# Social Computing Capstone

## Day 4: Why do people participate in online social communities?

CSE 481p | Winter 2022

Amy X. Zhang
Assistant Professor | University of Washington, Allen School of Computer Science & Engineering
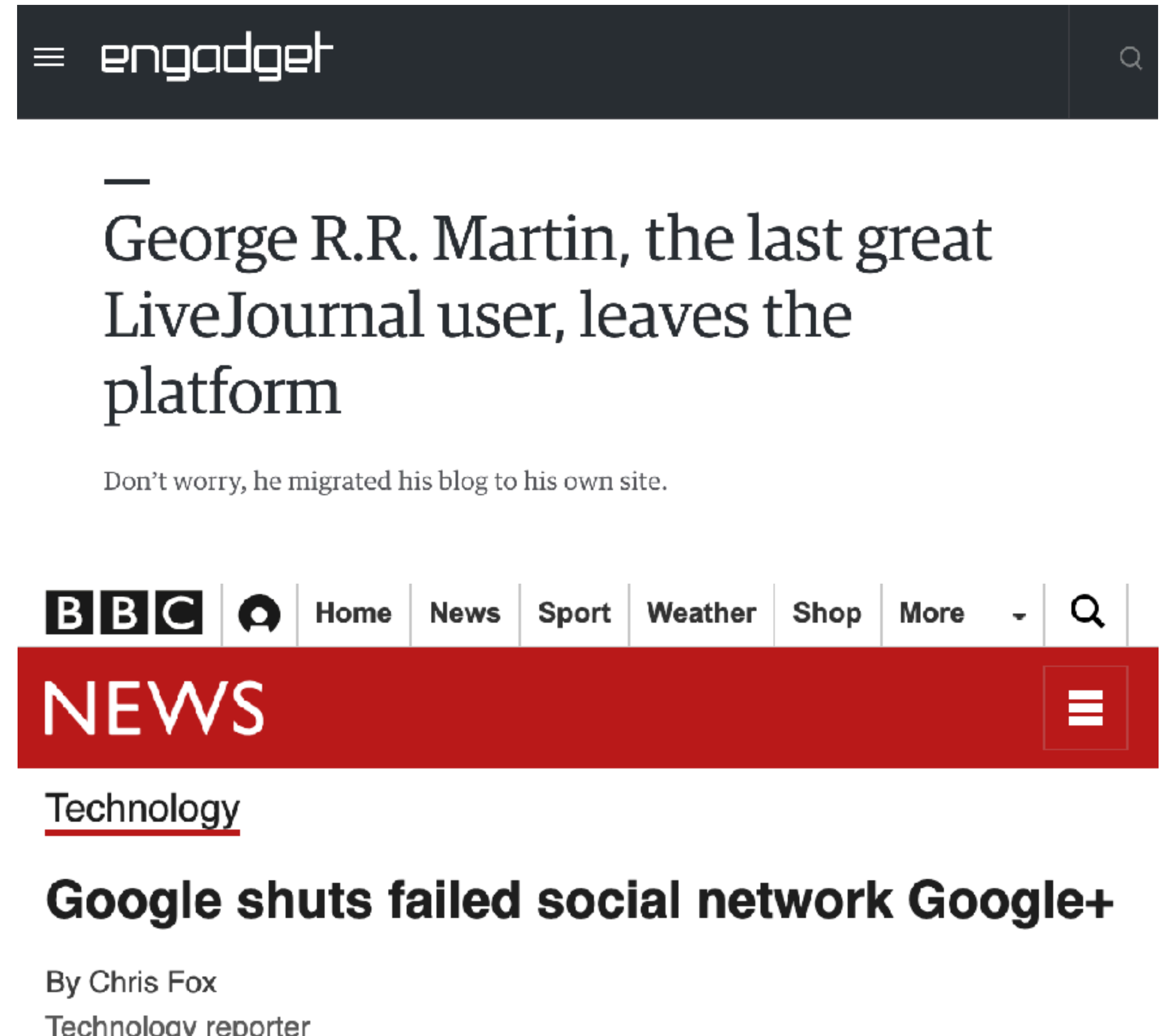
# Schedule for today's class

- Go around and each group say what you're thinking will be your group project topic (10 min)

