

Social Computing Capstone

Day 5: Engagement and Attention

CSE 481p | Spring 2023

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Schedule for today's class

- Go around and discuss A3 (15 min)
- Lecture on today's topic - Engagement and Attention (30 min)
- Instructions for website set-up (5 min)
- Team signups for 1-on-1s with us (5 min)
- Group work time on G1 (20 min)

A3 - No social media/phone/internet day

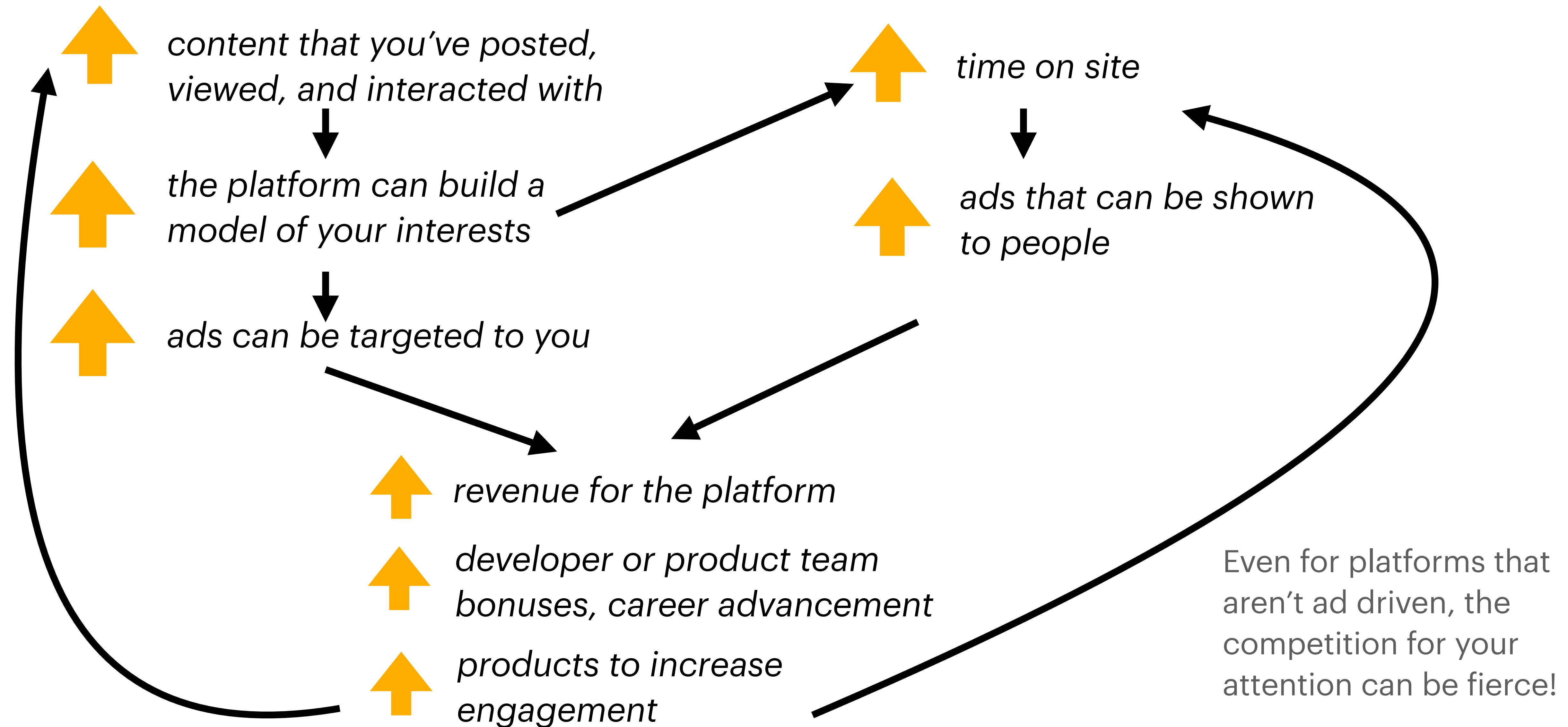
- On a scale of 1 (easy) - 5 (hard), how hard was this challenge? Did you succeed?
- Anything that surprised you about the day, or anything that you noticed about yourself/your tendencies?
- Anything you have done or plan to do differently as a result of this challenge?
- Our reliance on these technologies isn't really an “addiction” per se... so what is it?

