

Strength of weak ties

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Social Network (Soc 204)
Spring 2017
Princeton University

March 27, 2017



Midterm

- ▶ 90 - 102: 88
- ▶ 80 - 89: 22
- ▶ 70 - 79: 12
- ▶ 60 - 69: 5
- ▶ 0 - 59: 3

Questions:

- ▶ Intellectual: me, your preceptor, your classmates
- ▶ Grading: me and see regrading policy on syllabus:
http://www.princeton.edu/~mjs3/soc204_s2017/logistics.shtml#regrade

Midterm

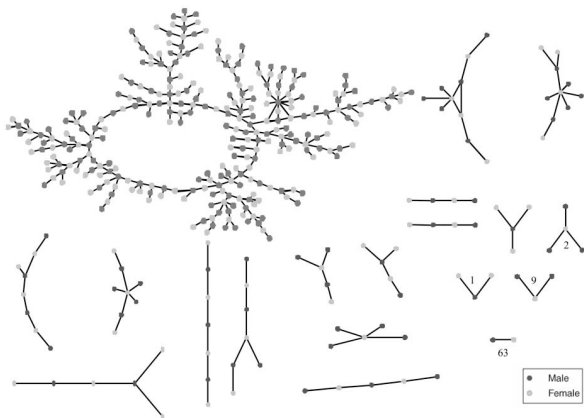


FIG. 2.—The direct relationship structure at Jefferson High

Midterm

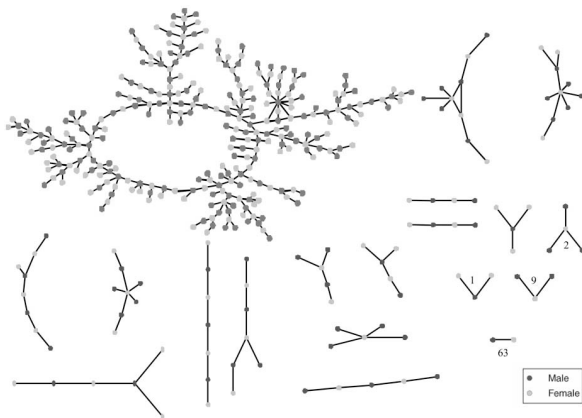


FIG. 2.—The direct relationship structure at Jefferson High

Why are cycles of length 3 and 4 uncommon in this setting?

As described on the syllabus, your final grade has three components:

- ▶ Final grade = $0.25 * \text{midterm} + 0.45 * \text{final} + 0.3 * \text{homework}$

Logistics:

- ▶ homework due Wednesday



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



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Three part process:

1. measure your algorithmic filter bubble
2. break your algorithmic filter bubble
3. measure the effect on your attitudes

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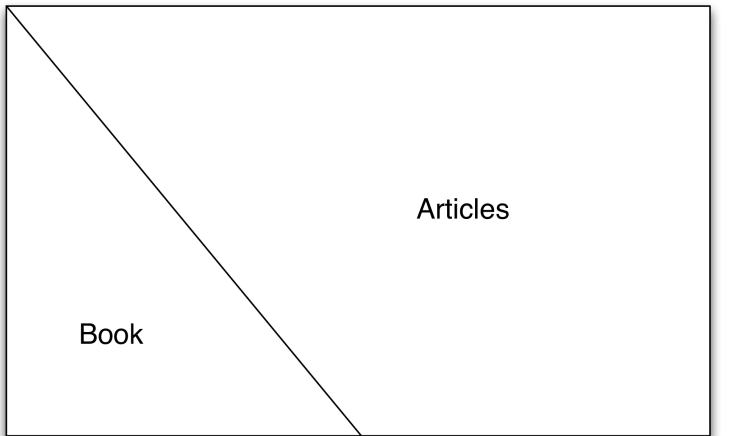
There is no obviously best way to do this. And, that's the point!
Also, nobody knows what we are going to find.

Logistics:

- ▶ homework due Wednesday

Logistics:

- ▶ homework due Wednesday
- ▶ big picture



Book

Articles

Midterm

Final

Concepts

Applications

- ▶ 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.

