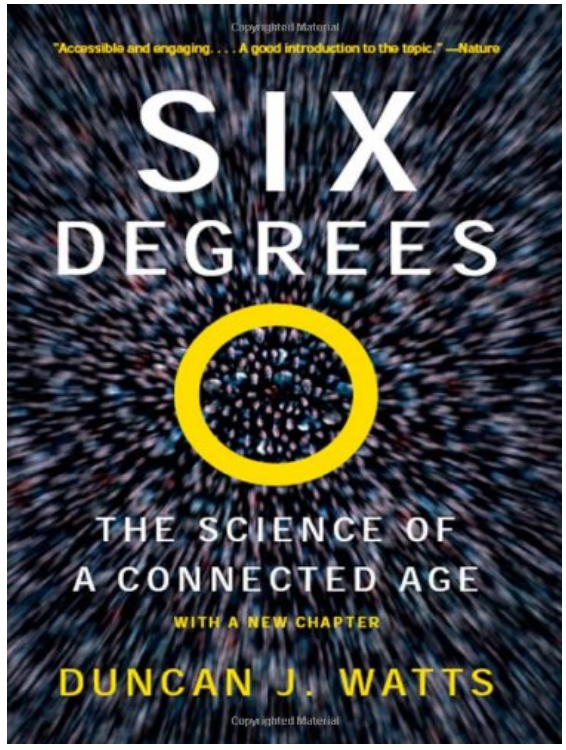
Introduction

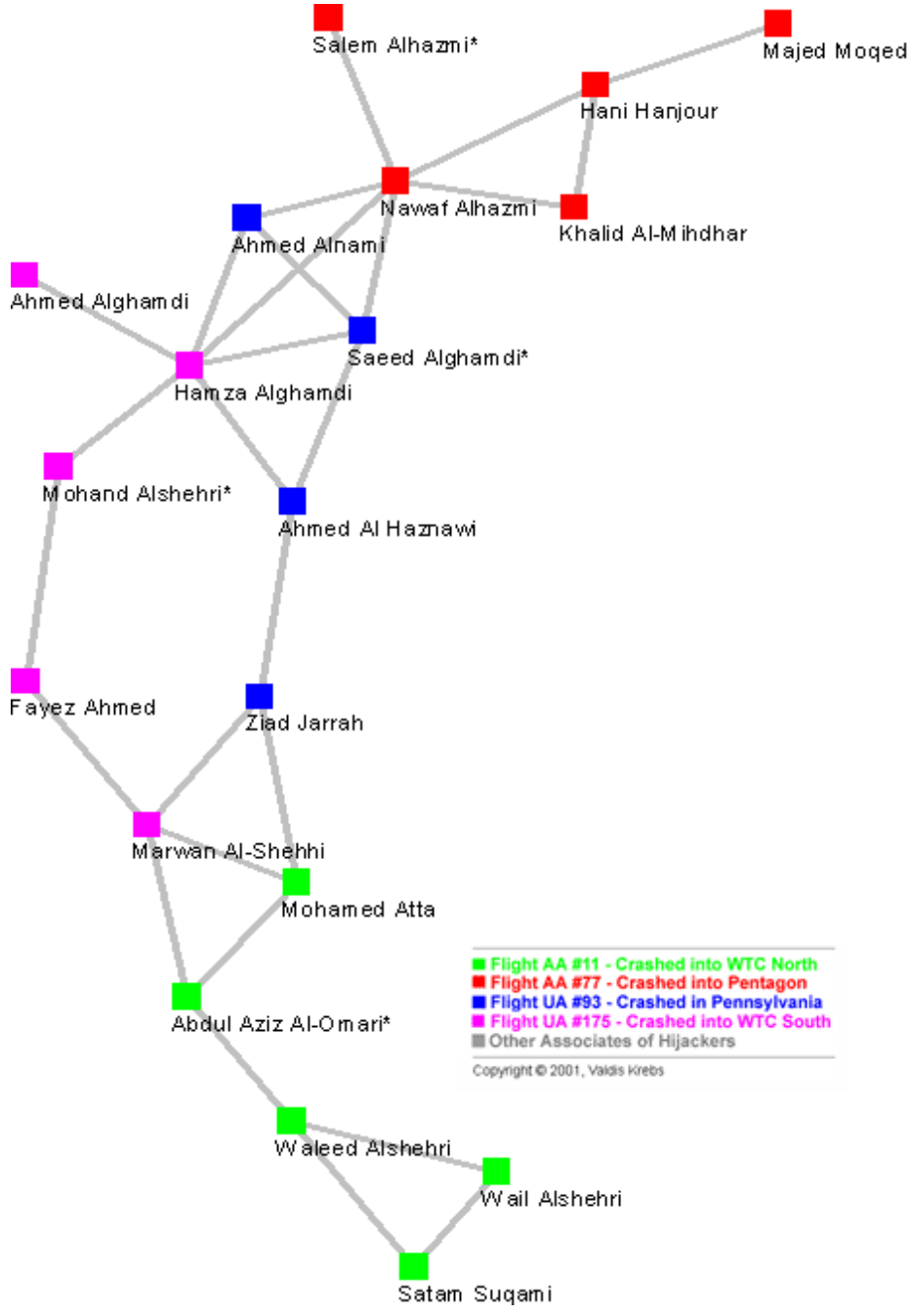
Matthew J. Salganik

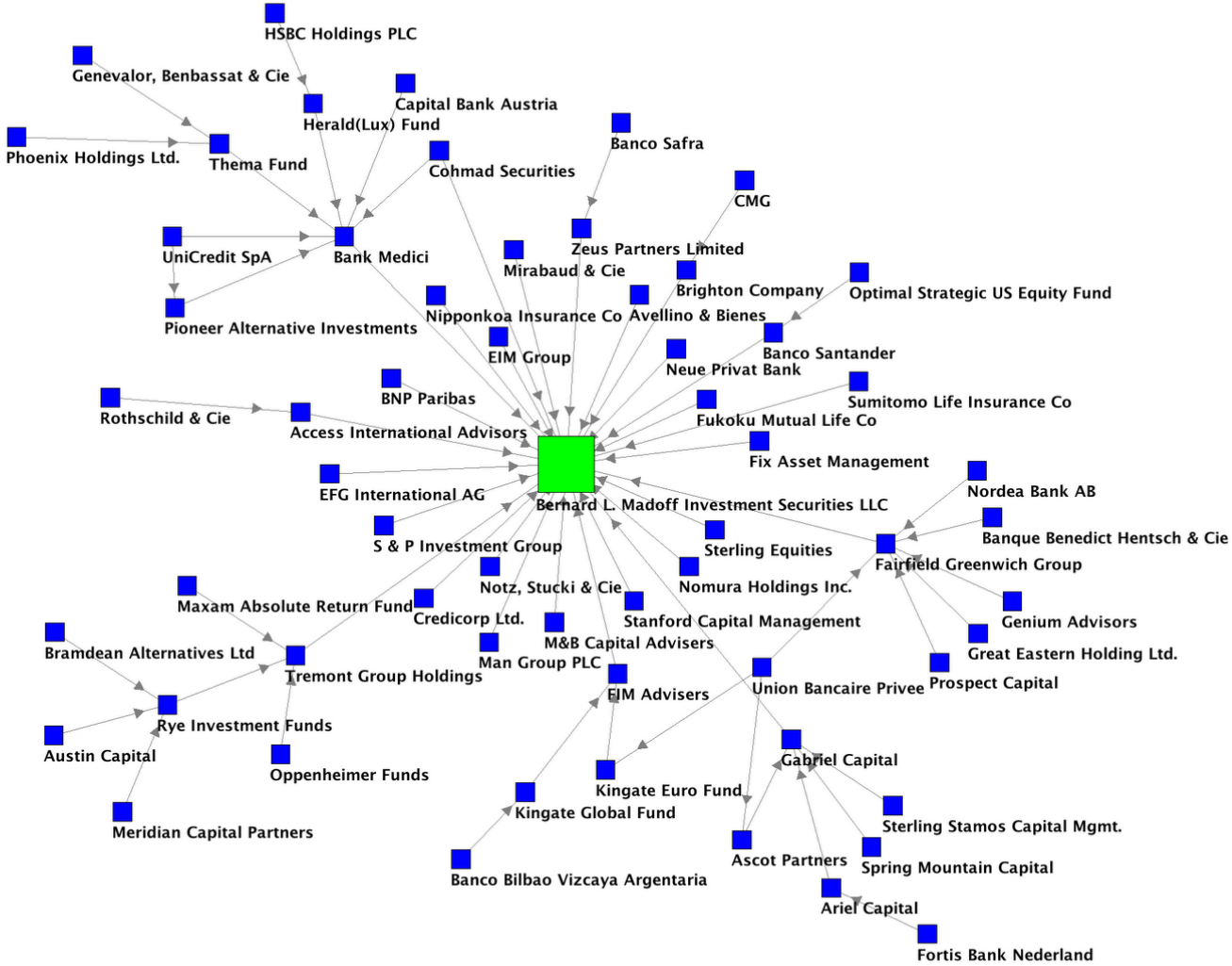
Social Network (Soc 204)
Spring 2017
Princeton University