- Lecture on today's topic (30 min)

- Go over G1 and how to do user research (due next Thurs) (15 min)

- Assign A3, also install Hypothesis and assign readings for next Tues (5 min)

- Breakout time in groups to discuss G1 plans (20 min)

# Group updates

# Why do people participate in online social communities?

# Remember Friendster? Xanga? Digg? Flickr? Google+?

## The New York Times

PLAY THE CROSSWORD

### The Rise and Fall of Yik Yak, the Anonymous Messaging App

David Plunkert

## engadget

### George R.R. Martin, the last great LiveJournal user, leaves the platform

Don't worry, he migrated his blog to his own site.

## BBC | Home | News | Sport | Weather | Shop | More

## NEWS

### Technology

### Google shuts failed social network Google+

By Chris Fox
Technology reporter

Among open source projects that have produced successful and sustainable software, the median number of code contributors is…

1

[Schweik and English 2012]
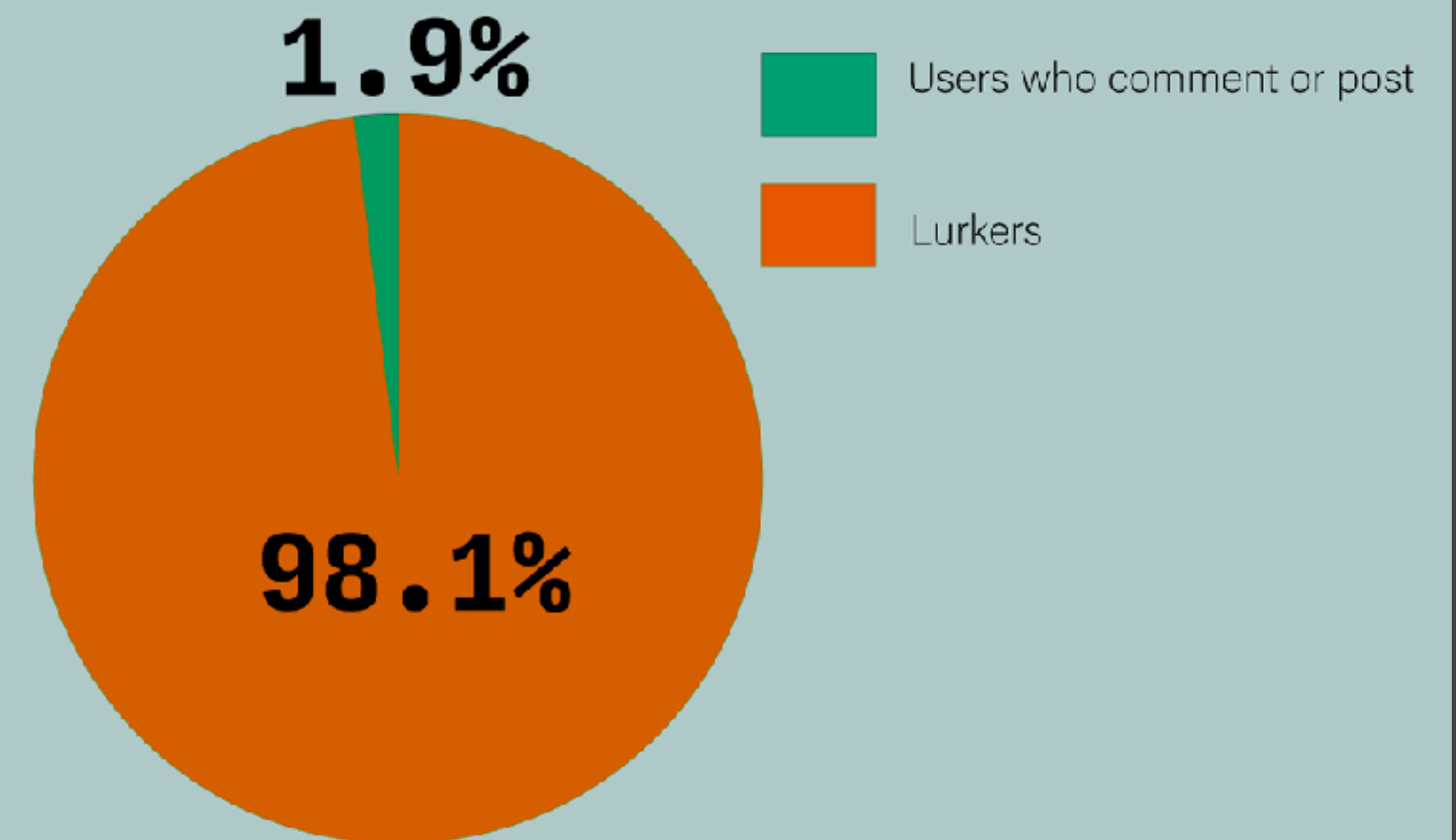
the loneliest number

