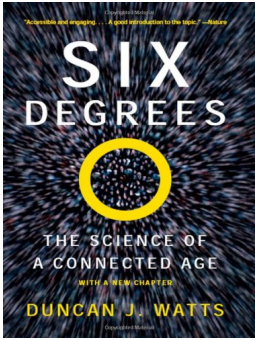
Introduction

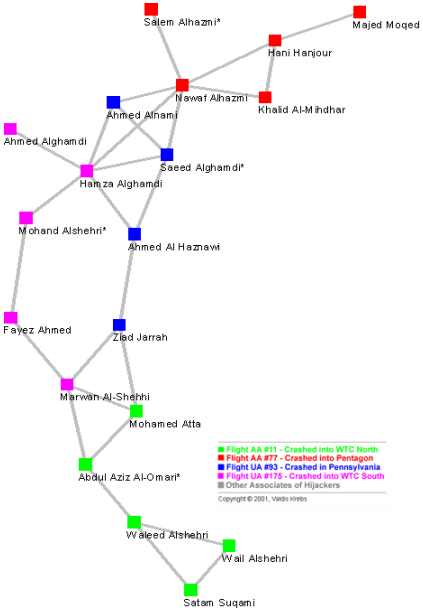
Matthew J. Salganik

Social Networks (Soc 204)
Princeton University

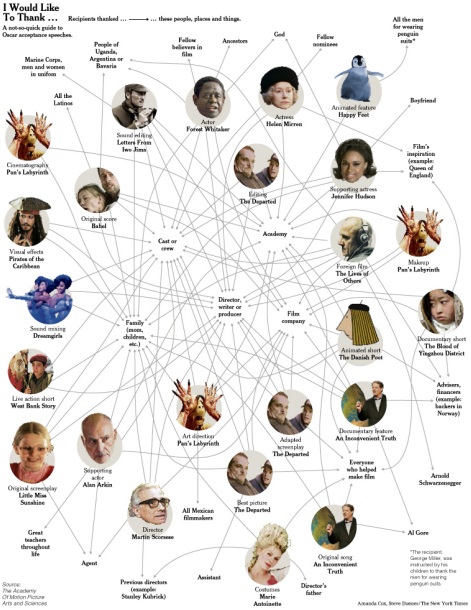
Wednesday, September 1, 2021
Week 1, Lecture 1



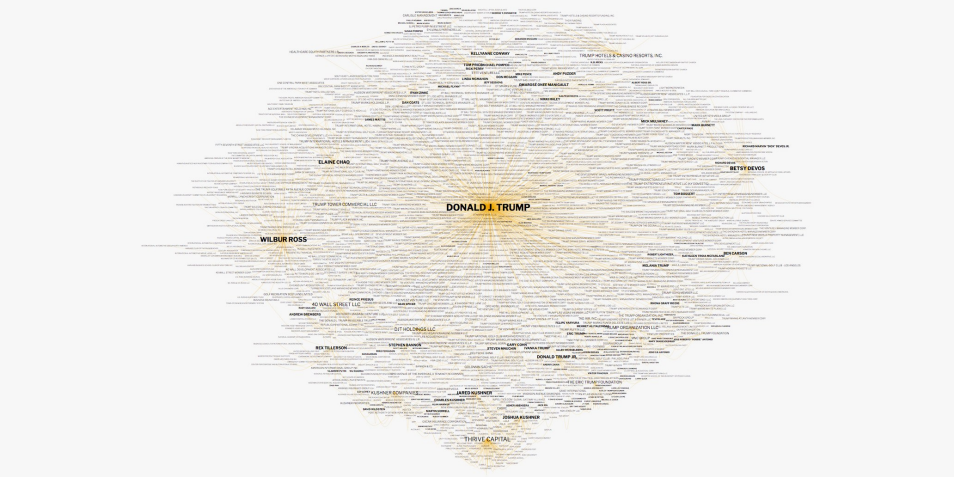
We live in the connected age.