Logistics:

- ▶ homework due Wednesday
- ▶ big picture
- ▶ research opportunity

Get started with the Fragile Families Challenge:



Tuesday, March 28th, 2:30pm - 5pm, Wallace Hall 190

Matthew Salganik

More information and apply to participate at

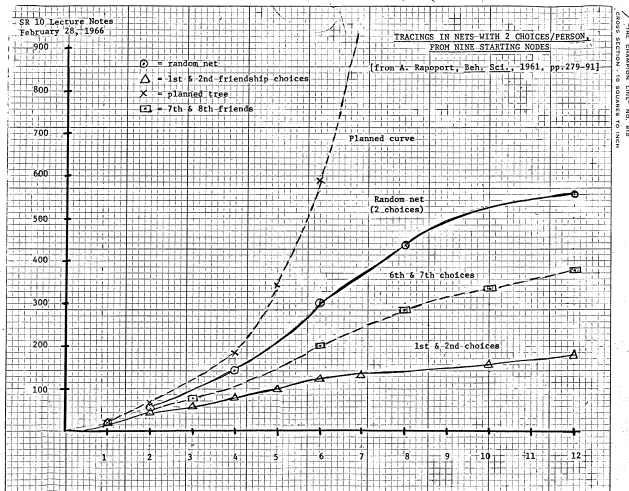
<http://www.fragilefamilieschallenge.org>

Vote:

1. Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*.
2. Smith, S. (2005). "Don't put my name on it": Social capital activation and job-finding assistance among the black urban poor. *American Journal of Sociology*.

Strength of weak ties is a classic. Why?

- ▶ one extra bit of complexity and one plausible assumption lead to surprising empirical predictions, many that turn out to be true
- ▶ connects micro rules to macro patterns (similar to Bearman et al. study of sexual networks)
- ▶ generates lots of new research

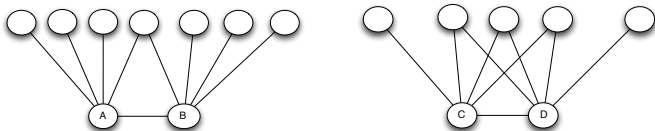


Source: From Harrison White's class in 1966

“Strength of a tie is a (probably linear) combination of the amount of time, emotional intensity, the intimacy, and reciprocal services which characterize the tie.”

Prediction:

The stronger the tie between two people, the more their friendship sets overlap.



No good data to test in 1973, but there is now (as you will see with your future homeworks).

For the rest of the paper, he deals with a simplification:

- ▶ Old idea: tie is either present or absent
- ▶ New idea: tie is either strong, weak, or absent

Assume no forbidden triad

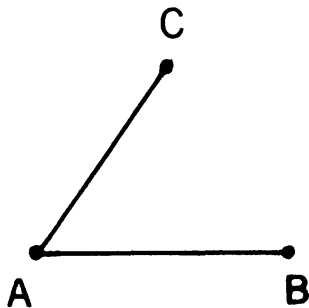


FIG. 1.—Forbidden triad

Except in weird cases, *no strong tie is a bridge*. Or *all bridges are weak ties*.

But, it is not the case that all weak ties are bridges.

Bridges are probably rare, so Granovetter talks about *local bridges*

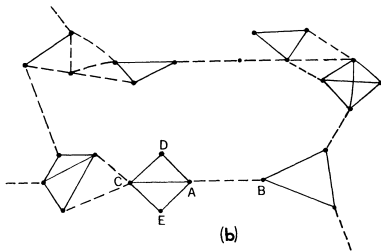
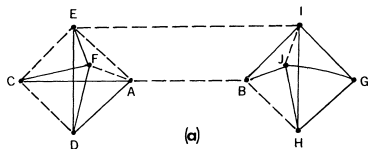


FIG. 2.—Local bridges. *a*, Degree 3; *b*, Degree 13. — = strong tie; --- = weak tie.

“The significance of weak ties, then, would be that those which are local bridges create more and shorter paths.”

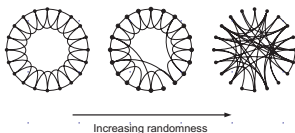
Which concept or model that we learned about does this remind you of?