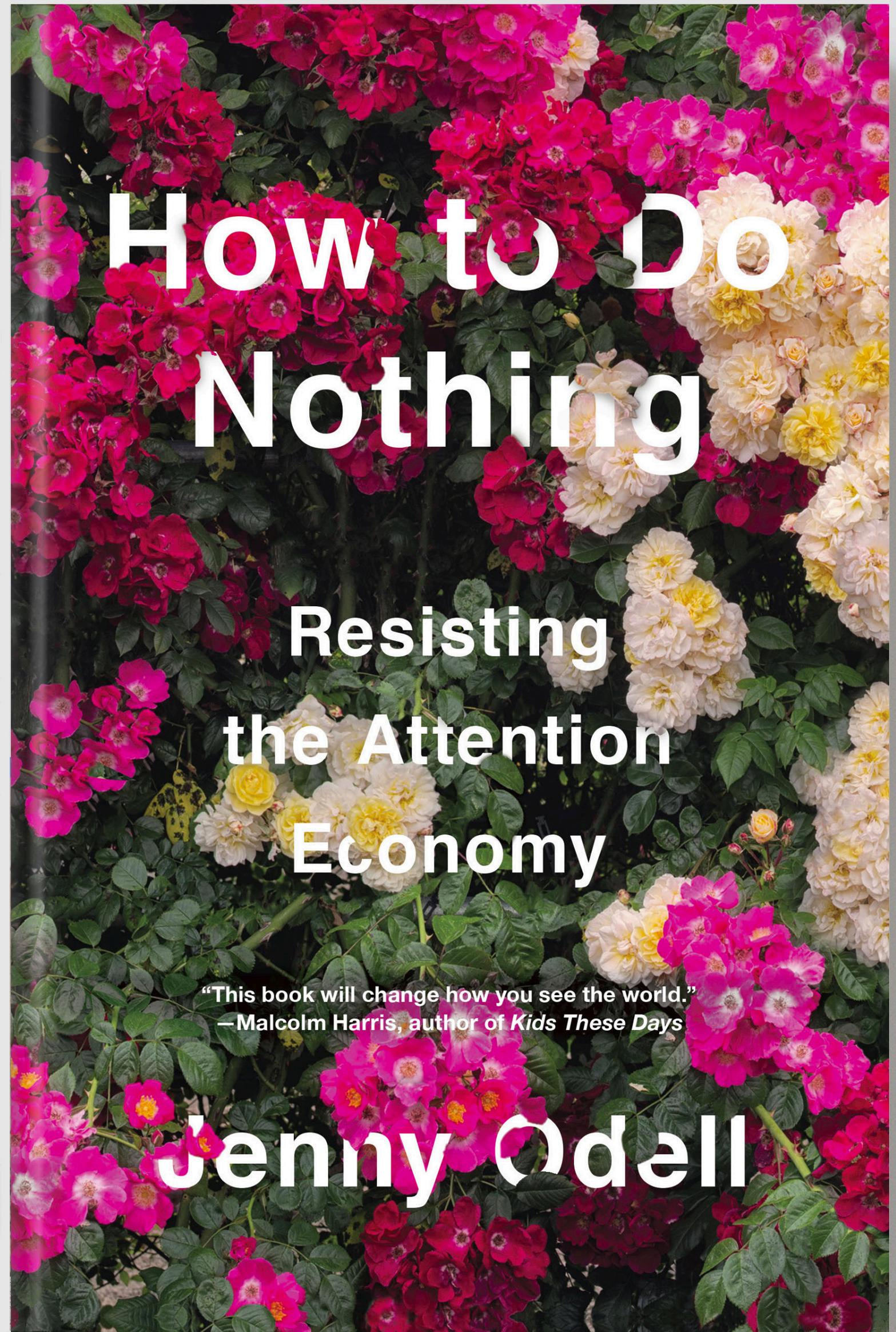
Engagement and Attention

What does “engagement” mean on social platforms?

- Content:
 - Watch time
 - Dwell time
 - Click-through rate
 - Number of comments
 - Number of likes, other emoji reactions
 - Number of shares
- User:
 - Daily active users, monthly active users
 - “Streak” - number of days visited/posted in a row
 - Activity (posting, liking)
 - Time on site on average per visit/day

Why do platforms care about engagement?





The “Attention Economy”

In a world where addictive technology is designed to buy and sell our attention, and our value is determined by our 24/7 data productivity, it can seem impossible to escape.

Odell sees our attention as the most precious—and overdrawn—resource we have. And we must actively and continuously choose how we use it. We might not spend it on things that capitalism has deemed important ... but once we can start paying a new kind of attention, she writes, we can undertake bolder forms of political action, reimagine humankind’s role in the environment, and arrive at more meaningful understandings of happiness and progress.

Far from the simple anti-technology screed, or the back-to-nature meditation we read so often, How to do Nothing is an action plan for thinking outside of capitalist narratives of efficiency and techno-determinism.

Ways that platforms artificially increase engagement... sometimes with bad consequences