February 6, 2017

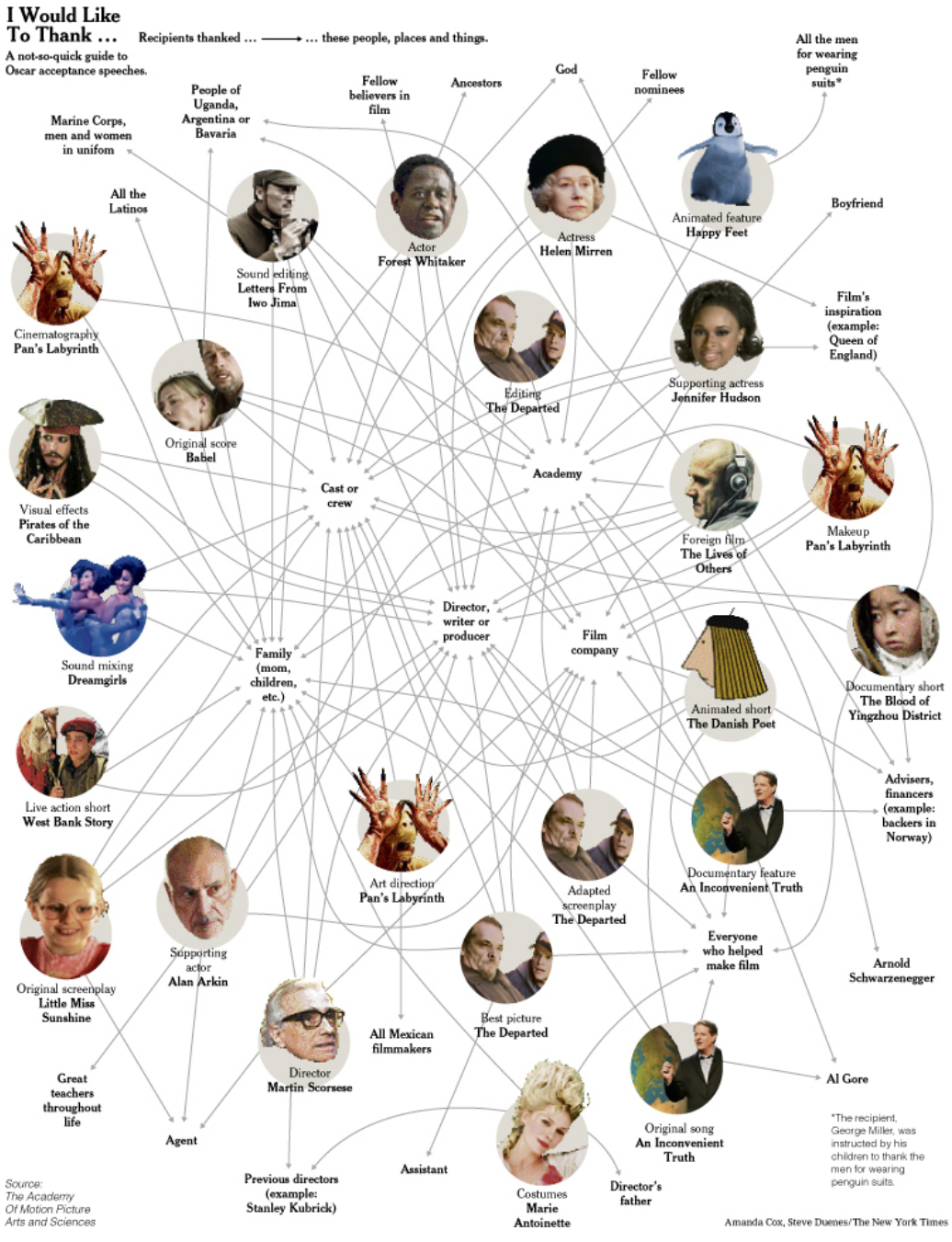


We live in the connected age.

