

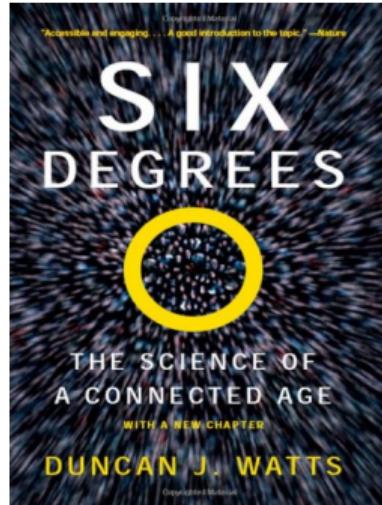
Introduction

Matthew J. Salganik

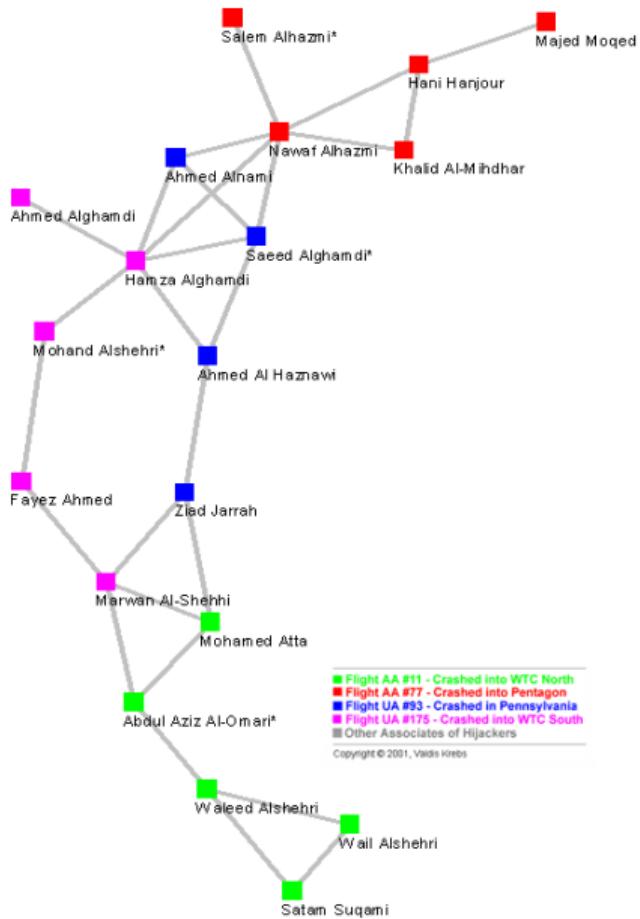
Social Networks (Soc 204)
Princeton University

Wednesday, September 1, 2021
Week 1, Lecture 1



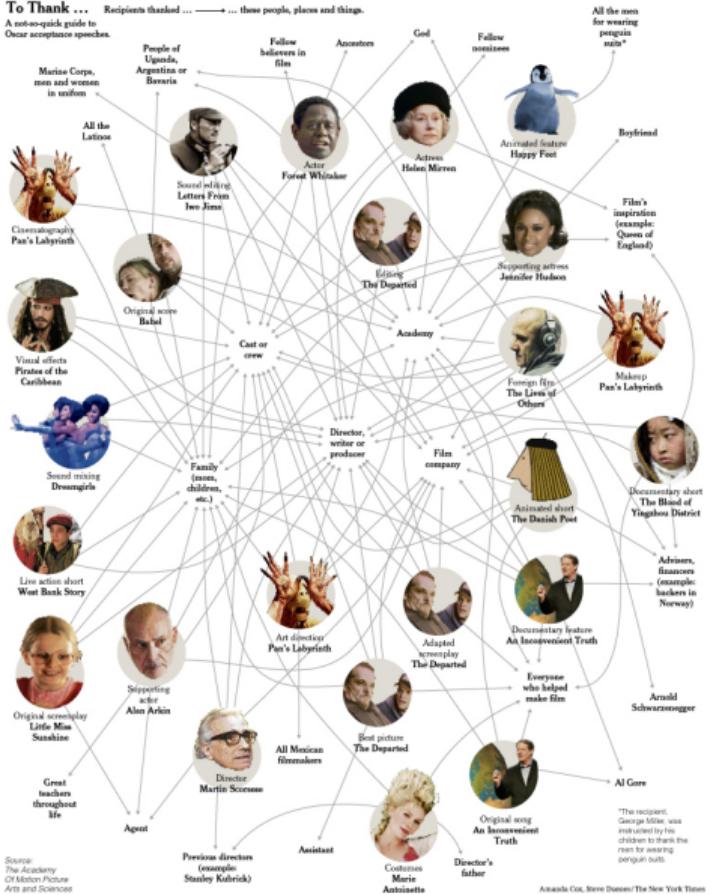


We live in the connected age.