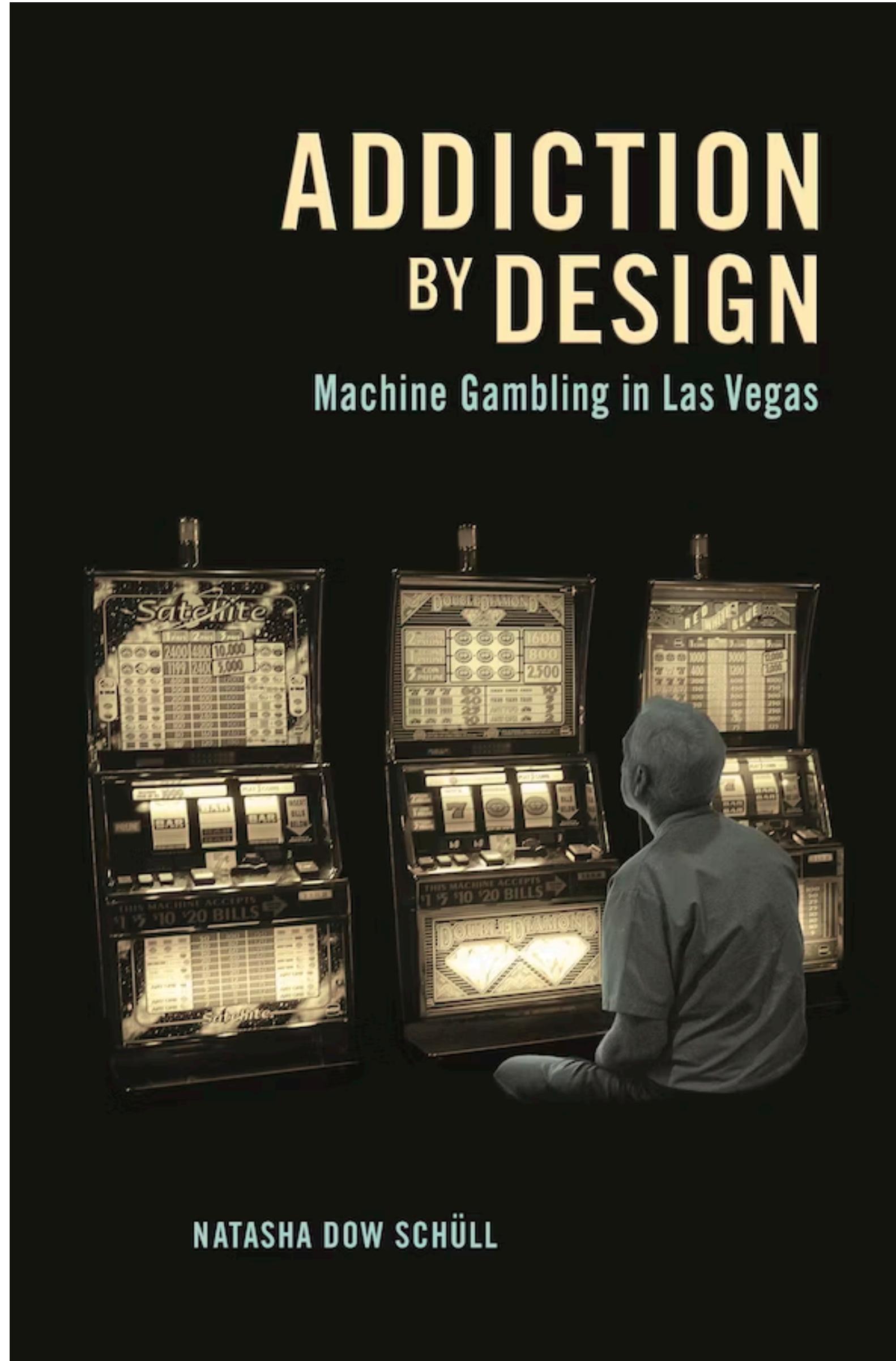
- **Dark patterns** that limit user autonomy using tricks such as obfuscation or fake-outs
- **Reducing friction** so that it's easier to keep reading, sharing, posting, etc.
- **Hyper-personalization** of your recommendations

Dark patterns that limit user autonomy using tricks
such as obfuscation or fake-outs

The Nerdwriter

Solutions?

- Stay personally vigilant and learn about these tricks (but that's hard!).
- Shame companies so that it becomes a liability to keep doing it
- Educate designers and developers on their ethical responsibilities so they refuse to do it
- Legislation?
 - Hard to target this exactly but things like anti-trust and GDPR are aiming to reduce the power of platforms to do this



Addiction by Design: *Machine Gambling in Las Vegas*

Natasha Dow Schüll

An anthropologist looks at the new "crack cocaine" of high-tech gambling

Drawing on fifteen years of field research in Las Vegas, anthropologist Natasha Dow Schüll shows how the mechanical rhythm of electronic gambling pulls players into a trancelike state they call the “machine zone,” in which daily worries, social demands, and even bodily awareness fade away. Once in the zone, gambling addicts play not to win but simply to keep playing, for as long as possible—even at the cost of physical and economic exhaustion.

Reducing friction so that it's easier to keep reading, sharing, posting, etc.