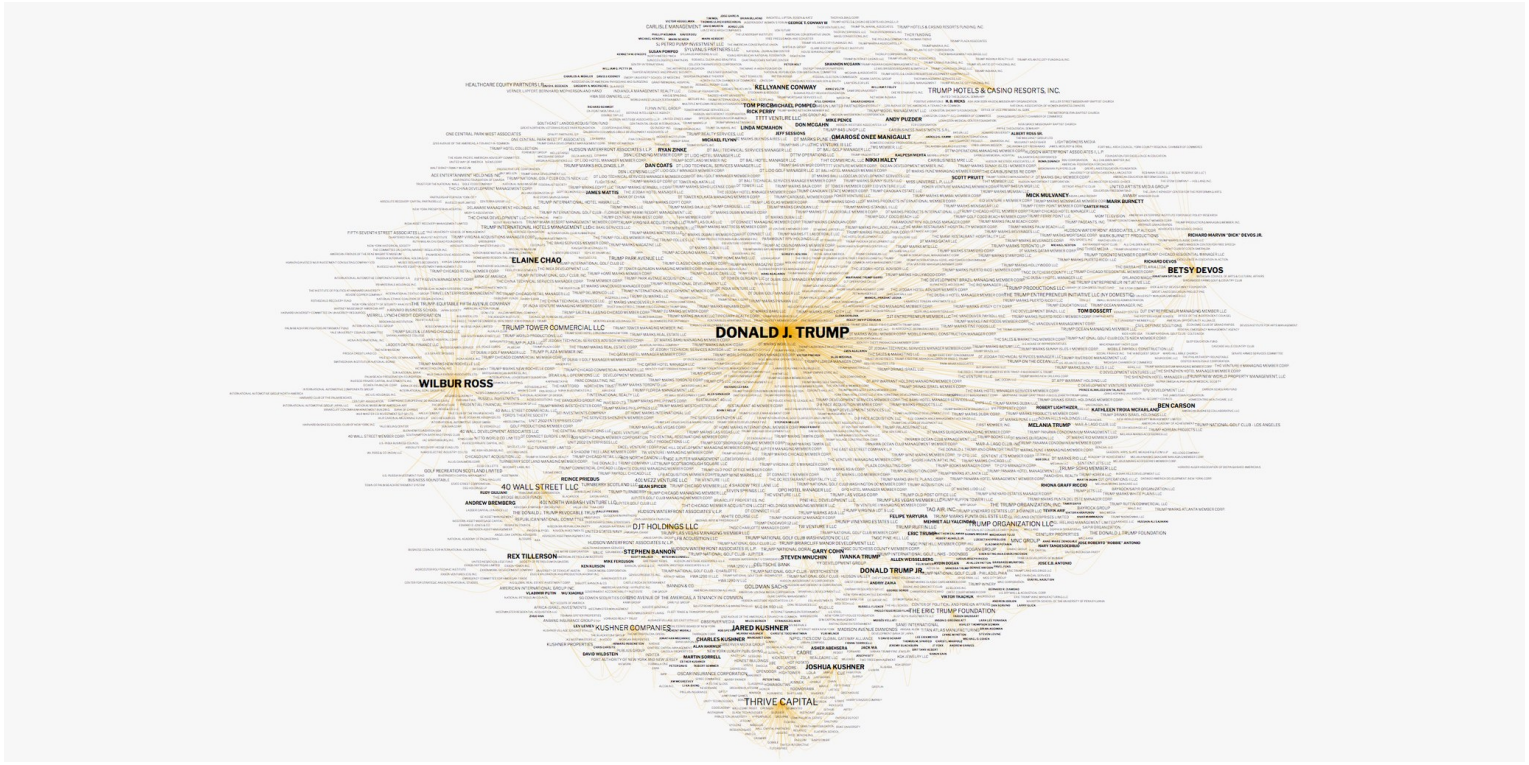

Salem Alhazmi*
Majed Moqed
Hani Hanjour
Nawaf Alhazmi
Khalid Al-Mihdhar
Ahmed Alnami
Ahmed Alghamdi
Saeed Alghamdi*
Hamza Alghamdi
Mohand Alshehri*
Ahmed Al Haznawi
Fayez Ahmed
Ziad Jarrah
Marwan Al-Shehhi
Mohamed Atta
Abdul Aziz Al-Omari*
Waleed Alshehri
Wail Alshehri
Satam Suqami
Flight AA #11 - Crashed into WTC North
Flight AA #77 - Crashed into Pentagon
Flight UA #93 - Crashed in Pennsylvania
Flight UA #175 - Crashed into WTC South
Other Associates of Hijackers
Copyright © 2001, Valdis Krebs



