

# **Technology and Public Discourse**

**CS489 Computer Ethics and Social Issues**

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**discourse: n. written or spoken  
communication or debate**

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**OED**

**democracy. n. a system of government by the whole population or all the eligible members of a state, typically through elected representatives.**

**origin: dēmokratia (“rule by people”)**

**OED**

# Direct Democracy



A [Landsgemeinde](#), or assembly, of the [canton of Glarus](#), on 7 May 2006, [Switzerland](#).

[https://en.wikipedia.org/wiki/Direct\\_democracy#/media/File:Landsgemeinde\\_Glarus\\_2006.jpg](https://en.wikipedia.org/wiki/Direct_democracy#/media/File:Landsgemeinde_Glarus_2006.jpg)

# Representative Democracy



**“Given more information, a person  
can make a better decision”  
Do you agree?**

**Is direct democracy more  
desirable as a political system?  
(poll)**



# Tech and Direct Democracy

- On one hand, we can afford the scalability required for modern day direct democracy via technology
  - “IT와 빅데이터 기술의 발전은 직접민주주의를 정착시키는데 좋은 무기가 될 수 있다. 앞서도 얘기했듯이 온라인 기술을 활용해 시간적 공간적 제약을 넘어 최대한의 다중이 토론을 진행하고 이러한 토론의 결과가 과거와는 상상할 수 없는 속도로 체계화 돼서 빠른 의사결정을 도울 수 있기 때문이다. (Advances in IT and big data can be an excellent weapon for establishing direct democracy. As mentioned before, it is now possible to host a debate among the maximum mass, without any temporal or spatial restrictions: the results from this can be systematically used to make decisions at a speed that was not imaginable in the past).”
    - excerpt from an article titled “If you ask whether direct democracy is possible in the modern world...” (<http://www.minplus.or.kr/news/articleView.html?idxno=2190>)
- Note: I neither endorse nor object to the view expressed in the article.

# Tech and Direct Democracy

- Does the age of social networking encourage people to exchange ideas more easily and widely?
- Seemingly, the current tech seems like an ideal tool for direct democracy: both as a way to make decisions (population-wide electronic voting, blockchain, etc) and as a way to form and exchange ideas (SNS, online communities, etc).
- It can backfire in unexpected, and more importantly, unintended, ways.

**tribe: n. a social division in a traditional society consisting of families or communities linked by social, economic, religious, or blood ties, with a common culture and dialect, typically having a recognized leader**

**OED**



...e-minded people into a motivated, mobilised tribe is a sense of shared struggle and common grievance. And the internet is the largest and most abundantly stocked pantry of grievance in the history of mankind.”

*People vs. Tech: How the Internet is Killing Democracy (a*



**“Online, anyone can find any type of community they wish (or invent their own), and with it, thousands of like-minded people with whom they can mobilise. Anyone who is upset can now automatically, sometimes algorithmically, find other people that are similarly upset.”**

***People vs. Tech: How the Internet is Killing Democracy (and how we save it), Jamie Bartlett***

# Identity Politics

- Once, your political identity was either party membership, or a position on a wide spectrum between the left and the right.
- Now, increasingly smaller units of like-minded people - tribes - have replaced the traditional identity.
- Tribalism is, to some degree, inherent in human nature. However, in the super-connected modern world, every individual has so much reason to feel outraged, even when the person is living relatively well. *Tribalism magnifies the smallest differences between us as unrepairable chasms.*

**“Ok, but what does tech have to do with all of these?”**

# Information Overload

- First introduced by Gross in 1964 (“The Managing of Organisations”), popularised by the futurist Alvin Toffler in 1970: *“Information overload occurs when the amount of input to a system exceeds its processing capacity. Decision makers have fairly limited cognitive processing capacity. Consequently, when information overload occurs, it is likely that a reduction in decision quality will occur.”*
- Is more information always good?



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‘A lifetime’s worth of wisdom’  
Steven D. Levitt, co-author of *Freakonomics*

The International  
Bestseller

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Thinking,  
Fast and Slow



Daniel Kahneman  
Winner of the Nobel Prize



생각에 관한 생각

2002년부터 기다려왔던 단 한 권의 책, 행동경제학의 바이블!