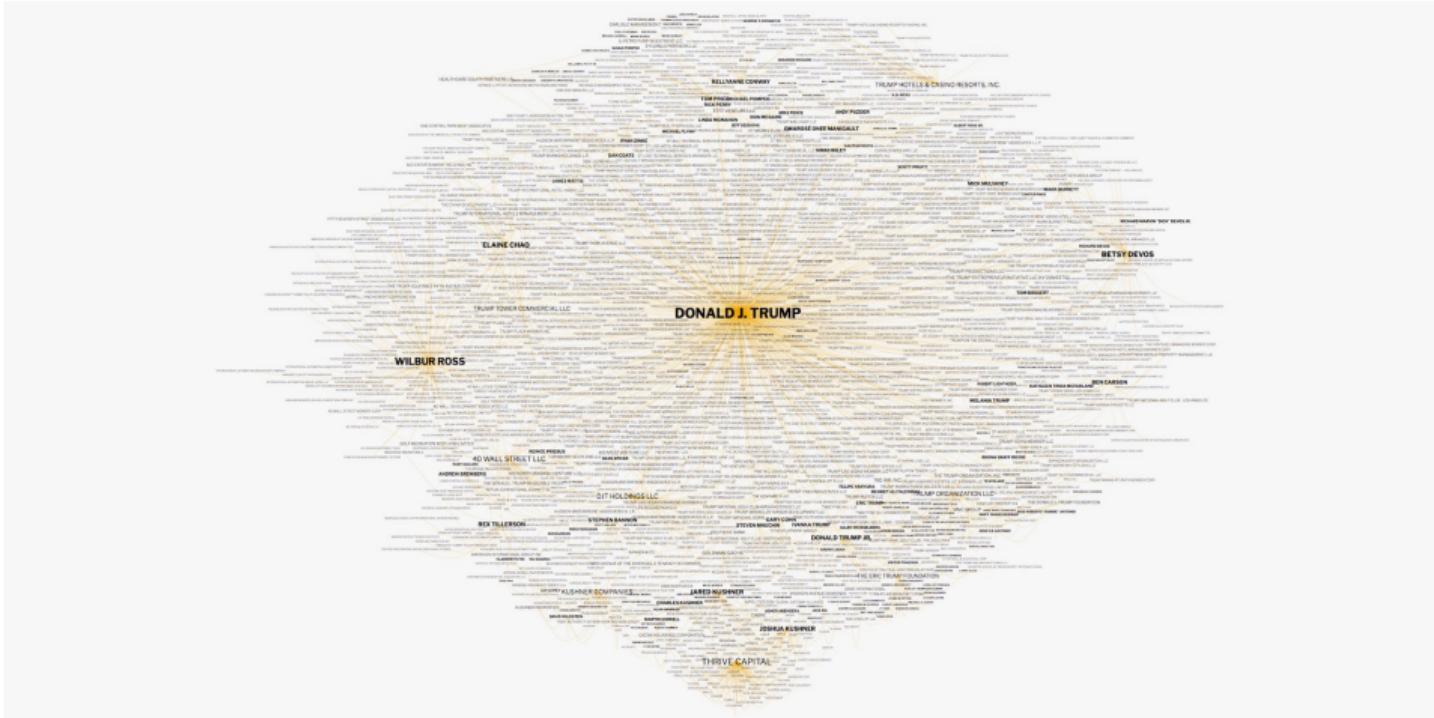
I Would Like To Thank ...

A not-so-quick guide to Oscar acceptance speeches.



Source:
The Academy
of Motion Picture
Arts and Sciences

Amanda Cox, Steve Dornbusch/The New York Times



<https://kimalbrecht.com/vis/#trump-connections>

General pattern:

- ▶ nodes
- ▶ edges

Your turn

Think-pair-share: What are some other examples of networks? They don't need to be social.