http://www.orgnet.com/madoff.html



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



http://www.kimalbrecht.com/project/trump-connections/

Your turn

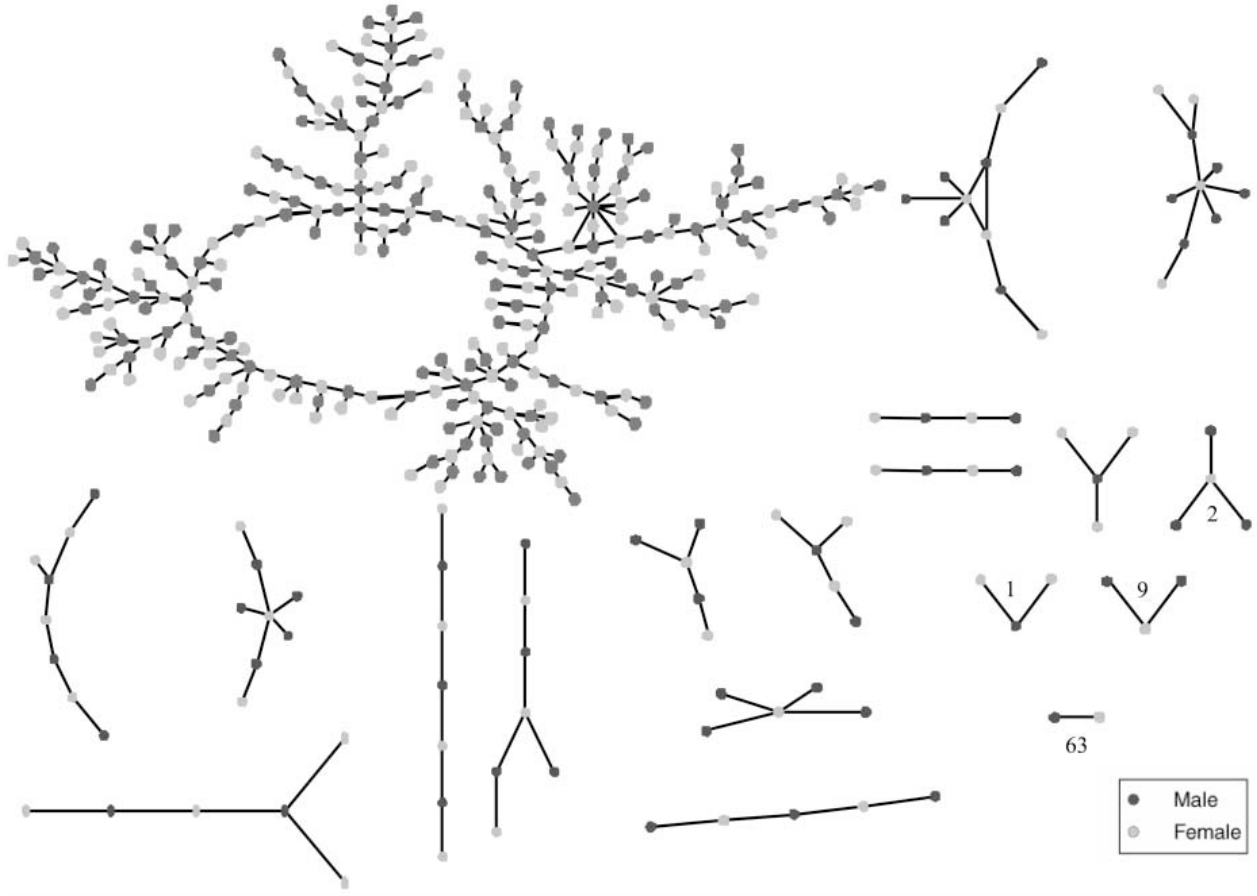


FIG. 2.—The direct relationship structure at Jefferson High