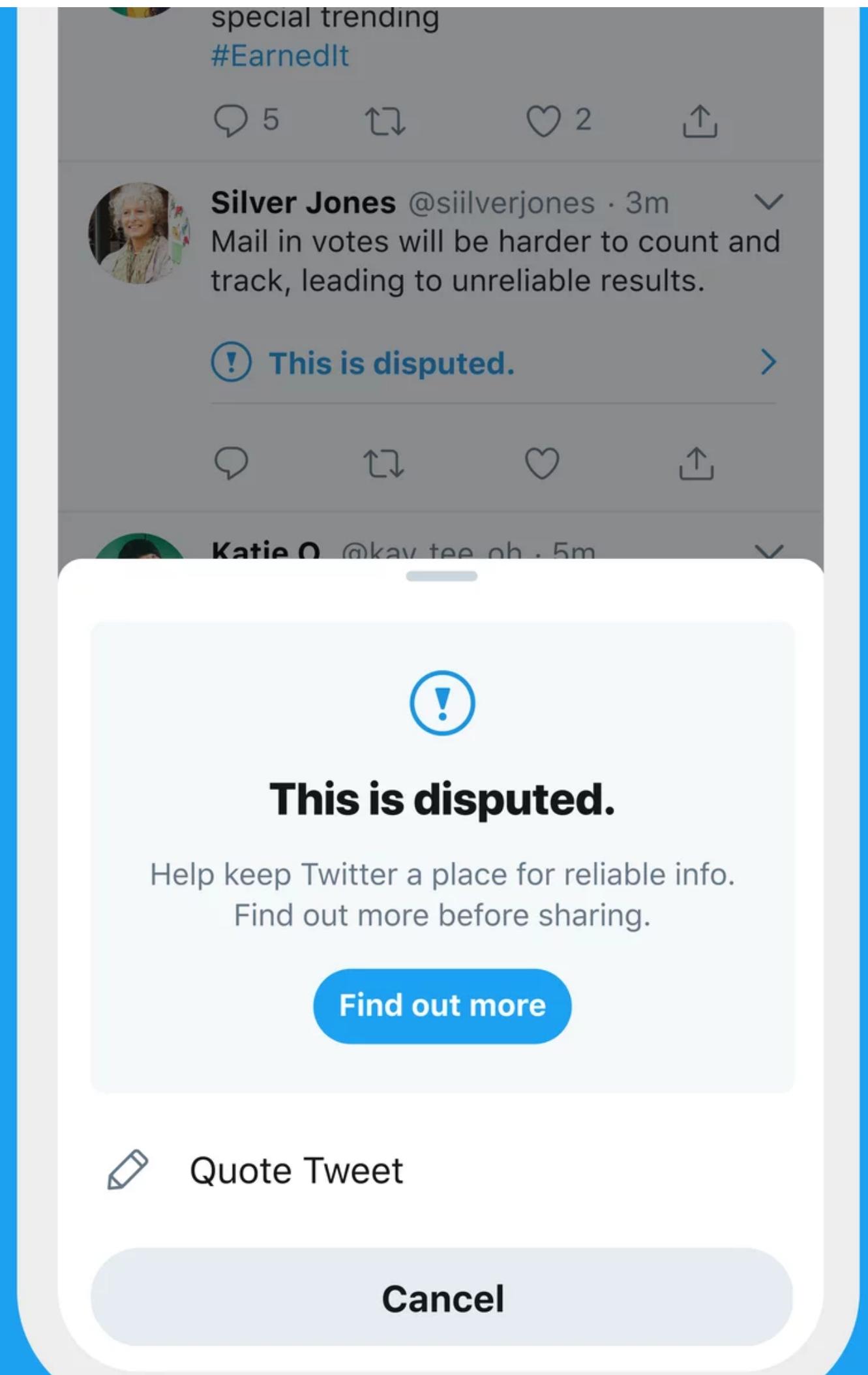
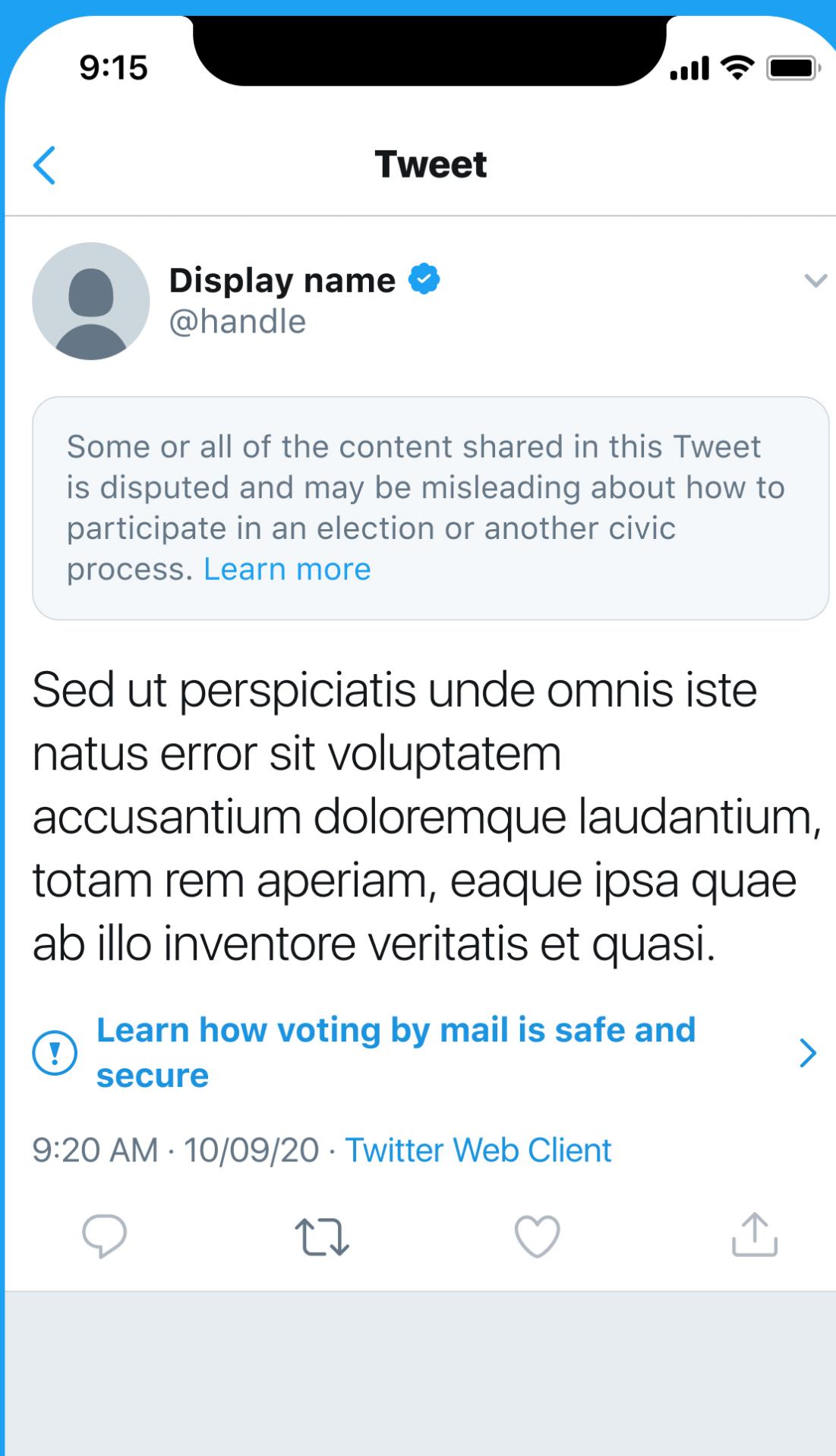
Example: misinformation