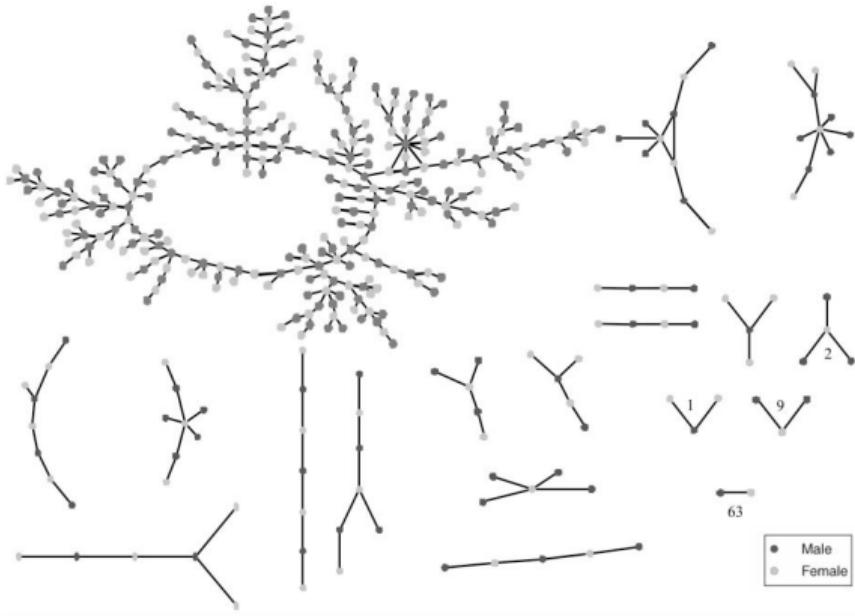


FIG. 2.—The direct relationship structure at Jefferson High

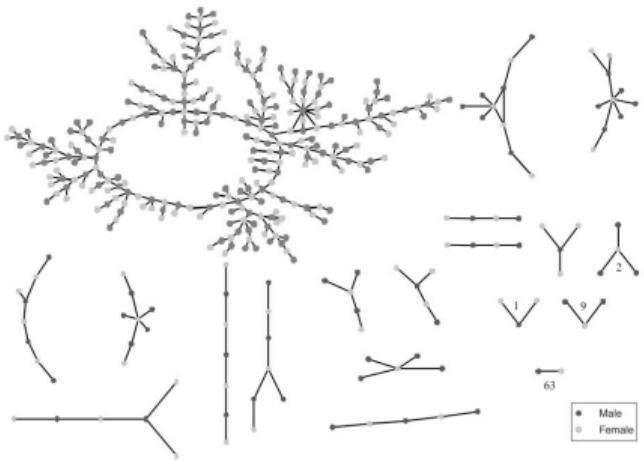
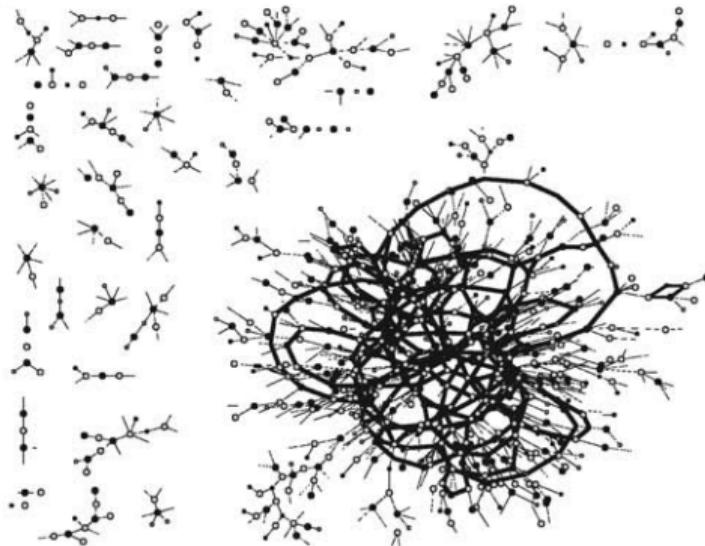
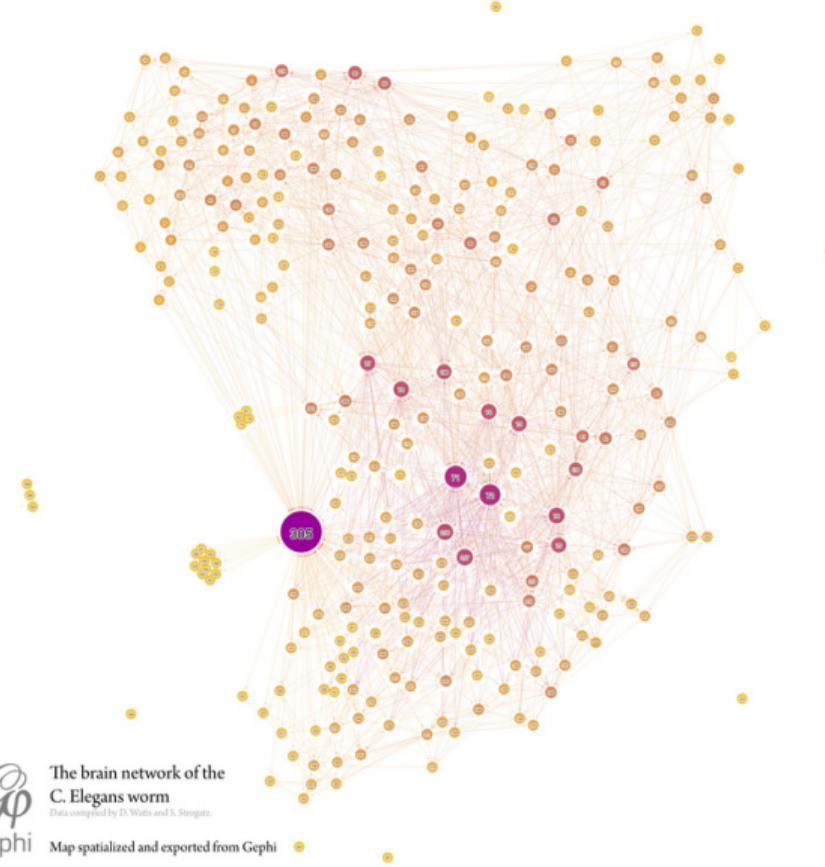