THINKING FAST AND SLOW

노벨경제학상을 수상한 최초의 심리학자!  
300년 전통경제학의 프레임을 완전히 뒤엎은  
행동경제학의 창시자 대니얼 카너먼의 첫 대중교양서!

김영사

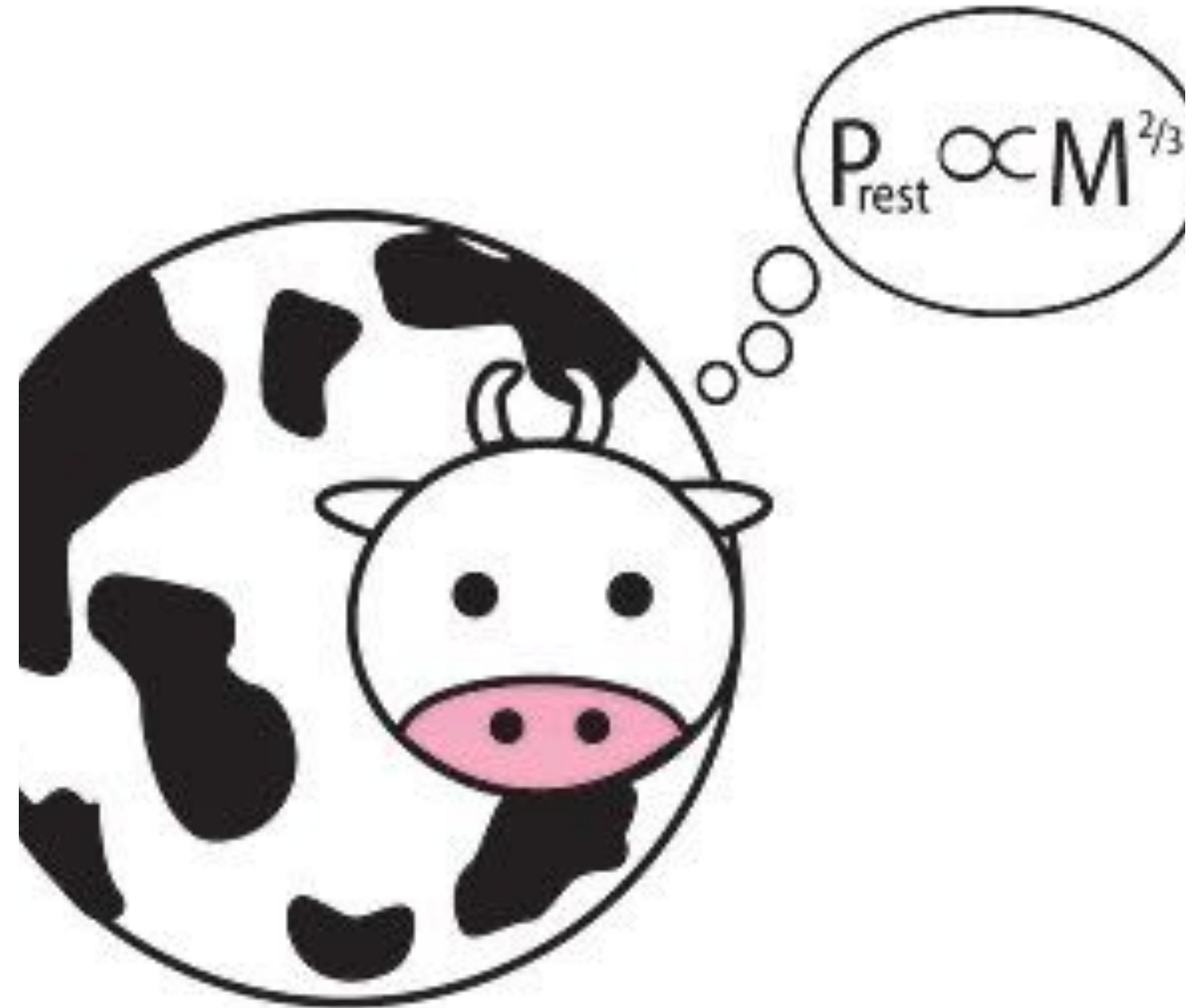
대니얼 카너먼 - 이진원 옮김

there

system

# System 1 vs. System 2

- Modern representative democracy is designed for system 2...
- In reality, this is a bit like the assumption about the spherical cow: we act more on system 1 than we think.
- And the internet is just system 1 on steroid: it is fast, continuous, immediate, and emotional.