- Studies show that oftentimes people share misinformation because they're **going too fast** (using intuition) and they're not engaging their slower critical reasoning skills. If they slow down, they're less likely to share it.
- They're also not really thinking about **accuracy** when they're sharing, they're thinking about what their friends will like, what will trend, etc. If they're primed to think about accuracy, they're less likely to share it.

Bago, Bence, David G. Rand, and Gordon Pennycook. "Fake news, fast and slow: Deliberation reduces belief in false (but not true) news headlines." *Journal of experimental psychology: general* 149.8 (2020): 1608.

Pennycook, Gordon, and David G. Rand. "Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning." *Cognition* 188 (2019): 39-50.

Add speed bumps



Accuracy priming



IrrationalLabs
@IrrationalLabs

We designed an intervention that reduced shares of flagged content on TikTok by 24% via a large scale RCT, thread  1/7



IrrationalLabs @IrrationalLabs · Feb 3

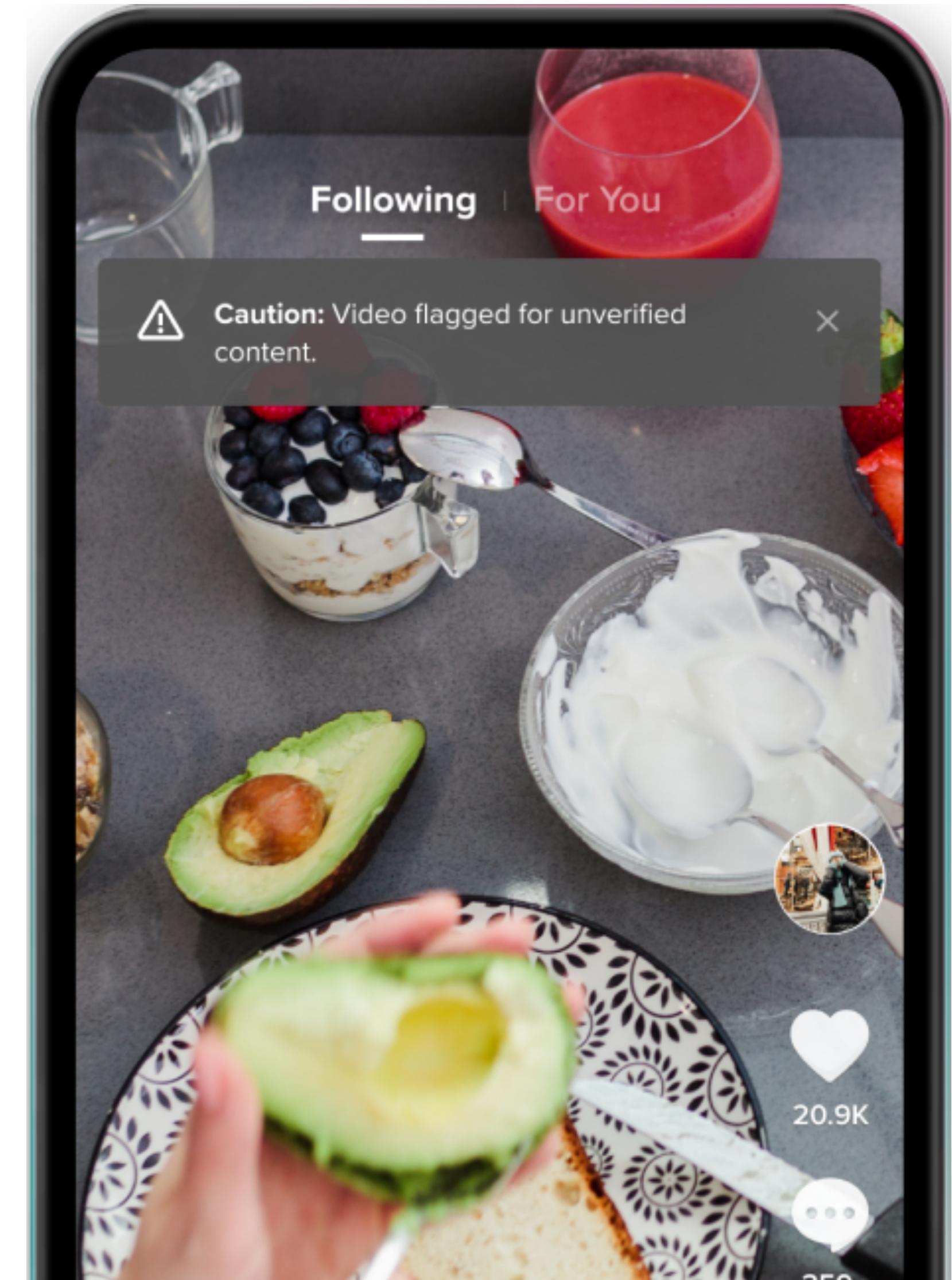
We put a short prompt on videos that reminded people to think about the accuracy of the content they were watching. And then - when people went to share the video - we reminded them again that the video was flagged & asked them if they were sure they wanted to share. 3/7



