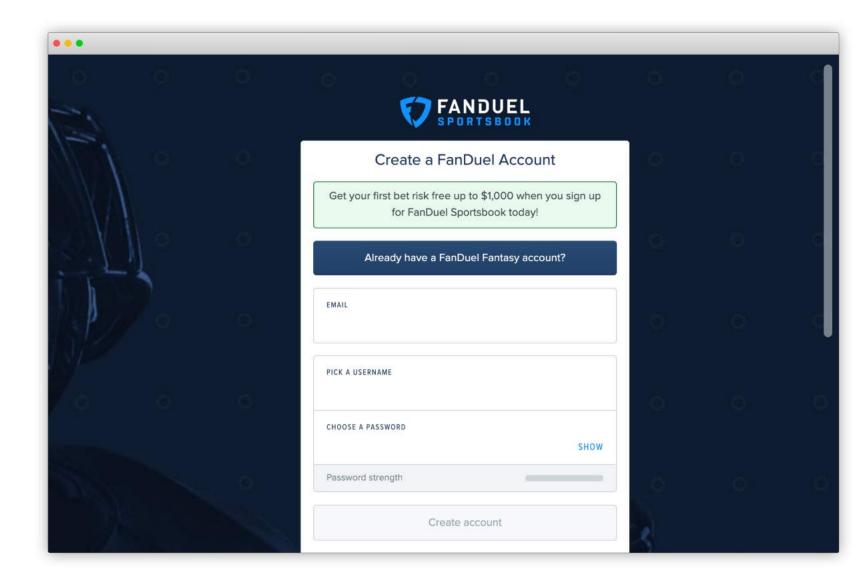
Eli Parser

How does this compare to designing for user engagement/attention?

Lower Psychological Barriers / Fanduel

Fanduel and DraftKings, sports gambling services, make a users' first bet free and match deposits.

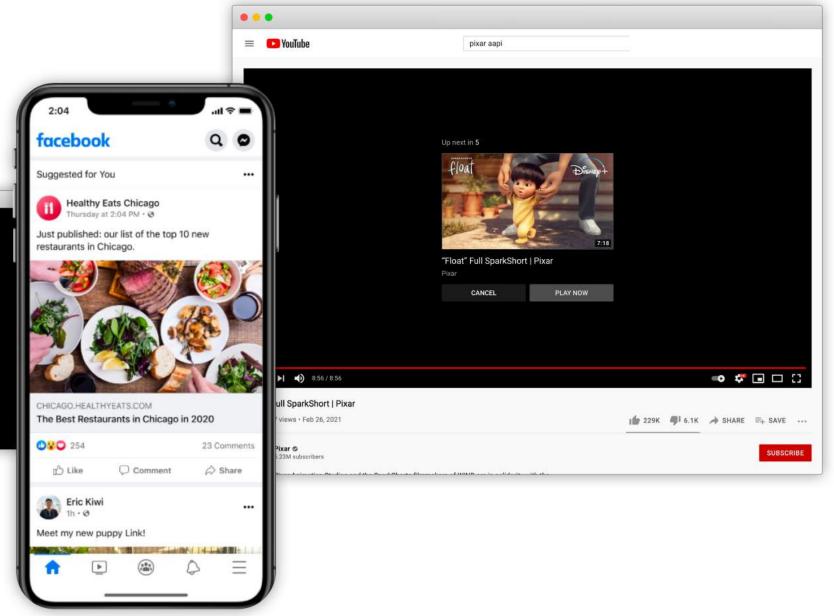
In doing so, users are more likely to start betting, where any windfall is a source of encouragement and any loss feels negligible because it was free (making you more likely to continue betting).