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

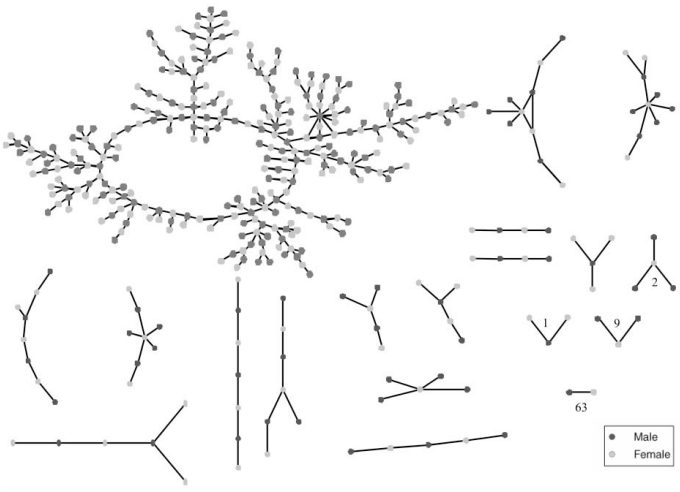
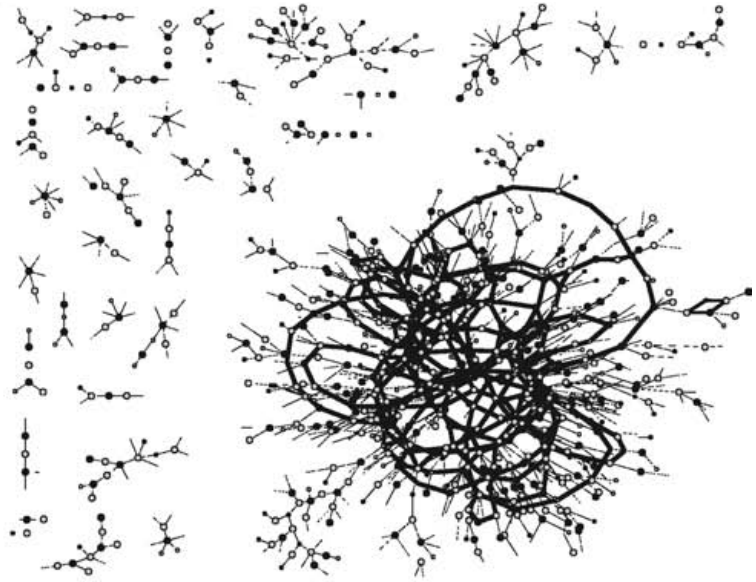


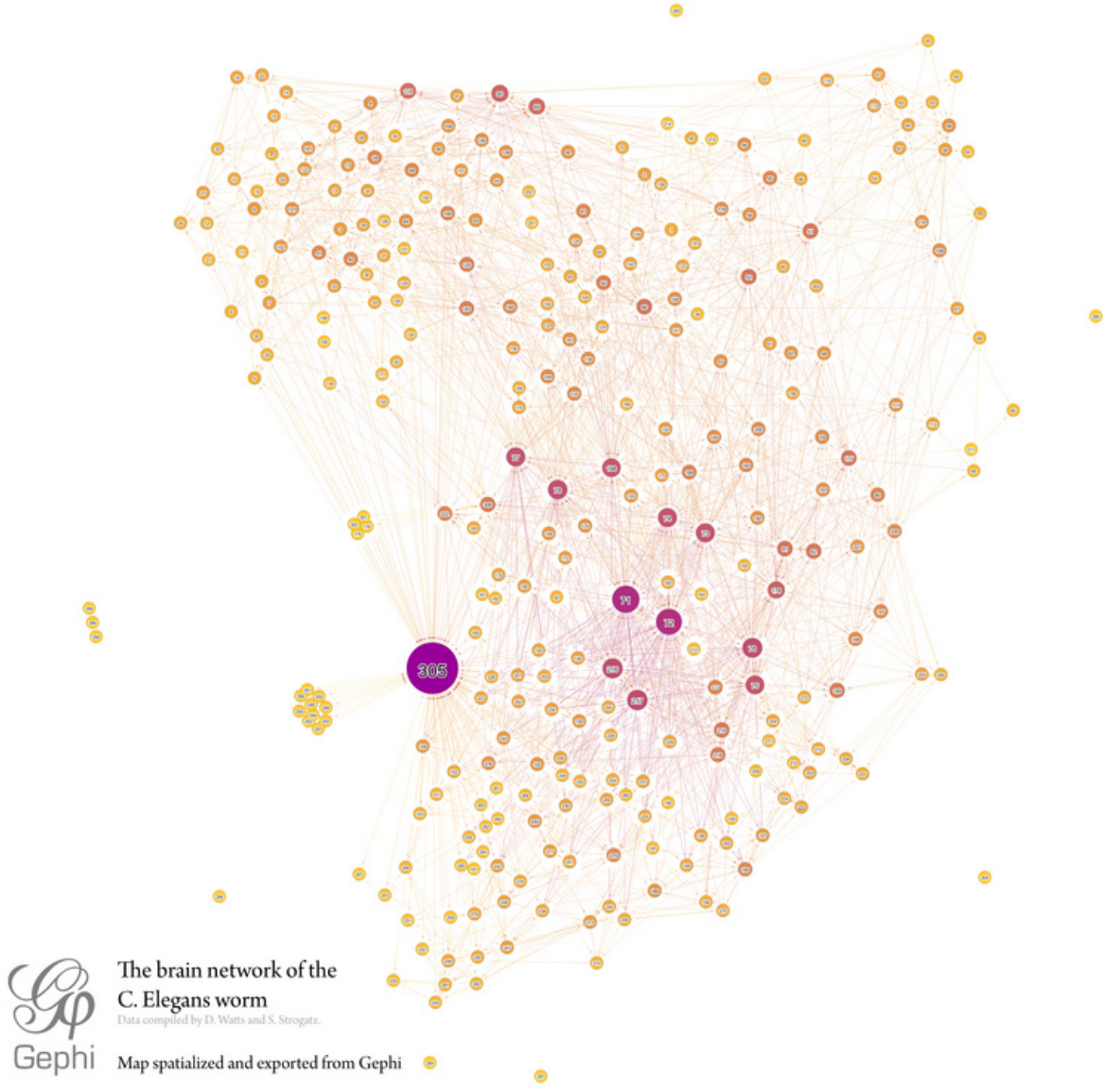
FIG. 2.—The direct relationship structure at Jefferson High