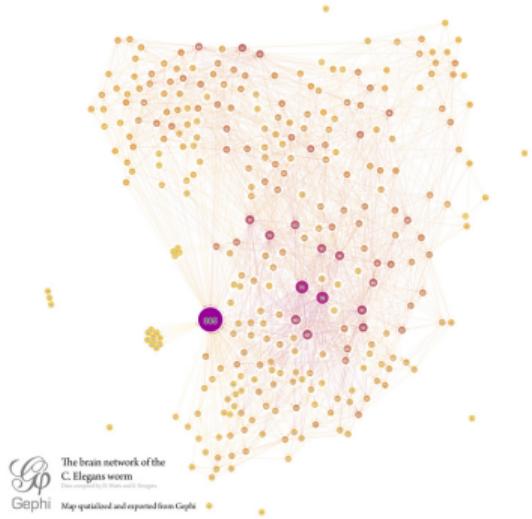
FIG. 2.—The direct relationship structure at Jefferson High

(a) American High School

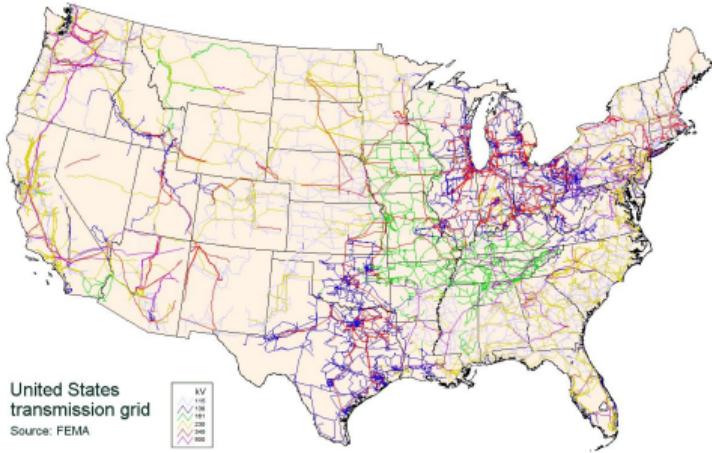


(b) Likoma Island, Malawi





(a) Worm Brain



(b) Power Grid

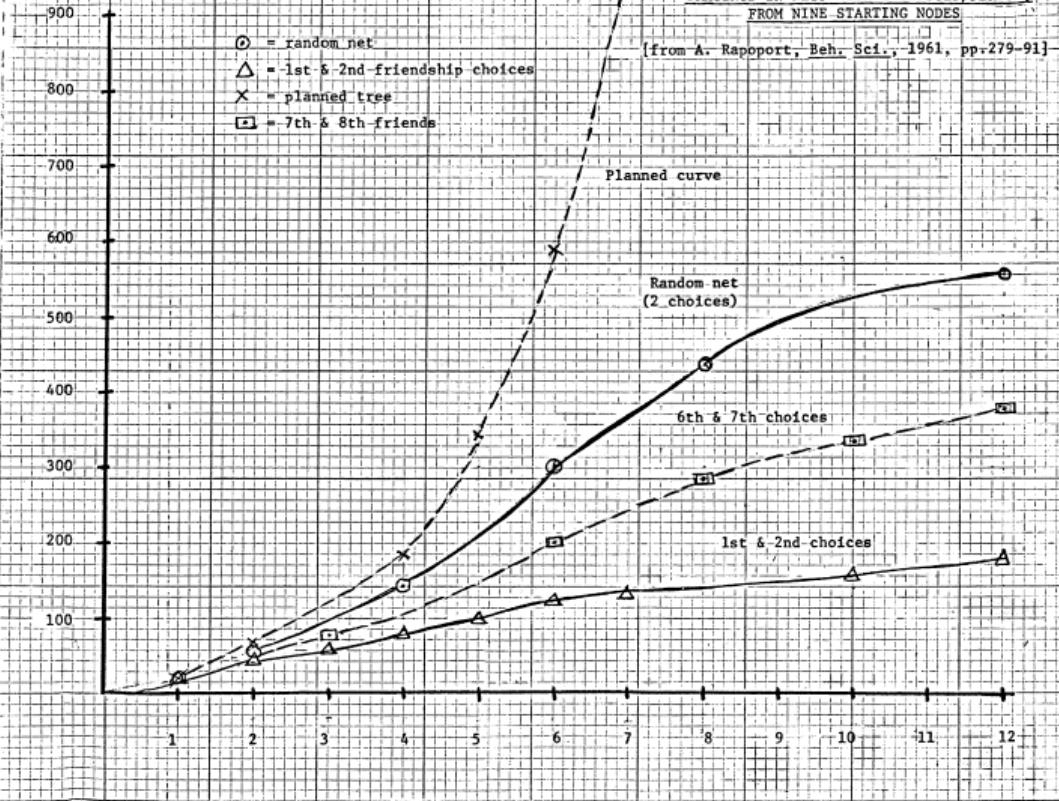
<https://commons.wikimedia.org/wiki/File:C.elegans-brain-network.jpg> & <https://commons.wikimedia.org/wiki/File:UnitedStatesPowerGrid.jpg>

- SR 10, Lecture Notes
February 28, 1966

TRACINGS IN NETS WITH 2 CHOICES/PERSON
FROM NINE STARTING NODES

[from A. Rapoport, Beh. Sci., 1961, pp.279-91]