Lower Psychological Barriers / The Endless Scroll



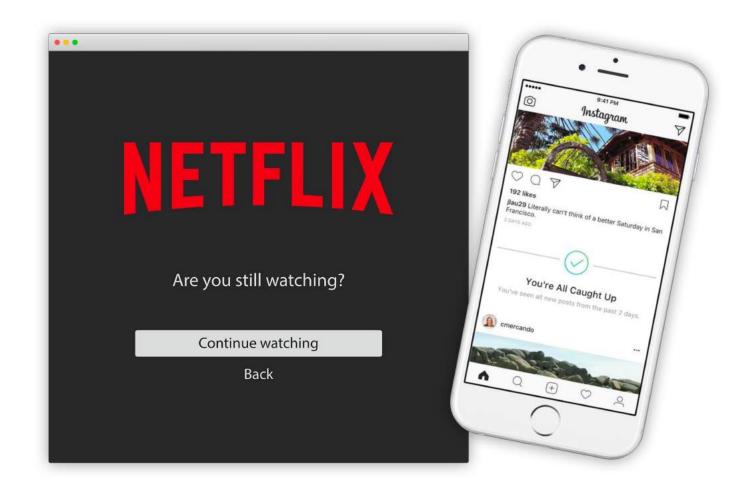
The endless scroll encourages **passive** consumption.



Lower Psychological Barriers / The Endless Scroll

Of course, it's worth noting that Netflix eventually checks in on you, and Instagram now let's you know that "You're all caught up."

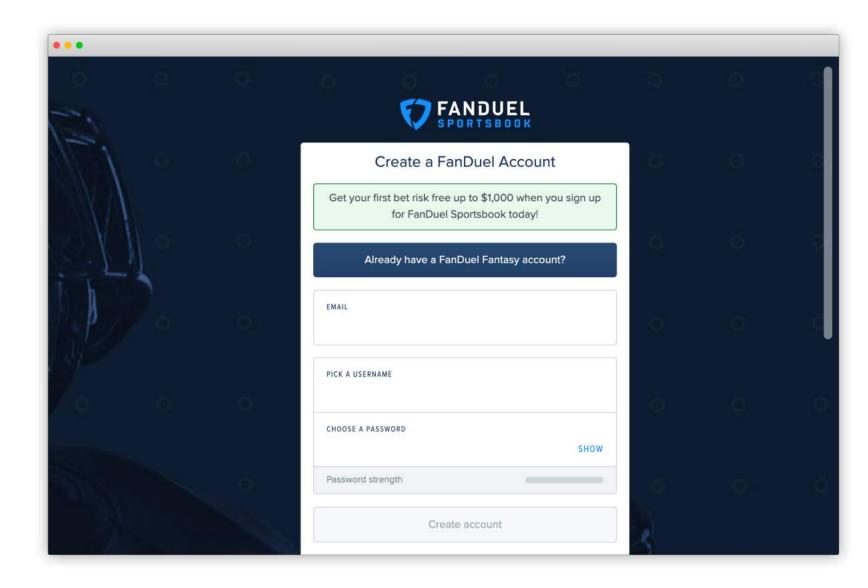
How might we encourage users to decide to continue spending time consuming, with intention and pause?