# Back to Tribalism

- Information overload leads to tribalism.
- To cope with a vast amount of information as quickly as possible, one cannot afford cognitive burden of anything that is unfamiliar: you want explanations and interpretations that are already familiar to you.
- This process is amplified by SNS and the echo chamber: beliefs and world-views are reinforced by repetition inside a closed network of similarly-minded people.



📖 readme.md

# Echochamber.js

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## All of the commenting, none of the comments.

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*alpha af*

Echochamber.js is a third-party script you can install to add a simple comment form to your blog post or website.

*why not just use Disqus?*

Because then there'd be a chance that someone would read the comments. *You* might have to read those comments. You don't want that.

When a user submits a comment, echochamber.js will save the comment to the user's LocalStorage, so when they return to the page, they can be confident that their voice is being heard, and feel *engaged* with your very engaging content. It does not make any HTTP requests. Since LocalStorage is only local, you and your database need not be burdened with other people's opinions.

## Features

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- No server required!
- 100% spam-proof!
- Compatible with most blog and static site software
- Styles itself nicely to match your site's colours and fonts

## Installation

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Copy and paste the following code where you want your comments to appear:

```
<script id="echochamber">  
  var EchoChamber = window.EchoChamber || {};
```

**“I still don’t see anything tech-specific. What you described is all just human nature.”**

# Platforms as Stakeholders

- Google and Facebook call themselves as “platforms”, implying that they just host whatever users put on “neutrally”.
- But these services are also stakeholders - not in the space of political justice, but in the commercial space: these are essentially advertising companies.
- The more time you spend on their platform, the more advertising they can sell.

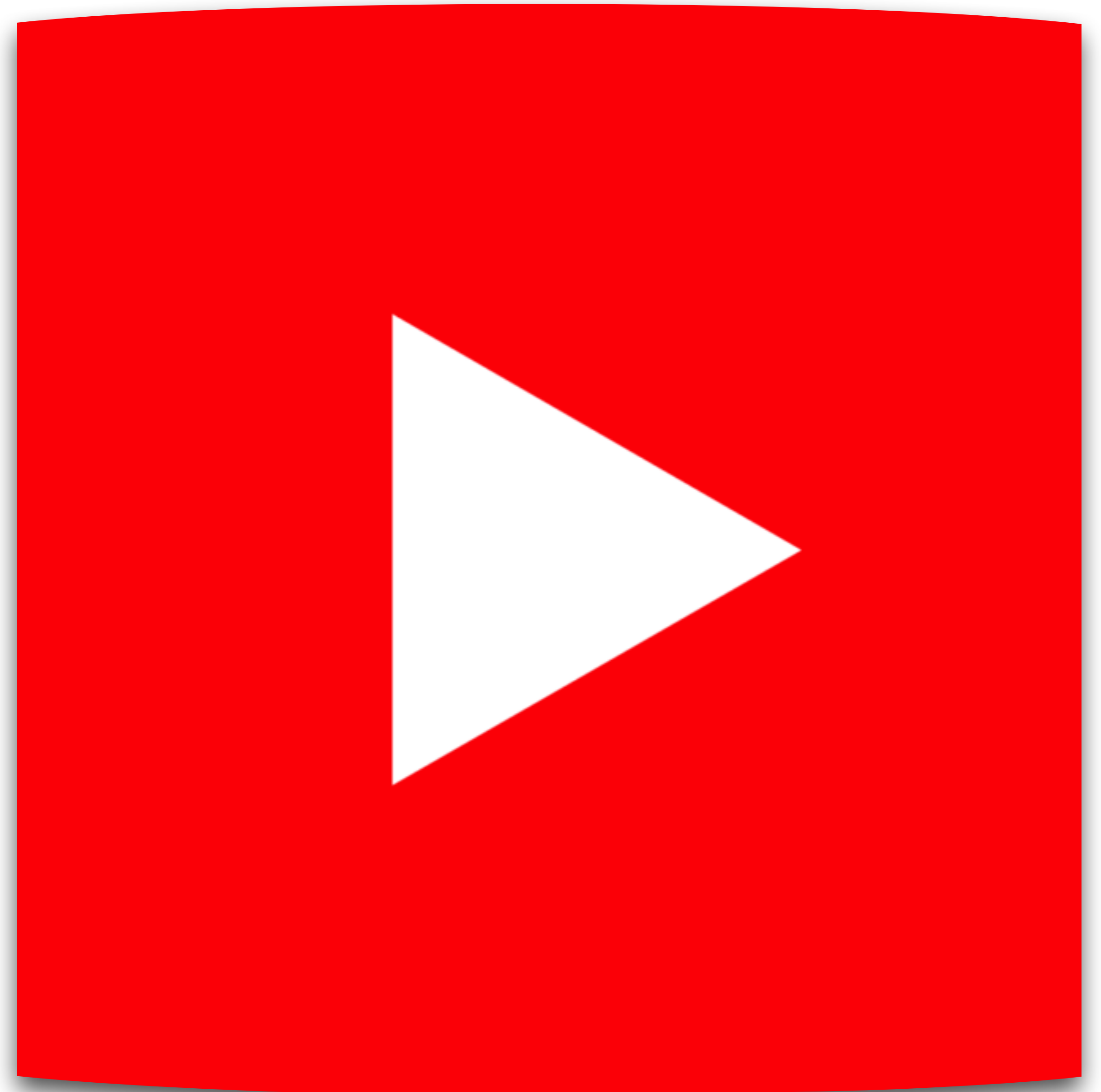
**“YouTube is something that looks like reality, but it is distorted zto make you spend more time online. The recommendation algorithm is not optimising for what is truthful, or balanced, or healthy for democracy. Watch time was the priority, everything else was considered a distraction.”**