CROSS SECTION - 10 SQUARES TO INCH
THE CHAMPION LINE NO. 810



Learning objectives

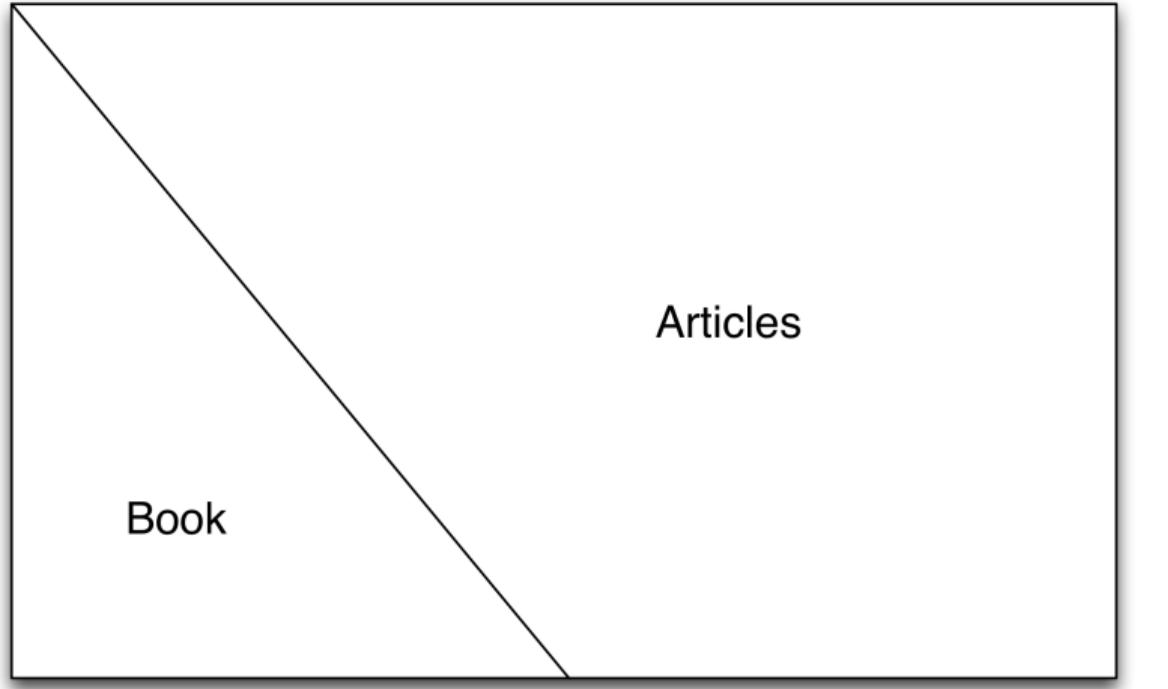
- ▶ Students will be able to **describe** the major concepts used in the study of networks.

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- ▶ Students will be able to **use** the major concepts in the study of networks to gain insight into real-world phenomena.
- ▶ Students will be able to **evaluate** real, modern research that connects the concepts of networks to real-world phenomena.