the loneliest number =

1

# But even amongst success...

Active contributors make up only 0.02%–0.03% of all Wikipedia users

[https://strategy.wikimedia.org/wiki/Wikimedia_users]



More than 98% of Reddit users are lurkers who don't post or comment

1.9%

■ Users who comment or post

■ Lurkers

98.1%

Created by TrueBirch. Reddit claims it has 330 million active monthly users. Monthly datasets from pushshift.io contain posts and comments from 6.4 million different users, suggesting that 98.1% of Reddit users are lurkers.

[http://redd.it/b5f9wi]

# Why do people participate in online social communities?

individual factors

    intrinsic and extrinsic motivation

social factors

    common identity and bond

# Why DON'T people participate?

1% rule

social loafing

network effects

Remember the term **sociotechnical** systems from Day 2

# Individual factors

# Motivation: why are you here?

Why do people contribute to...

Piazza/Ed?

Bookstagram?

Discord server for friends?

Lyft?

People have lots of pressing things to do with their time. So we need to ask critically: why are they spending time in this socio-technical system?

# Intrinsic and extrinsic motivation

The distinction between intrinsic and extrinsic motivators helps clarify who is here, why, and what it implies for design.

Intrinsic motivation: derive from my own desires to complete a goal

    Examples: pleasure, hobby, developing a skill, demonstrating a skill

Extrinsic motivation: don't derive from my relationship with the goal

    Examples: money, graduation, points, badges

# Intrinsic / Extrinsic

Which motivation is each of these most likely to tap into?