(a) American High School

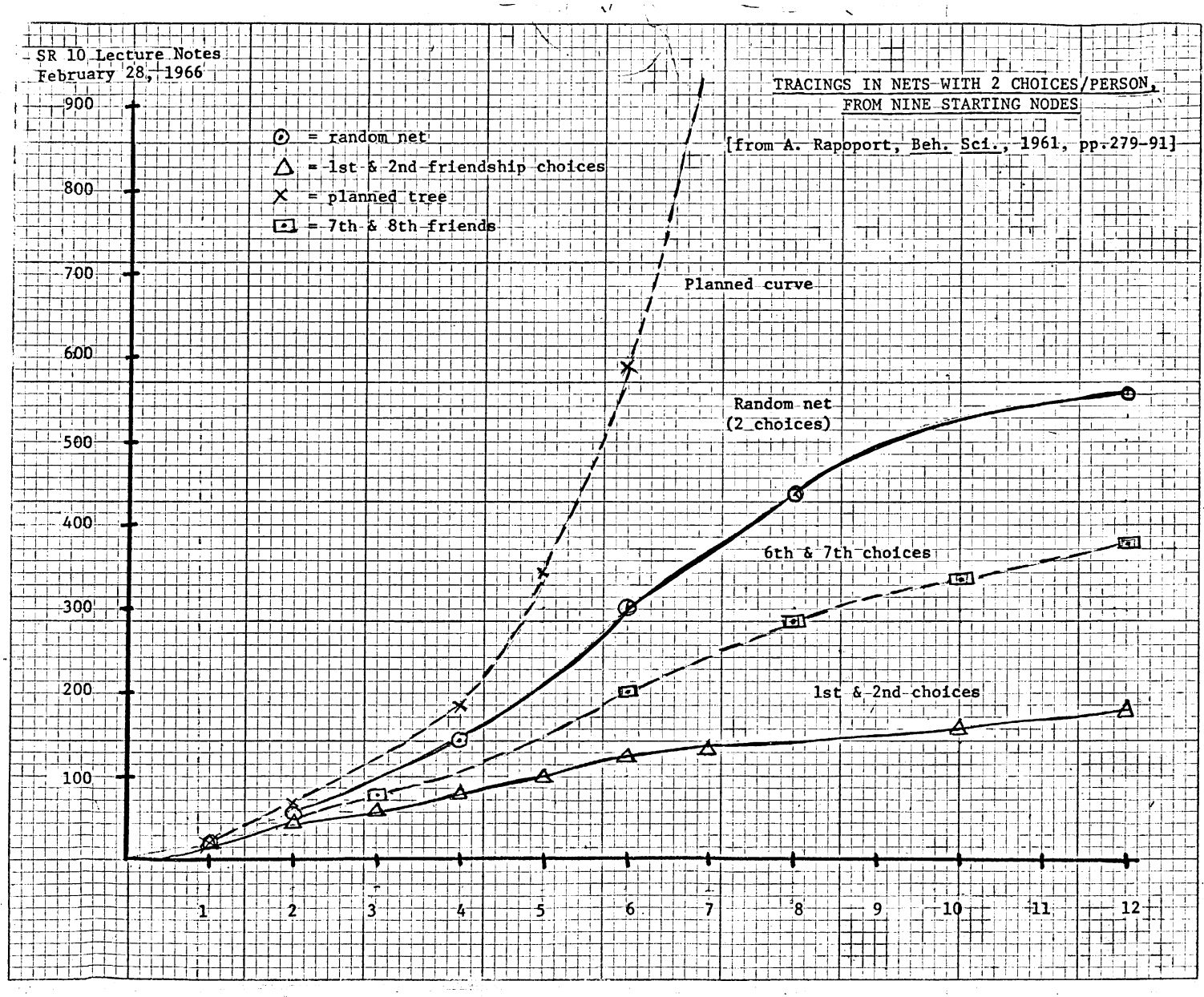


(b) Likoma Island, Malawi

urlhttp://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


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.