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Shortcuts in beta model

3.6



Strength of weak ties for

- ▶ communities
- ▶ individuals

Strength of weak ties for communities

Boston's West End was unable to resist “urban renewal”, Granovetter argues that this is because of lack of short paths between people (think “caveman graph”)

Granovetter predicts: weak ties hold communities together and enable them to act cohesively

Strength of weak ties for individuals

Local bridges are most important for spreading new things.
Therefore, weak ties are important for spreading new things and receiving information.

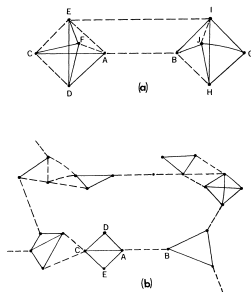


FIG. 2.—Local bridges. *a*, Degree 3; *b*, Degree 13. — = strong tie; --- = weak tie.

In the sample he studied (professionals in a suburb of Boston), of those who found a job through a contact, how often did they see the contact?

- ▶ often (at least twice a week): 17%
- ▶ occasionally (more than once a year but less than twice a week): 56%
- ▶ rarely (once a year or less): 28%

The people you see occasionally and rarely can be the most important.

¹⁵ Although this corresponds only to the first of the four dimensions in my definition, supplementary anecdotal evidence from interviews makes it likely that, in this case, the entire definition is satisfied by this measure. At the time of research, it had not occurred to me that tie strength would be a useful variable.

Maybe people find jobs through weak ties because they have more weak ties?

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Weak Ties, Information, and Influence: How Workers Find Jobs in a Local Russian Labor Market

Valery Yakubovich
University of Chicago

<http://asr.sagepub.com/content/70/3/408.full.pdf+html>
Probability of finding a job through a weak tie is higher than finding a job through a strong tie (in Samara, Russia in 1998)

To summarize lots of subsequent research, it is really non-redundant information, not weak ties, that is important.

Therefore, a better title might have been: *The strength of local bridges*

“Don’t put my name on it”: Social Capital Activation and Job-Finding Assistance among the Black Urban Poor¹

Sandra Susan Smith
University of California, Berkeley

Similar to Feld in that you are entering into a long conversation

What is social capital?

What is social capital?

1. physical capital

What is social capital?

1. physical capital
2. human capital

What is social capital?

1. physical capital
2. human capital
3. social capital

What is social capital?

1. physical capital
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What is the most important kind of capital that get from Princeton?

“a baseline model of social capital activation (e.g., the probability that job seekers will receive job-finding assistance from job contacts with whom they are connected) would take into consideration properties of the:

- ▶ community
- ▶ the network
- ▶ the dyad
- ▶ the individual”

Note that Granovetter focused just on dyad

Main questions:

1. First, when in possession of job information and/or influence, to what extent are the black urban poor willing to assist their job-seeking ties?
2. Second, under what conditions are job contacts willing to extend job-finding assistance? Specifically, to what extent are decisions to assist affected by properties of the individual, the dyad, the network, and the community?

Main questions:

1. First, when in possession of job information and/or influence, to what extent are the black urban poor willing to assist their job-seeking ties?
2. Second, under what conditions are job contacts willing to extend job-finding assistance? Specifically, to what extent are decisions to assist affected by properties of the individual, the dyad, the network, and the community?

Main data: 105 in-depth interviews of people recruited from 1 social service agency

- ▶ “accessed” social capital is not the same as “mobilized” social capital

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- ▶ a weakness of weak ties

Summary:

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- ▶ your weak ties might be your most important, but only if they are bridging
- ▶ weak ties also help hold communities together
- ▶ ties along might be enough if they can't be activated
- ▶ activation of ties depends on the person, the dyad, the network, and the community

<http://bit.ly/socnet204>

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- ▶ Pariser, E. (2011). Beware online 'filter bubbles'. TED talk.
- ▶ Weisberg, J. (2011). Bubble Trouble: Is Web personalization turning us into solipsistic twits. Slate.
- ▶ Bakshy, E., Messing, S., and Adamic, L.A. (2015) Exposure to ideologically diverse news and opinion on Facebook. Science.
- ▶ Sandvig, C. (2015) The Facebook 'it's not our fault' study. Social Media Collective Research Blog.