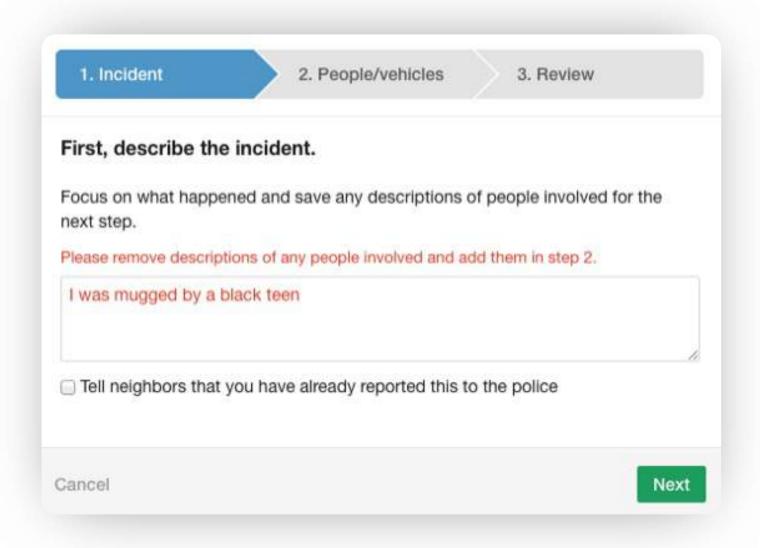
Psychological Barriers / Fanduel

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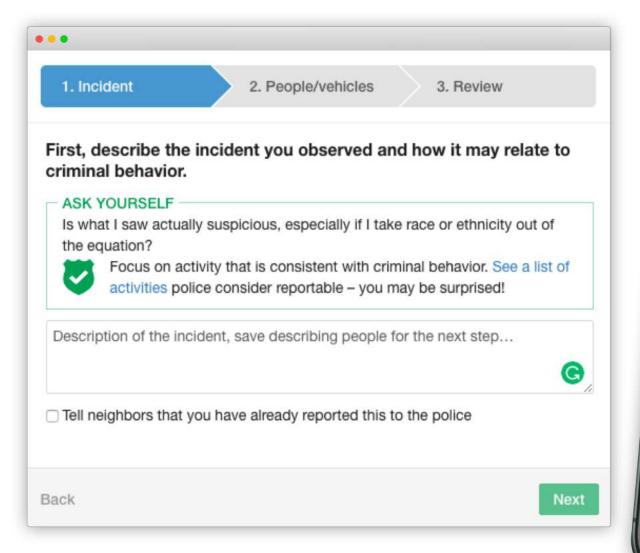


Lower Psychological Barriers / Nextdoor, Race-based Incident Reporting



- ASK YOUR	SELE
people?	Is can I add that will help distinguish this person from other similar cribe clothing from head to toe. Police say this is the most helpful eighbors (and helps avoid suspecting innocent people).
	ncluded, you must include at least 2 of the highlighted fields. (Why?)
Hair:	Hat, hair (include color and style)
Тор:	Shirt, jacket (include color and style)
Bottom:	Pants, skirt (include color and style)
Shoes:	Shoe, brand (include color and style)
Now give the other basics	
Age:	32
Build:	
Race:	black
	When race is in Hair: Top: Bottom: Shoes: Now give the Age: Build:

#### Nextdoor, Race-based Incident Reporting





#### More dark patterns

#### Social proof

Activity messages (misleading notice that others are purchasing, etc) • Testimonials (misleading positive statements)

#### Nagging

Repeated requests to do something

#### **Obstruction**

Roach motel (asymmetric ease of signup and canceling difficulty) • Price comparison prevention • Intermediate currency • Immortal accounts

#### Sneaking

Sneak into basket • Hidden costs • Hidden subscription / forced continuity • Bait and switch

#### Interface interference

Preselection / aesthetic manipulation • Toying with emotion • False hierarhcy / pressured selling • Disguised ad • Trick questions • Confirmshaming (making a choice seem dishonorable) • Cuteness

#### Forced action

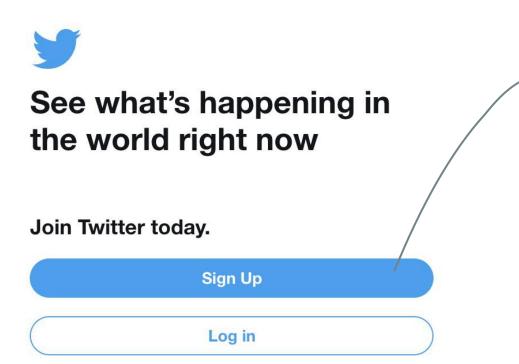
Address book leeching • Privacy Zuckering (tricking people into sharing personal info) • Gamification • Forced Registration

#### Scarcity

Low stock message • High demand message

#### Urgency

Countdown timer • Limited time messages



The visual weight you choose communicates who and what you're privileging – here, for example, the Sign Up button is the primary button