Posting your art to Twitter/DeviantArt as a new artist

Answering someone's question on Stack Overflow

Creating memes for your go-to shitposting place

# Motivation crowding

Mixing motivators is dangerous: taking an intrinsically motivated goal and adding extrinsic motivators to it may actually reduce the overall motivation level.
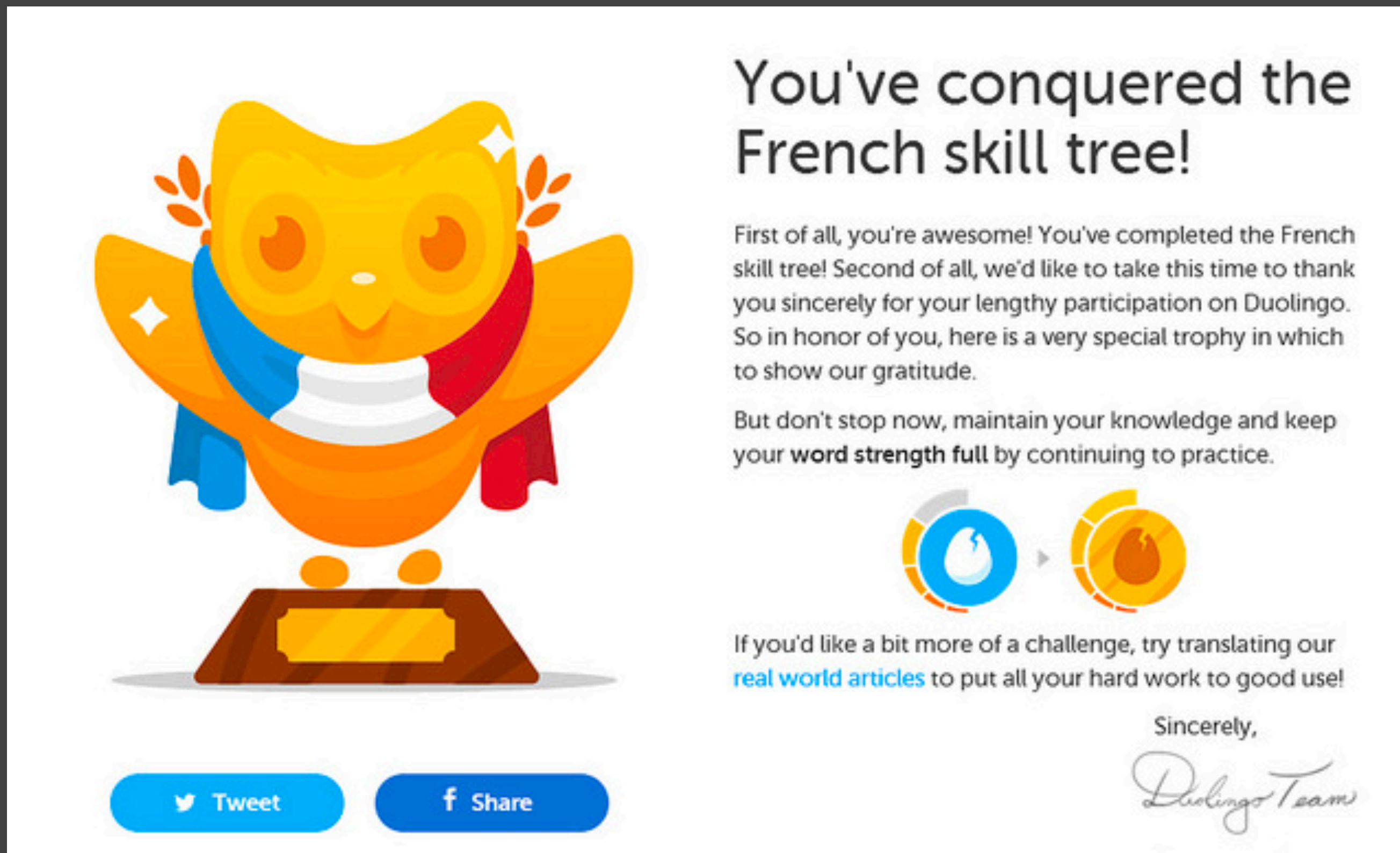
1. Late parents are shamed

2. A fine is instituted. Lateness increases!

3. The fine is removed. Lateness remains!

[Gneezy and Rustichini 2000]

# But sometimes extrinsic rewards (or gamification) can be done well

You've conquered the French skill tree!

First of all, you're awesome! You've completed the French skill tree! Second of all, we'd like to take this time to thank you sincerely for your lengthy participation on Duolingo. So in honor of you, here is a very special trophy in which to show our gratitude.

But don't stop now, maintain your knowledge and keep your **word strength full** by continuing to practice.

If you'd like a bit more of a challenge, try translating our **real world articles** to put all your hard work to good use!

Sincerely,
Duolingo Team

Tweet    Share

Why does Duolingo's use of gamification, badges, streaks, etc., not feel like it's crowding out the intrinsic learning motivation?

# Takeaways for your social computing systems

- Think about how your tool solves **intrinsic** needs first. Without meeting any intrinsic needs at all, either your system is just a marketplace or you've "poisoned the well" - people cannot trust each other on your system to have genuine social interactions.

- Once you've got that sorted, then extrinsic rewards can either be designed to come after to help form a habit or come before to cross the barrier to get started.

# Social factors

# Common identity and bond theory

Two theories of group attachment from social psych studies of voluntary social groups like fraternities and clubs:

**Common identity theory**: people join groups due to an identification with the group as a whole
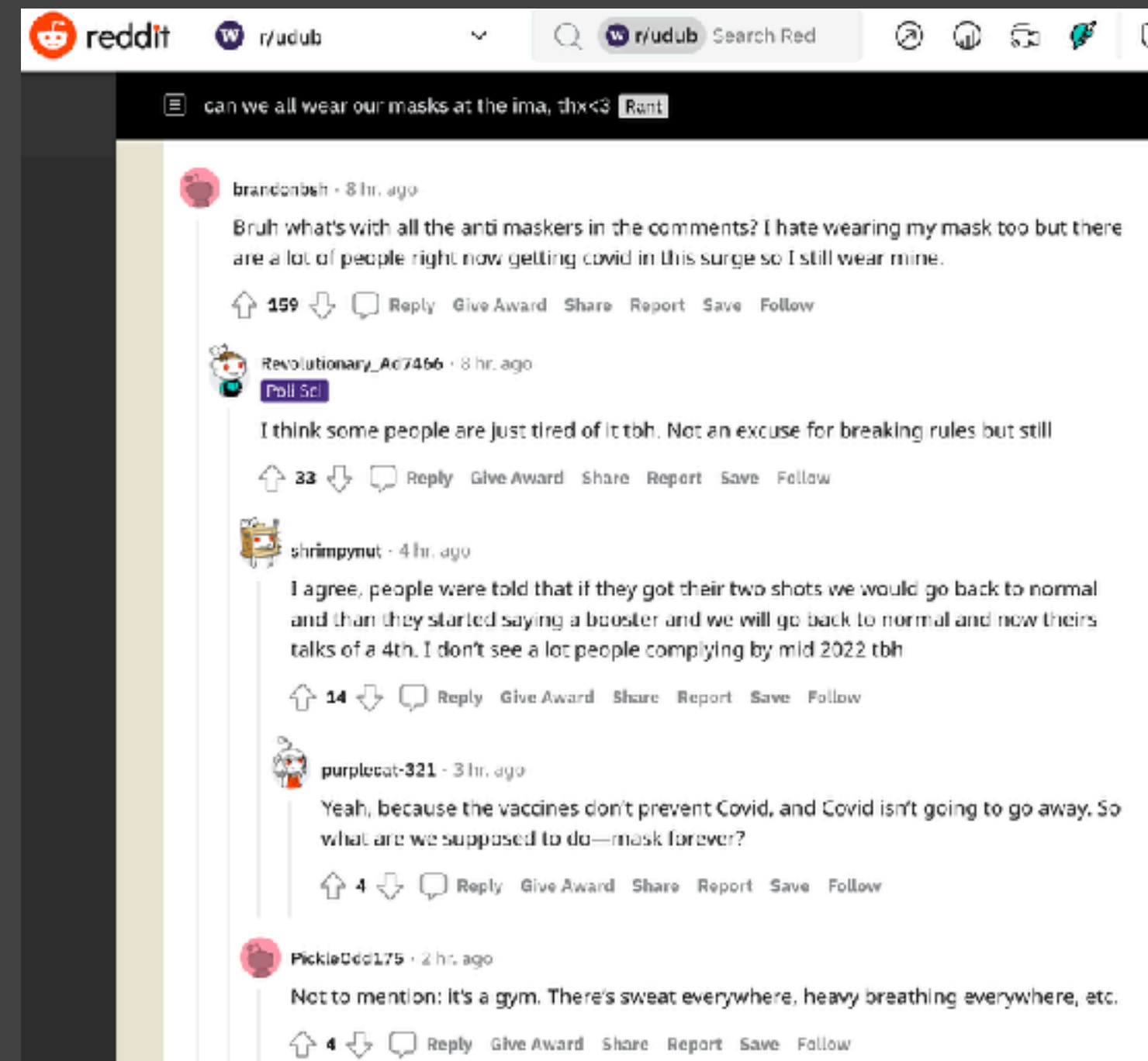
  - they perceive others in the group as interchangeable, and turnover in membership is unnoticed

**Common bond theory**: people join groups because of connections to individuals in the group and not the group as a whole

  - if the people they're close to leave, they are likely to leave as well

Ren, Yuqing, Robert Kraut, and Sara Kiesler. "Applying common identity and bond theory to design of online communities." Organization studies 28.3 (2007): 377-408.

# How this can manifest in system decisions:

How recognizable are individuals on your system? How do people get added to the system?
How important is staying on topic or producing high quality content important?



Ren, Yuqing, Robert Kraut, and Sara Kiesler. "Applying common identity and bond theory to design of online communities." Organization studies 28.3 (2007): 377-408.

# Takeaways for your social computing systems

- Most communities have some element of both common identity and common bond. But it's probably not 50/50. Which one is your system more geared towards? When making decisions about design, how can you emphasize one or the other?