Major activities



Midterm

Final

Concepts

Applications

- ▶ Weekly precept assignment
- ▶ Weekly quiz
- ▶ Midterm exam
- ▶ Final exam

Each week

- ▶ Watch pre-read video

Each week

- ▶ Watch pre-read video
- ▶ Do reading

Each week

- ▶ Watch pre-read video
- ▶ Do reading
- ▶ Come to lecture

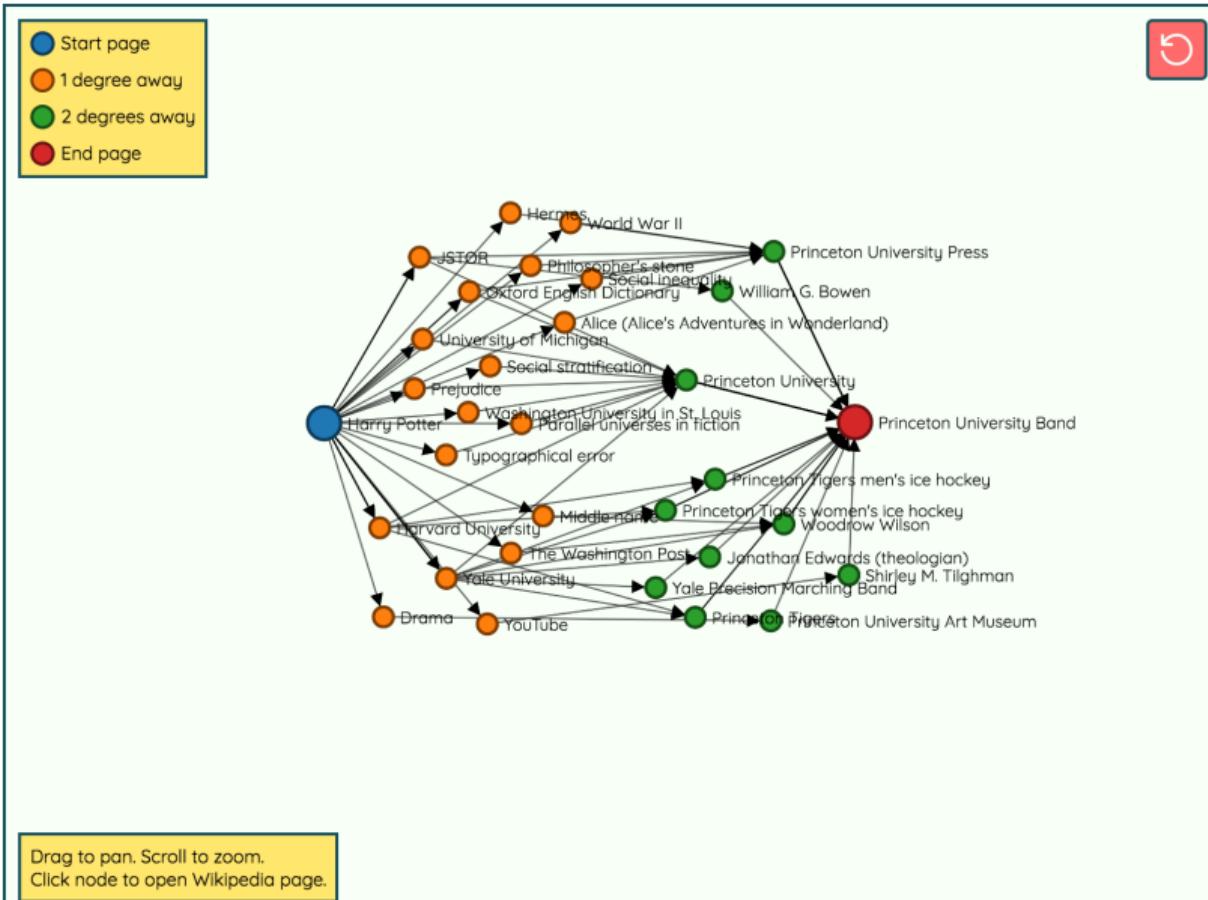
Each week

- ▶ Watch pre-read video
- ▶ Do reading
- ▶ Come to lecture
- ▶ Watch pre-read video
- ▶ Do reading
- ▶ Submit quiz on Canvas
- ▶ Submit weekly assignment
- ▶ Come to lecture

Each week

- ▶ Watch pre-read video
- ▶ Do reading
- ▶ Come to lecture
- ▶ Watch pre-read video
- ▶ Do reading
- ▶ Submit quiz on Canvas
- ▶ Submit weekly assignment
- ▶ Come to lecture
- ▶ Attend precept

Example assignment



Example assignment

Experimental evidence of massive-scale emotional contagion through social networks

Adam D. I. Kramer^{a,1}, Jamie E. Guillory^{b,2}, and Jeffrey T. Hancock^{b,c}