http://pear.accc.uic.edu/ojs/index.php/fm/article/view/941/863



http://www.nytimes.com/imagepages/2007/02/26/movies/27graphic.ready.html


DONALD J. TRUMP
WILBUR ROSS
ELAINE CHAO
BETSY DEVOS
KELLYANNE CONWAY
TRUMP HOTELS & CASINO RESORTS, INC.
TRUMP TOWER COMMERCIAL LLC
40 WALL STREET LLC
DJT HOLDINGS LLC
THE TRUMP ORGANIZATION LLC
DONALD TRUMP JR.
JARED KUSHNER
JOSHUA KUSHNER
THRIVE CAPITAL
RICK TILLERSON
STEPHEN BANNON
STEVEN MNUCHIN
ANDREW MEMBERS
HOPE HICKS
SAM CLOVIS
ERIC TRUMP
IVANKA TRUMP
GARY COHN
MICK MULVANEY
RUDY GIULIANI
JOHN CARSON
HOLLAND TRUMP
TIFFANY TRUMP
TOM BRADY
DAN MCADAMS
JOHN PUTNAM
DAVID JOSEPH
LINDA MCMAHON
JEFF SESSIONS
CHARLES KUSHNER
MARK MILLER
DAVID SCHWARTZ
JOSEPH MCGINTY
MARK SCHWARTZ
JOSEPH MCGINTY
MARK SCHWARTZ
JOSEPH MCGINTY
MARK

General pattern:

- nodes
- edges

Your turn

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

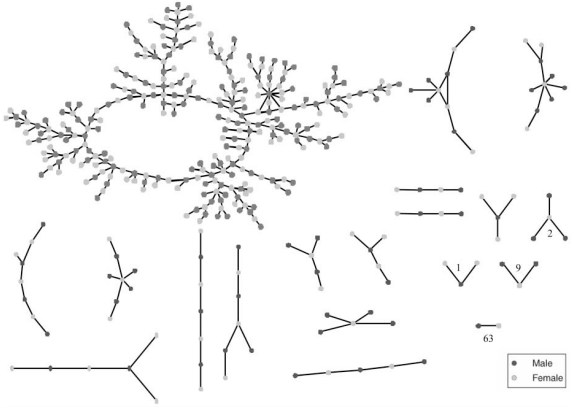


FIG. 2.—The direct relationship structure at Jefferson High

urlhttp://www.journals.uchicago.edu/doi/10.1086/386272

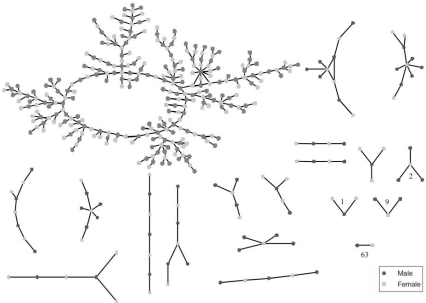
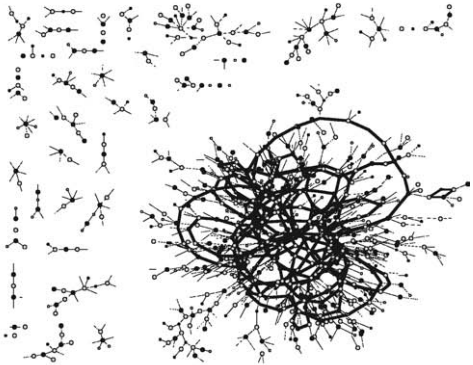


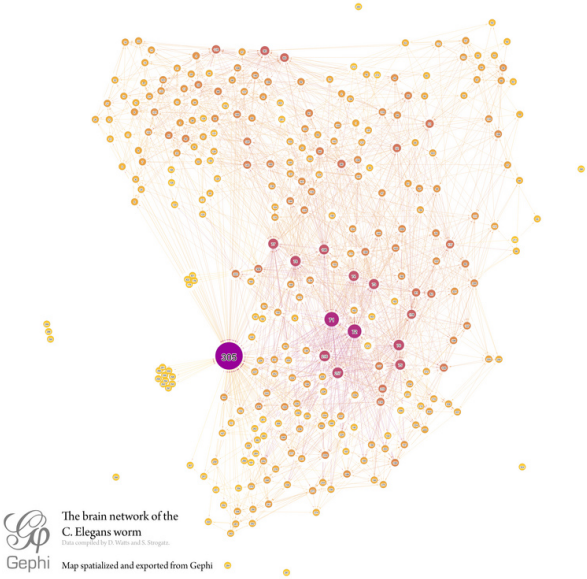
FIG. 2.—The direct relationship structure at Jefferson High