**'Fiction is outperforming reality': how YouTube's algorithm distorts truth (Guardian)**

<https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth>

# Something to Think About

- Briefly read Tufekci (NY Times, 10 March 2018) - a PDF version is linked from the course website
- Does your viewing experience support this claim?





# Negative Feedback Loop

- Some malicious contents creators form a symbiosis with the platform, generating more extreme contents for more clicks, resulting in the so called “hatred business”: see <https://www.nocutnews.co.kr/news/5176442> for example (Korean)
- These provide ingredients for YouTube recommender system to work with. More views follow.
- Malicious creators have incentive to get even more extreme.

# Counter Argument

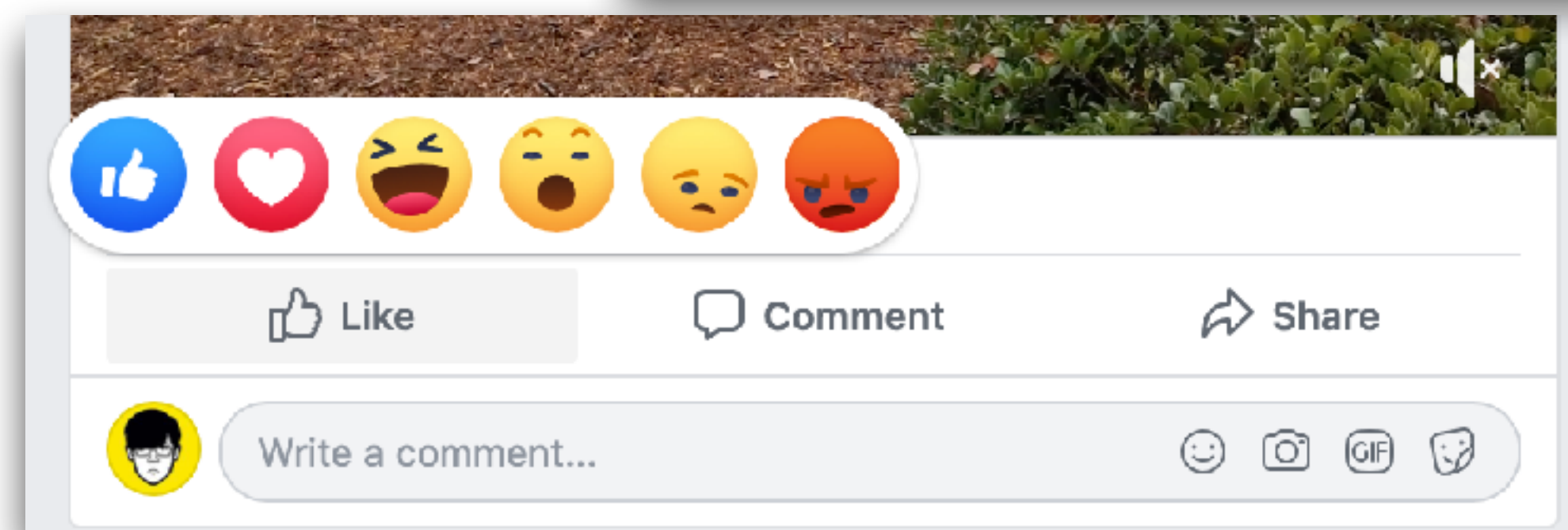
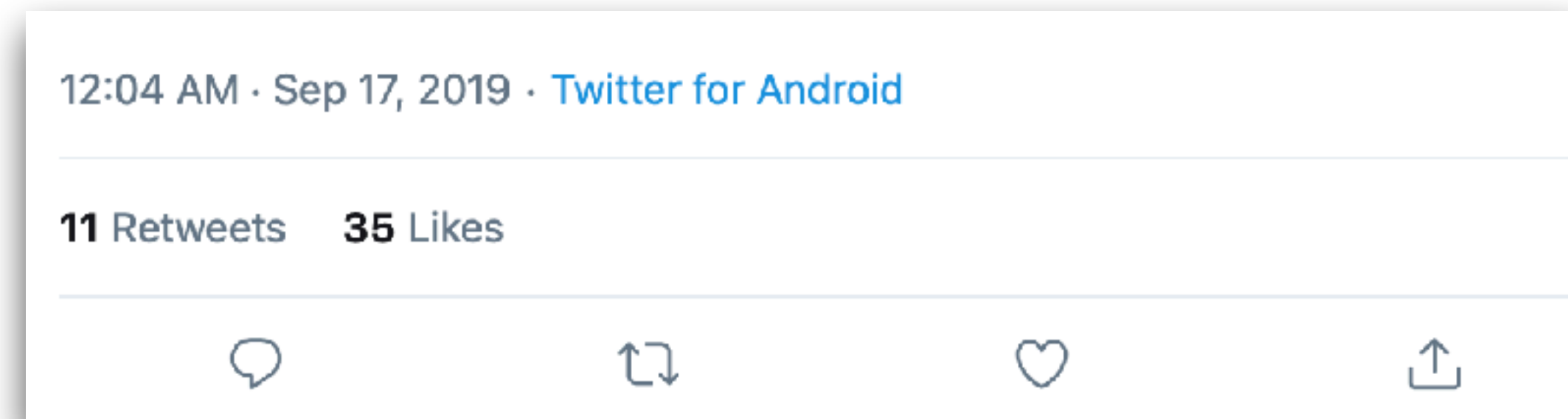
- People tried to validate the claim, with varying results. For example, a study in 2019 concludes that there is little impact from YouTube recommendation algorithm:
  - <https://arxiv.org/abs/1912.11211>
- Others claim that even the 2019 study is flawed: YouTube keeps changing the recommendation algorithms, radical clickbait and normal news outlets adopt very different media strategies, people systematically abuse view counts, etc... in the end, this is not something that can be easily studied from outside.
  - <https://mashable.com/article/youtube-flawed-radicalization-study>

# Ethics?

- Today's topic is an ethical one, regardless of your political bearing.
- One may argue that a wider, balanced world-view is necessary if you subscribe to utilitarianism: otherwise, how would you know the good from the bad?
- Humans should be treated only as an end, not as means.

# UI/UX

- What looks like the most benign and naive UI design element can have unintended impacts.
- Can you give examples of system 1 friendly UI/UX elements?



# Concluding Thoughts

- Is the nature vs. digital frame too simplistic? Too naive? Or actually meaningful? Was good old days really good old days?
- Do you agree that contents providers on platforms such as YouTube be regulated? If so, how? If not, why?
- As system architects and UI designers, how can we encourage healthier communication and more balanced consumption of information?