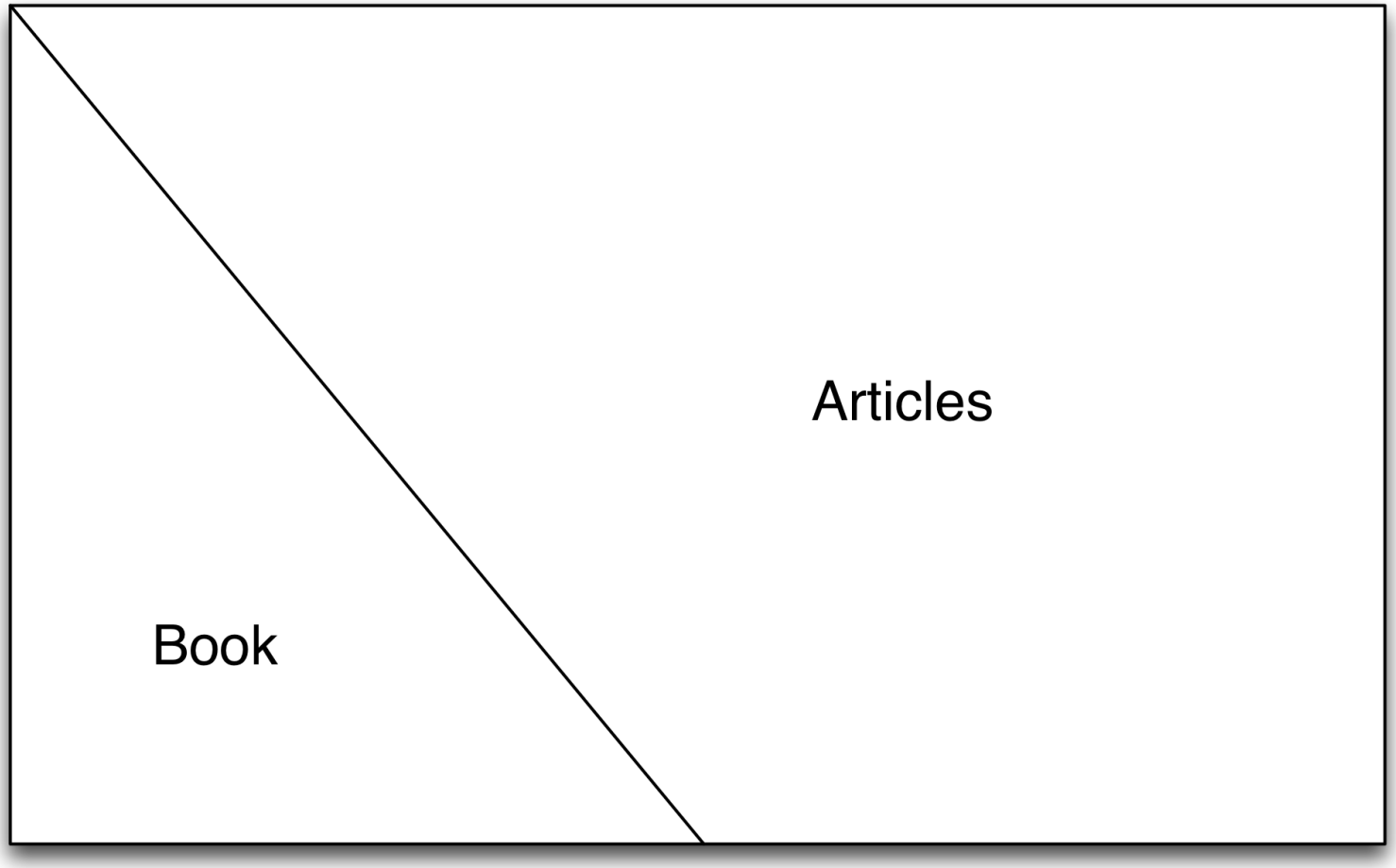
- Students will be able to **describe** the major concepts used in the study of networks.
- Students will be able to **describe** the interconnections between the major concepts used in the study of networks.

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

- Students will be able to **describe** the major concepts used in the study of networks.
- Students will be able to **describe** the interconnections between the major concepts used in the study of networks.
- 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.
- Students will be able to **begin to create** new research that connects the major ideas and models of networks to real-world phenomena.

Major activities



Midterm

Final

Concepts

Applications

- Midterm exam
- Final exam
- Weekly activities

American Journal of Epidemiology

Vol. 183, No. 8
DOI: 10.1093/aje/kwv287
Advance Access publication:
March 24, 2016

Practice of Epidemiology

Quantity Versus Quality: A Survey Experiment to Improve the Network Scale-up Method

Dennis M. Feehan*, Aline Umubyeyi, Mary Mahy, Wolfgang Hladik, and Matthew J. Salganik

* Correspondence to Dr. Dennis M. Feehan, Department of Demography, College of Letters and Science, University of California, Berkeley, 2232 Piedmont Avenue, Berkeley, CA 94720 (e-mail: feehan@berkeley.edu).