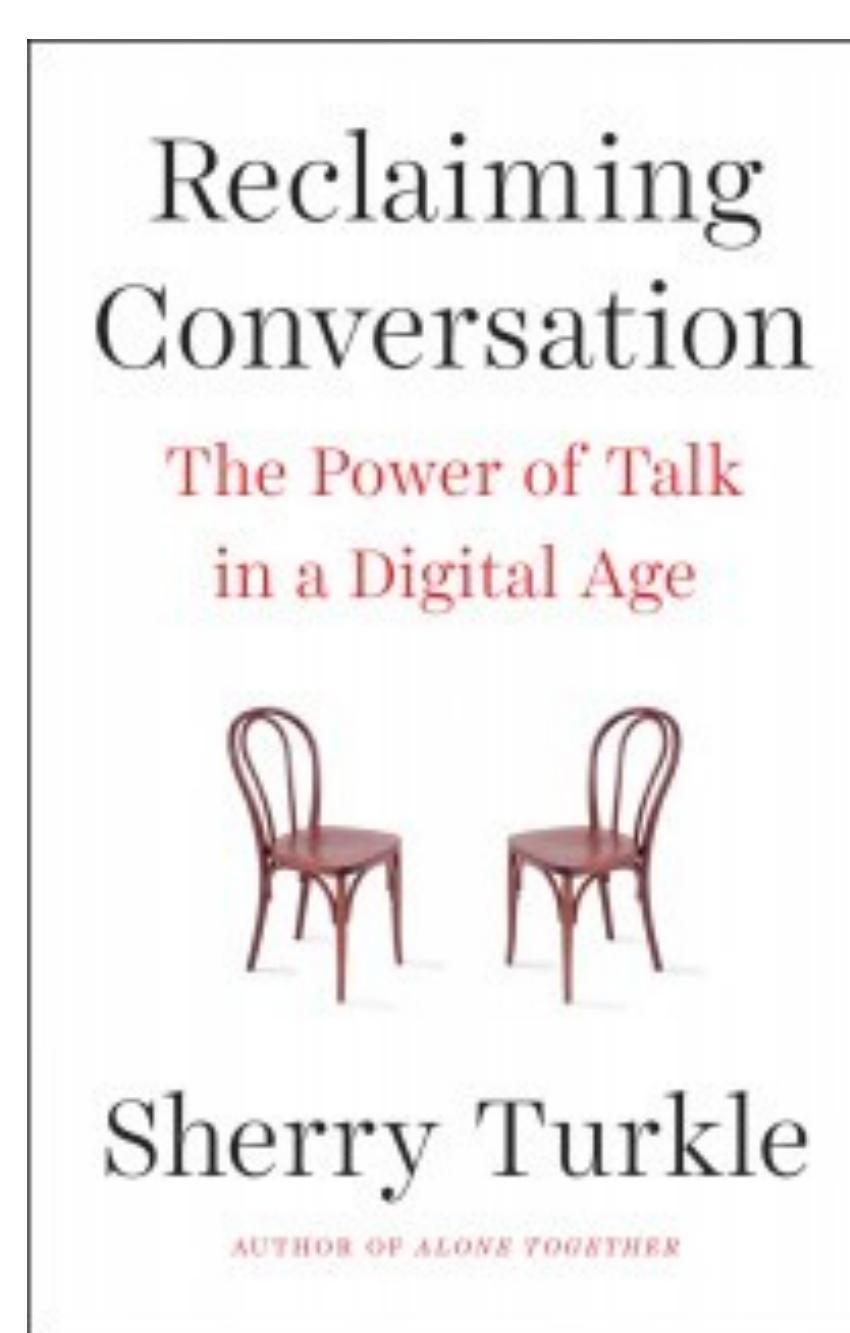
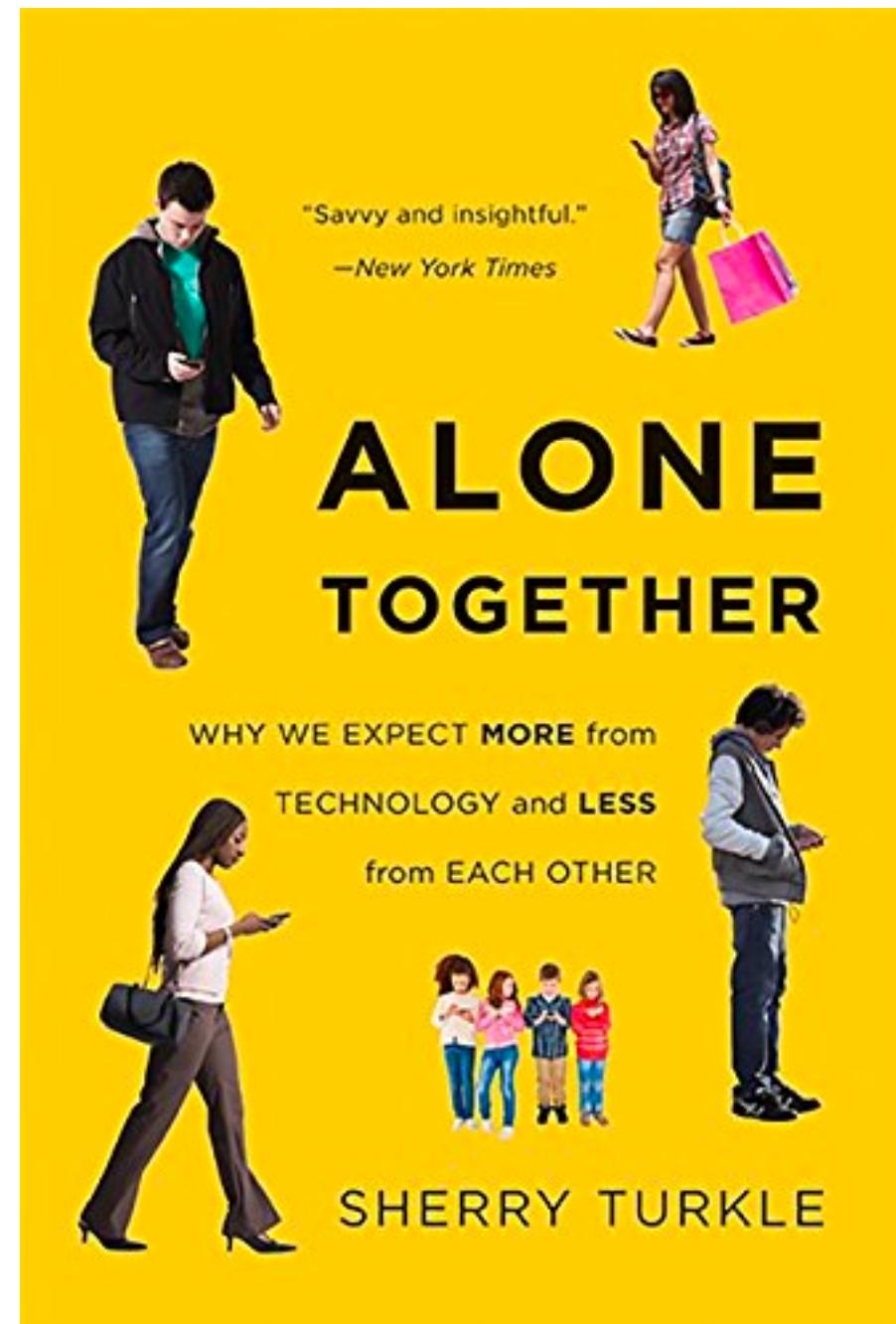
IrrationalLabs @IrrationalLabs · Feb 3