^aCore Data Science Team, Facebook, Inc., Menlo Park, CA 94025; and Departments of ^bCommunication and ^cInformation Science, Cornell University, Ithaca, NY 14853

<https://doi.org/10.1073/pnas.1320040111>

Example assignment

American Economic Review 2020, 110(3): 629–676
<https://doi.org/10.1257/aer.20190658>

The Welfare Effects of Social Media[†]

By HUNT ALLCOTT, LUCA BRAGHIERI, SARAH EICHMEYER,
AND MATTHEW GENTZKOW*

<https://doi.org/10.1257/aer.20190658>

INSPIRED CONVERSATIONS

THE
PRINCETON
PRECEPT

Getting to know each other

About me

About the preceptors:

- ▶ Emily Cantrell
- ▶ Katie Donnelly-Moran
- ▶ Max Fineman

About you

- ▶ first year, second year, third year, fourth year

- ▶ first year, second year, third year, fourth year
- ▶ no major, sociology, social science (but not sociology), humanities, natural sciences, cs/engineering



have account, active user (6 of past 7 days)



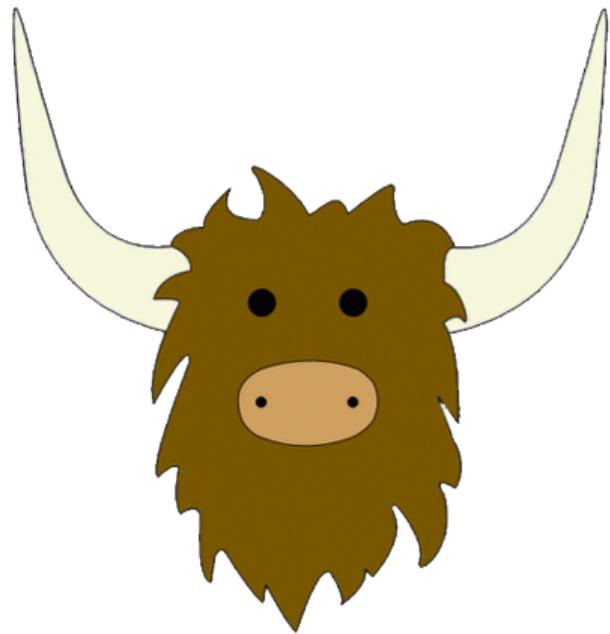
have account, active user (6 of past 7 days)



have account, active user (6 of past 7 days)



have account, active user (6 of past 7 days)