Initially submitted January 26, 2015; accepted for publication October 14, 2015.

https://doi.org/10.1093/aje/kwv287

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

https://commons.wikimedia.org/wiki/File:Reflection_in_a_soap_bubble_edit.jpg

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:

- Samuel Clovis
- Romain Ferrali
- Herrissa Lamothe
- Sarah Reibstein
- Janet Xu

About the preceptors:

- Samuel Clovis
- Romain Ferrali
- Herrissa Lamothe
- Sarah Reibstein
- Janet Xu

- Ryan Parsons
- Ramina Sotoudeh

Logistical notes:

- Precept times have not been set
- There is no precept this week

About you

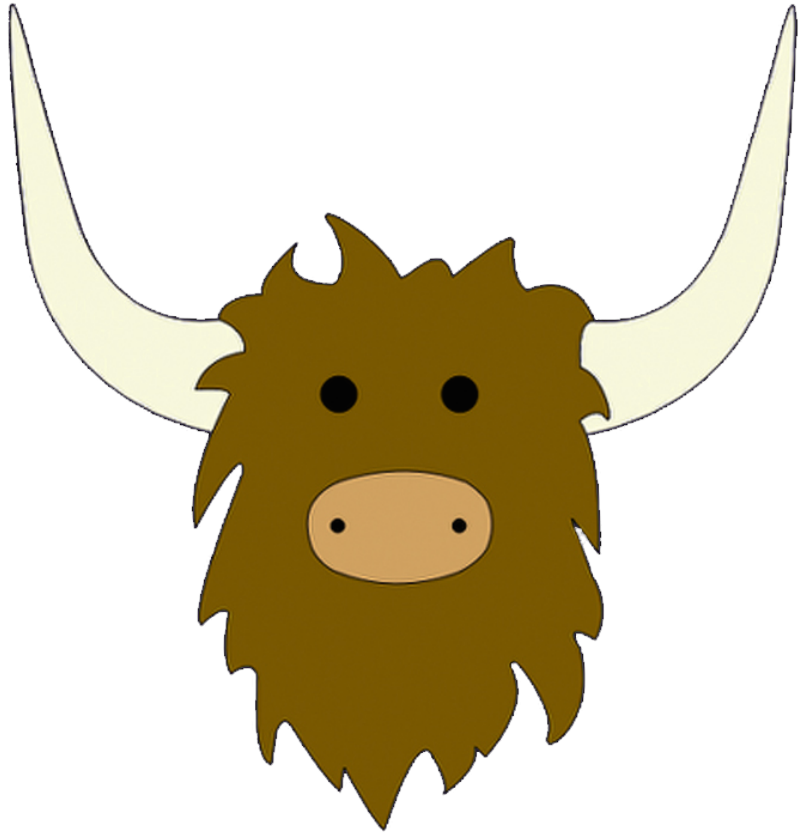
- first year, second year, third year, fourth year

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

active user (6 of past 7 days), have account, no account

active user (6 of past 7 days), have account, no account

active user (6 of past 7 days), have account, no account



Yik Yak

active user (6 of past 7 days), have account, no account

Is this course right for you?

Looking ahead

Facebook is the dominant social networking platform in the United States. This presentation offers a new method for conducting experiments within existing Facebook networks, without the express participation of Facebook itself. The theoretical rationale for this method is discussed, and four experiments are presented that use the method to explore the effects of social networks on political behaviors and attitudes.

`http://citp.princeton.edu/event/haenschen/`

- Watts, Preface and Chapter 1. (Available from Blackboard)
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1:62-67. (Available from Blackboard)
- Travers, J. and Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4):425-443.
- Kleinfeld, J.S. (2002). The small world problem. *Society*, 39(2):61-66. (Available from Blackboard)

- Watts, Preface and Chapter 1. (Available from Blackboard)
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1:62-67. (Available from Blackboard)
- Travers, J. and Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4):425-443.
- Kleinfeld, J.S. (2002). The small world problem. *Society*, 39(2):61-66. (Available from Blackboard)

Arc: Background context $\rightarrow$ Informal Insight $\rightarrow$ Formal Research $\rightarrow$ Critique

- Watts, Preface and Chapter 1. (Available from Blackboard)
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1:62-67. (Available from Blackboard)
- Travers, J. and Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4):425-443.
- Kleinfeld, J.S. (2002). The small world problem. *Society*, 39(2):61-66. (Available from Blackboard)

Arc: Background context $\rightarrow$ Informal Insight $\rightarrow$ Formal Research $\rightarrow$ Critique $\rightarrow$ Improved Research

- Watts, Preface and Chapter 1. (Available from Blackboard)
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1:62-67. (Available from Blackboard)
- Travers, J. and Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4):425-443.
- Kleinfeld, J.S. (2002). The small world problem. *Society*, 39(2):61-66. (Available from Blackboard)

Arc: Background context $\rightarrow$ Informal Insight $\rightarrow$ Formal Research $\rightarrow$ Critique $\rightarrow$ Improved Research

While you are reading:

- think about the relationship between Watts' description and the actual studies

- Watts, Preface and Chapter 1. (Available from Blackboard)
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1:62-67. (Available from Blackboard)
- Travers, J. and Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4):425-443.
- Kleinfeld, J.S. (2002). The small world problem. *Society*, 39(2):61-66. (Available from Blackboard)

Arc: Background context $\rightarrow$ Informal Insight $\rightarrow$ Formal Research $\rightarrow$ Critique $\rightarrow$ Improved Research

While you are reading:

- think about the relationship between Watts' description and the actual studies
- think about the connection between the informal insight and the formal research