(a) American High School

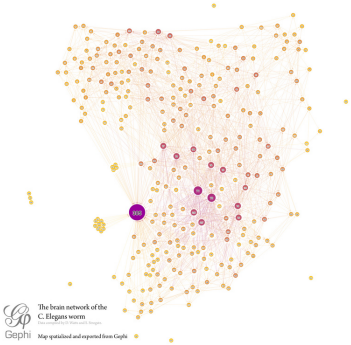


(b) Likoma Island, Malawi

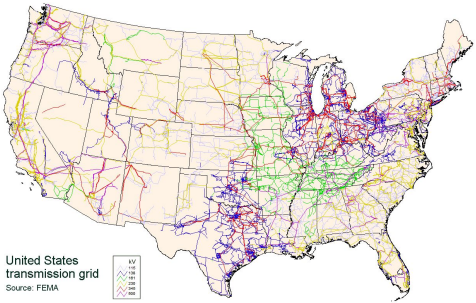
http://www.journals.uchicago.edu/doi/10.1086/386272 & https://www.ncbi.nlm.nih.gov/pubmed/18090281



https://commons.wikimedia.org/wiki/File:C.elegans-brain-network.jpg

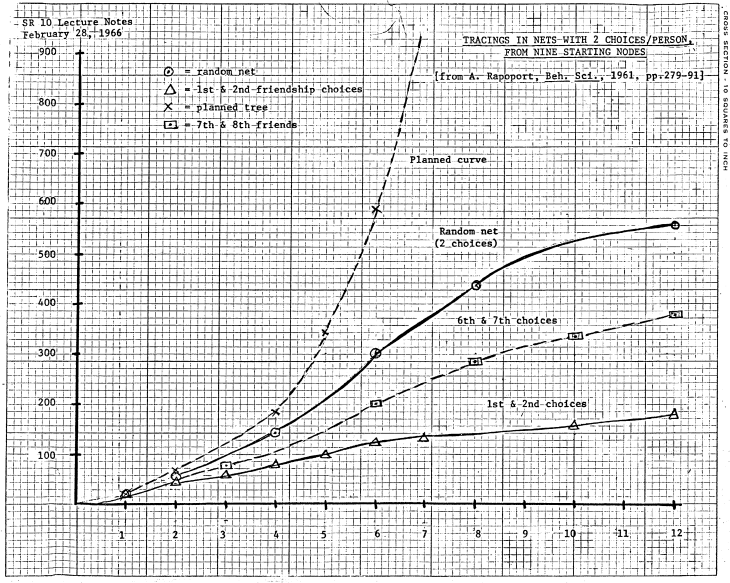


(a) Worm Brain



(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]
⊙ = random net
△ = 1st & 2nd friendship choices
× = planned tree
⊡ = 7th & 8th friends
Planned curve
Random net
(2 choices)
6th & 7th choices
1st & 2nd choices
900
800
700
600
500
400
300
200
100
1
2
3
4
5
6
7
8
9
10
11
12
THE CHAMPION LINE NO. 810
CROSS SECTION - 10 SQUARES TO INCH

Learning objectives

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

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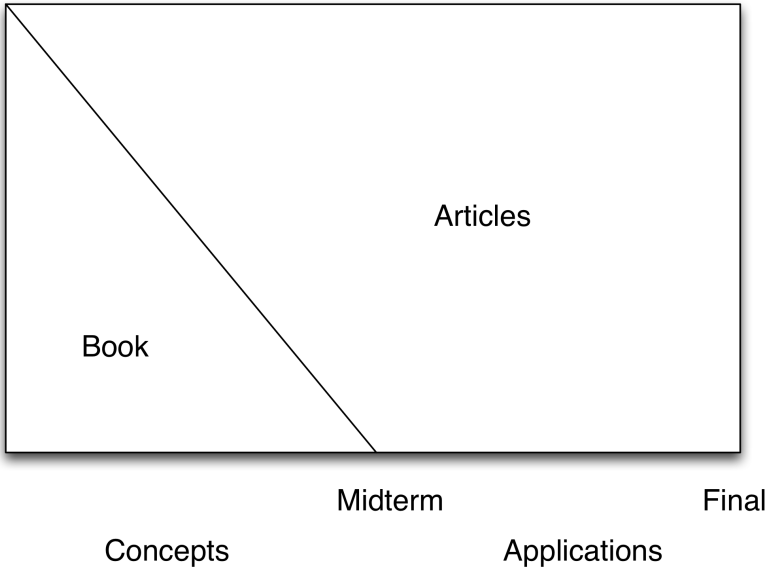
- Students will be able to **use** the major concepts in the study of networks to gain insight into real-world phenomena.
- Students will be able to **evaluate** real, modern research that connects the concepts of networks to real-world phenomena.