# Why don't people participate?

# 1% rule:

1% of users create content while 99% lurk

Also the 1-9-90 rule: 90% consume content, 9% change or update content, 1% add content

# Power law of participation:

the majority of contributions are made by a minority of users.

In Wikipedia, 500 people, or 0.5% of users, account for 50% of the edits.
In the Apache project, 15 developers, or 0.5%, account for 80%-90% of edits.

# Pareto principle (80/20 rule):

20 percent of a group will produce 80 percent of the activity

# Social Loafing

Many hands make...work...light?

When there are others contributing, we contribute less.

Experiment: blindfold a participant and get them to play team tug-of-war. [Ingham 1974]

> Except...there is actually nobody else on their team, they just think so. (Remember, they're blindfolded.)

> People pulled 18% harder when they thought they were the only one on their team than when they thought there were 2–5 others.

# Network effects and payoff interdependence

In social applications, sometimes the experience gets better the more people participate. You may need a *critical mass* to have a useful tool. Example:

- Social networks have "*network effects*" - tools like Facebook or Airbnb are useful because other people are on there too, and this grows as the network grows, forming a competitive advantage.

In *payoff interdependence* (from game theory), no one gets the reward (payoff) unless everyone participates. Example:

- Group when2meet or automatic scheduling apps, group task trackers

# Takeaways for your social computing systems

- No matter what, your system will have a lot of lurkers. That's ok! Don't shame or nudge people for being lurkers (we all lurk)!

- Consider building into your system low threshold activities (liking, voting, reacting) so some lurkers can still provide some signal back to the community and it becomes an on-ramp for greater involvement.

- Be careful of designing a tool that needs a high critical mass because it's risky. See if you can design something that will still have a good experience for a low number of users.

~5 min bathroom break

# How to do User Research (G1)

# Assignment G1: User Research report (due Thurs)

Narrow down to a particular topic and target audience (the people who you think will want to use your tool). You don't need an exact product or a solution for them yet. Examples:

- Single college students at UW who are looking to date friends-of-friends

- People who are dealing with mental health issues and looking for support online

- People who want a way to share their day-to-day life with family in another country

Too broad/vague:

- People who want to talk to others online

- People who want to keep in touch with friends

- People who want to date

# User Research

Go out and learn about your target audience! Potential methods:

- Interviews

- Surveys

- Fly-on-the-wall observation

- Digital ethnography

- Contextual inquiry

See slides from my CSE 440 course: https://courses.cs.washington.edu/courses/cse440/21au/slides/05-User_Research_I.pdf for a deeper dive into different types of user research and how to best conduct them. Come talk to us for feedback and advice and recruitment connections!

# User Research Report

Activities are goal-directed sets of actions.

Environments include the entire arena in which activities take place.

Interactions are between a person and someone or something else, and are the building blocks of activities.

Objects are the building blocks of the environment, key elements sometimes put to complex or even unintended uses, possibly changing their function, meaning, and context.

Users are the people whose behaviors, preferences, and needs are being observed.

# Example: People who want a way to share their day-to-day life with family in another country

Activities are goal-directed sets of actions.

Take short videos and photos of what they're doing occasionally

Environments include the entire arena in which activities take place.

Family WhatsApp group

Interactions are between a person and someone or something else, and are the building blocks of activities.

Post videos and photos to family group, respond to other people's posts with emojis

Objects are the building blocks of the environment, key elements sometimes put to complex or even unintended uses, possibly changing their function, meaning, and context.

The phone and phone camera

Users are the people whose behaviors, preferences, and needs are being observed.

A student and their family in another country

# For next week:

A3 is due Tuesday. Your challenge before then is to **avoid social media (or your phone entirely (or the internet entirely))** for 24 hours. See if you can plan ahead to make it successful! Then post a reflection on Canvas and comment on someone else's reflection.

We are starting up readings for each class. This will typically be 1-2 short news articles/opinion pieces. For each reading, we ask that you **write at least one comment "in the margins" of each reading** (can be in response to someone else's comment) using Hypothes.is.

[Pause while I help everyone install hypothes.is] Invite link: https://tinyurl.com/socaphypoth

We have 1 reading for Tuesday. Readings are listed on the website under "Schedule and Readings".

Remaining time: work in your groups on a plan for completing G1