In addition to successfully reducing shares by 24%, our intervention also reduced likes by 7%, and views by 5%. 6/7

<https://twitter.com/IrrationalLabs/status/1357033901311451140>



Other than redesigning platforms, maybe we also have to rethink our relationship to tech?



Studies of conversation both in the laboratory and in natural settings show that when two people are talking, the mere presence of a phone on a table between them or in the periphery of their vision changes both what they talk about and the degree of connection they feel. People keep the conversation on topics where they won't mind being interrupted. They don't feel as invested in each other. Even a silent phone disconnects us.

The psychologist Yalda T. Uhls was the lead author on a 2014 [study](#) of children at a device-free outdoor camp. After five days without phones or tablets, these campers were able to read facial emotions and correctly identify the emotions of actors in videotaped scenes significantly better than a control group. What fostered these new empathic responses? They talked to one another.

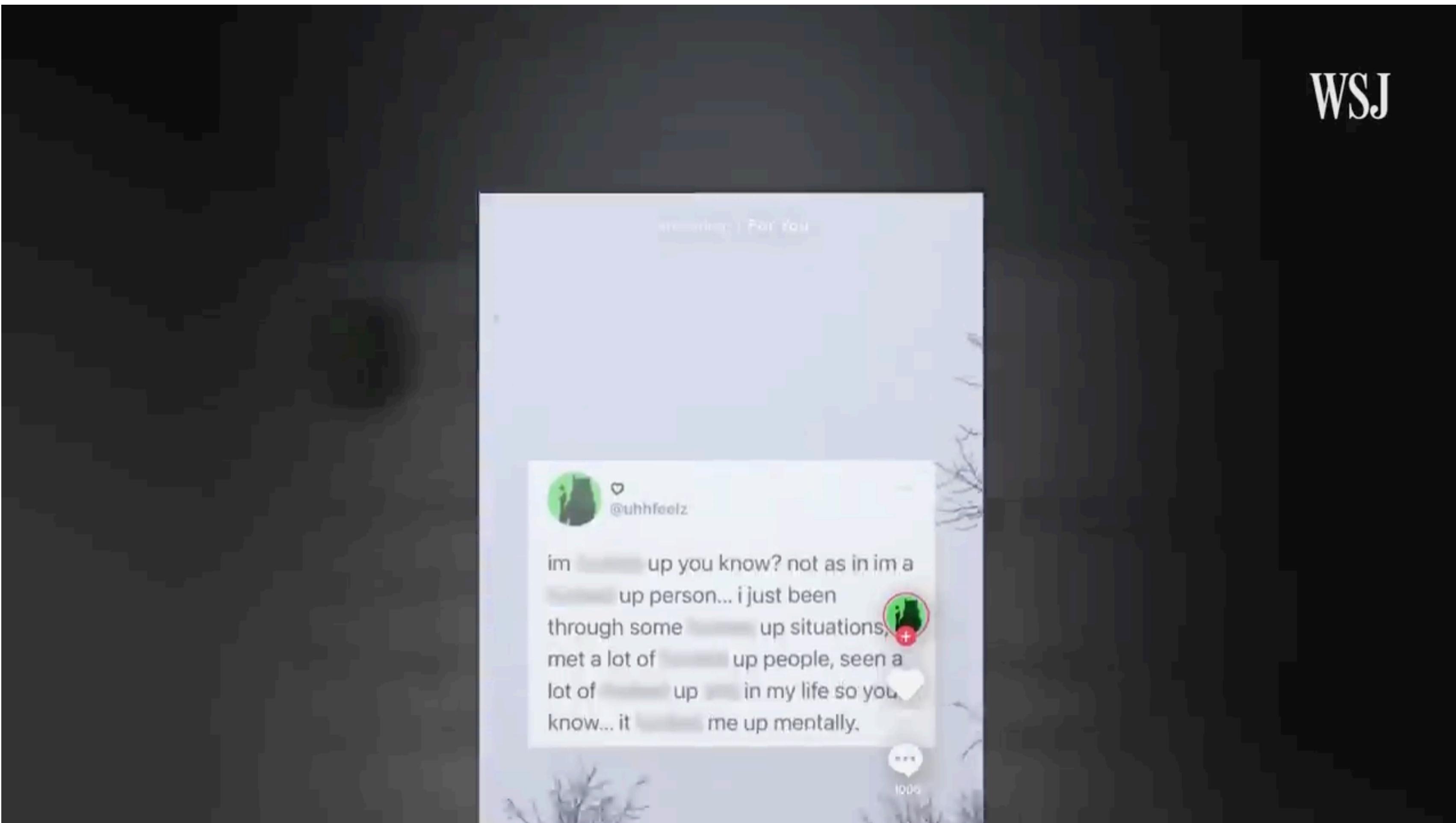
From: <https://www.nytimes.com/2015/09/27/opinion/sunday/stop-googling-lets-talk.html>