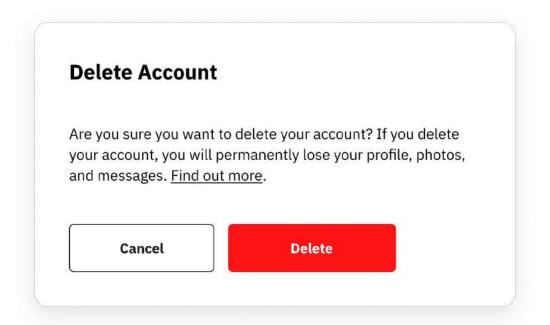


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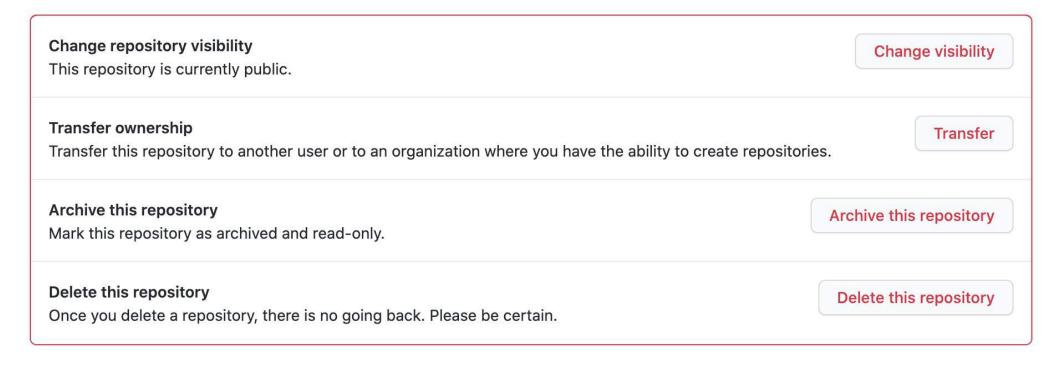
UI + UX weight can also be used in a protective capacity.

Fortunately, introducing manual and **algorithmic** "speed bumps" is a design practice we are already very familiar with.

For heavy and often irreversible actions like deletion, many design patterns have users confirm these actions before they are completed.



#### Danger Zone



### High-stakes decisions / COMPAS Sentencing Algorithm











## Facial Recognition Problems Denying US Workers Unemployment Lifeline

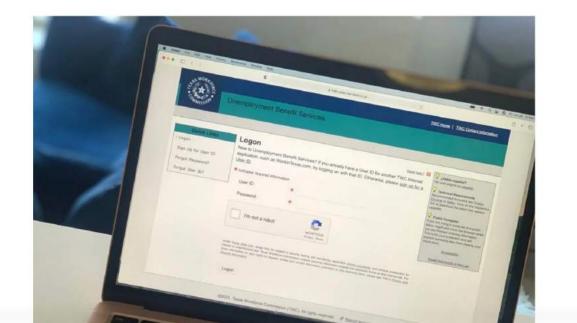
Solutions to Identity Verification Errors Urgently Needed to Help Those Facing Hardship

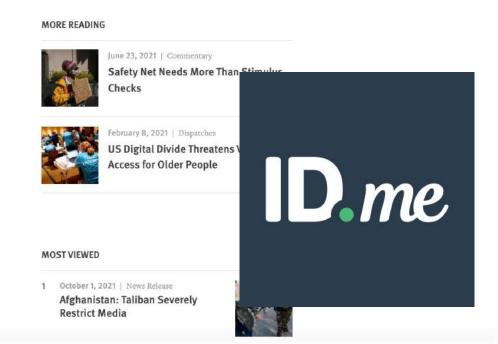


Amos Toh
Senior Researcher, Artificial Intelligence and Human Rights



Senior Researcher and Advocate, Poverty and Inequality





**DONATE NOW** 



When should there be more friction in the path of some action?

When should it **be easier** for a person to do something?

# What values and priorities are you baking into your design choices?

What are the first, second, and third order effects of those?

# What is the context you are operating within?

Does it include incumbent systems of oppression or exploitation?

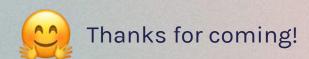
How are you working to combat this?

### Thanks!



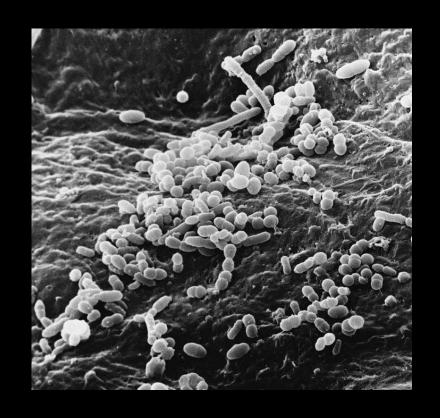
Huge shout out to Cara, Danni, Wanda, and the AIGA DC Team in particular, thank you for all of your support in realizing this talk!

## Any questions?



### **Kiran Wattamwar**

k.keyrun@gmail.com



In our immune systems, our skin is the first line of defense before our more advanced immunological response kicks in.

Product design functions like skin, the first line of defense in encouraging better practices for users before other more advanced mechanisms (like a rigorous security or audit infrastructure) step in.