Major activities


Articles
Book
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

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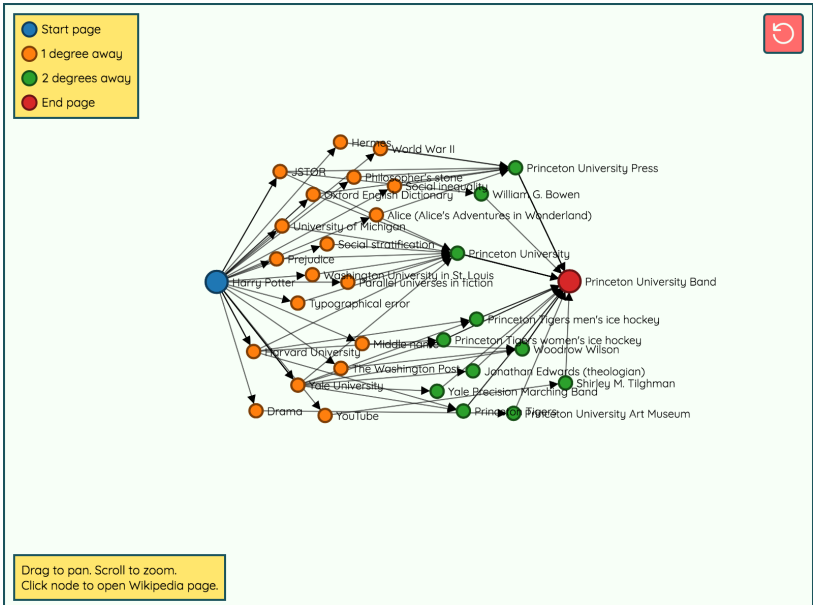
- Submit quiz on Canvas
- Submit weekly assignment
- Come to lecture
- Attend precept

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]

[a]Core Data Science Team, Facebook, Inc., Menlo Park, CA 94025; and Departments of [b]Communication and [c]Information Science, Cornell University, Ithaca, NY 14853

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

Precept philosophy

http://www.princeton.edu/pr/pub/precept/PU-Inspired-Conversations-2008.pdf

Getting to know each other

About me

About the preceptors:

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

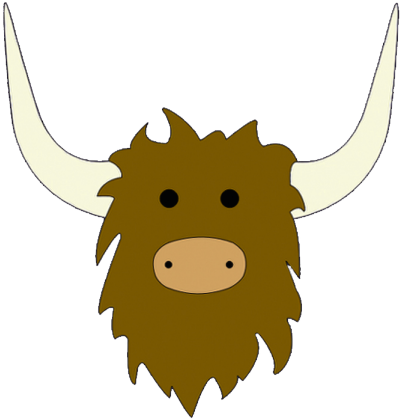
have account, active user (6 of past 7 days)

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

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

TikTok

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`

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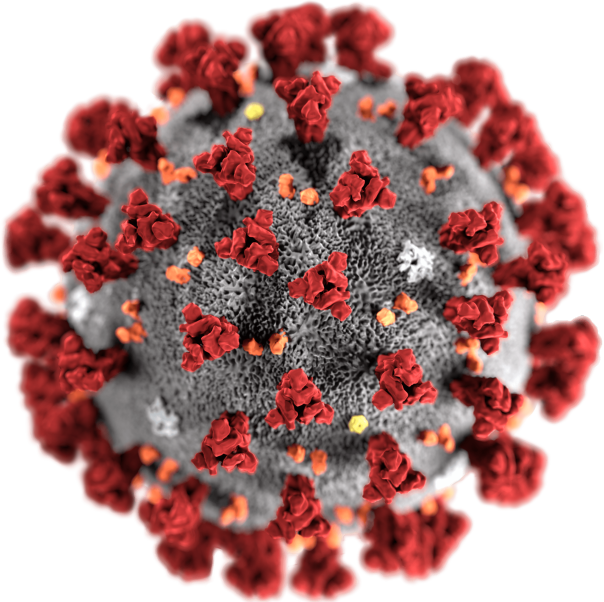
- Additional information about class logistics:

  `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