Hyper-personalization => echo chambers

- WSJ did a study where they created 100 TikTok accounts and programmed what videos each account watched vs skipped, then saw what the algorithm recommended.
- They found that accounts quickly went into “rabbit holes”. If the account watched “#depression” content, soon that would be almost all they were seeing.

[https://www.wsj.com/video/series/inside-tiktoks-highly-secrective-algorithm/
investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/](https://www.wsj.com/video/series/inside-tiktoks-highly-secrective-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/)

WSJ



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Personalized recommendation => Radicalization?



MEDIAMATTERS
FOR AMERICA

RESEARCH/STUDY

Andrea Austria / Media Matters

TikTok's algorithm leads users from transphobic videos to far-right rabbit holes

After interacting exclusively with transphobic videos on TikTok, Media Matters was fed extremist content by the company's "For You" page

Special PROGRAMS **LGBTQ**

WRITTEN BY OLIVIA LITTLE & ABBIE RICHARDS
RESEARCH CONTRIBUTIONS FROM NENA BEECHAM, CARLY EVANS & JEREMY TUTHILL
PUBLISHED 10/05/21 9:03 AM EDT

- Fake accounts who start out as anti-trans get exposed to hate speech against additional groups
- This phenomenon has also been documented regarding conspiracy communities

<https://www.mediamatters.org/tiktok/tiktoks-algorithm-leads-users-transphobic-videos-far-right-rabbit-holes>

Still fairly open questions!

How can we design recommender systems optimized to metrics that aren't just engagement?

What are the “right” metrics to optimize when it comes to recommender systems and who gets to decide that?

How can algorithm designers better understand and measure what's happening with their algorithms when they tweak them?

How can people outside the platforms better audit recommender systems so we know what's being personally recommended to people?

(We'll discuss this more in a future class!)

Set up project website + blog

- Github organization: <https://github.com/UWSocialComputing>
- Every team will have their own repo for their website. Kevin will go around and get your Github usernames and set up the code for each group's repo such that there is already a skeleton blog and website!
- Changes you make will automatically update your website (example from last year: <https://uwsocialcomputing.github.io/Left-On-Read/>)
- To add new posts to your blog, take a look at the usage guide: <https://github.com/nicolas-van/easy-markdown-to-github-pages>
- We highly encourage you to add info about your team to your webpage and to change up the styling to match your preference (tutorial here: <https://docs.github.com/en/pages/setting-up-a-github-pages-site-with-jekyll/adding-a-theme-to-your-github-pages-site-using-jekyll>). Eventually you will turn this into a website for your final project!
- Once you've finished G1, you can add it to your website as your first team blog post and view other team's posts!

Team signups

- Every week from now on, each group will get 10 minutes with Kevin or me (we'll swap each week). Come prepped with questions or things to show!
- Tuesday [3-4 slots]:
- Thursday [3-4 slots]:
- If we run out of time in class, I can usually go overtime for the ~30 minutes after class is over.

For Thursday

- G1 is due! Let us know if you have questions or would like help!
- Topic for Thursday is Online Social Identity and Self-Presentation
 - We have two readings, one by Jia Tolentino in the New Yorker, and one is excerpts from a paper on bio-signals from our guest visitor.
 - For the first 30 minutes, our guest will be Andrés Monroy-Hernández. He is a professor at Princeton, former research director at Snapchat, and in his PhD at MIT Media Lab, worked on Scratch.
 - He won't have a talk prepared or anything, he's just here to chat with us. So please bring questions for him! You can ask about the reading but you can also just ask about his career in industry and academia and his other research: <https://www.andresmh.com/>