Yik Yak

have account, active user (6 of past 7 days)

?



More information about the course

Logistical notes:

- ▶ We will post an announcement on Canvas when precept times are set
- ▶ There is no precept this week
- ▶ There is no quiz this week

More information about the course

- ▶ Canvas, especially modules page: <https://princeton.instructure.com/courses/4801/modules>

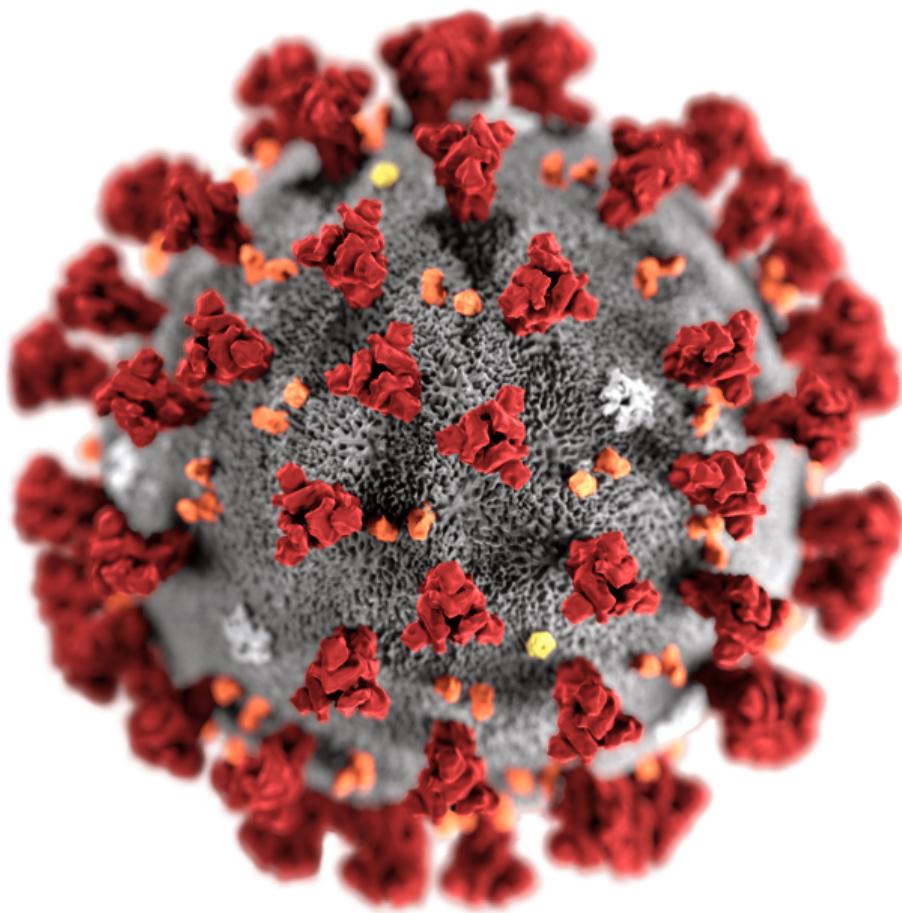
More information about the course

- ▶ Canvas, especially modules page: <https://princeton.instructure.com/courses/4801/modules>
- ▶ Additional information about readings: https://www.princeton.edu/~mjs3/soc204_f2021/readings.shtml

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- ▶ Additional information about readings: https://www.princeton.edu/~mjs3/soc204_f2021/readings.shtml
- ▶ Additional information about class logistics:
https://www.princeton.edu/~mjs3/soc204_f2021/logistics.shtml

Is this course right for you?



<https://phil.cdc.gov/Details.aspx?pid=23312>

Next class: The connected age and the small world problem