Foci

Matthew Salganik

Social Network (Soc 204)
Spring 2017
Princeton University

2/22/17

Logistics:

- no update on Blackboard yet

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- go to precept this week

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- go to precept this week
- no more posting of Watts book

Questions?

Feedback from last class:
Expectations for new materials

Causal Inference through the Method of Direct Estimation

Marc Ratkovic

Friday, February 24th, noon

Corwin 127

`http://q-aps.princeton.edu/book/QSS-seminar`

"The intersection of causal inference and machine learning is a rapidly advancing field. We propose a new approach, the method of direct estimation, that draws on both traditions in order to obtain nonparametric estimates of treatment effects. The approach focuses on estimating the effect of fluctuations in a treatment variable on an outcome. A tensor-spline implementation enables rich interactions between functional bases allowing for the capture treatment/covariate interactions. We show how new innovations in Bayesian sparse modeling readily handle the proposed framework, and then document its performance in simulation and applied examples. Furthermore we show how the method of direct estimation can easily extend to structural estimators commonly used in a variety of disciplines, like instrumental variables and

Vote:

1. Gladwell, M. (1999). Six degrees of Lois Weisberg. The New Yorker.
2. Watts, Chapter 4, 114-129.
3. Feld, S.L. (1981) The focused organization of social ties. American Journal of Sociology, 86(5):1015-1035.

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- networks with power law degree distribution are robust to random failure but fragile to targeted attack
- "hubs" seem important

Source: `www.wbez.org`

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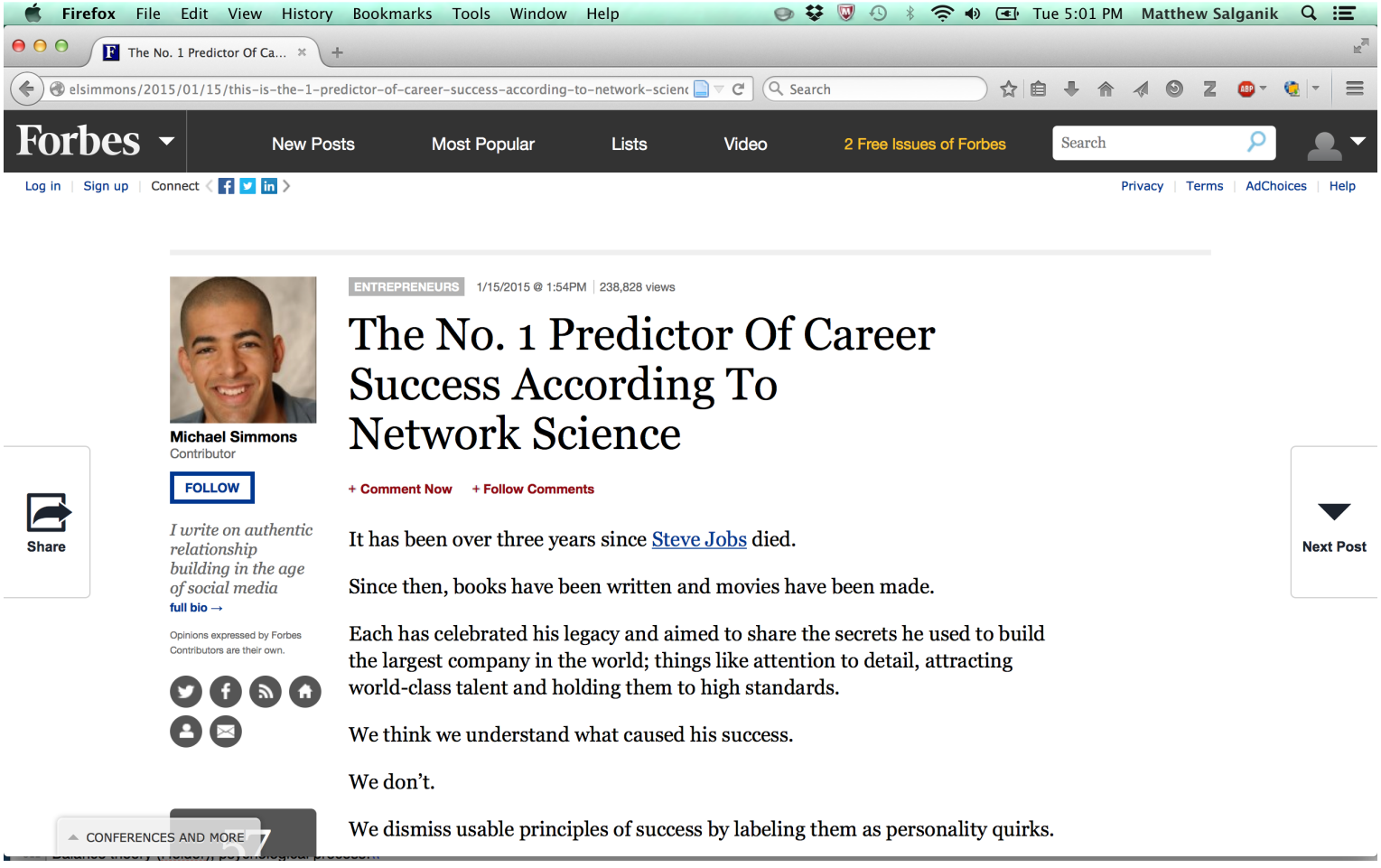
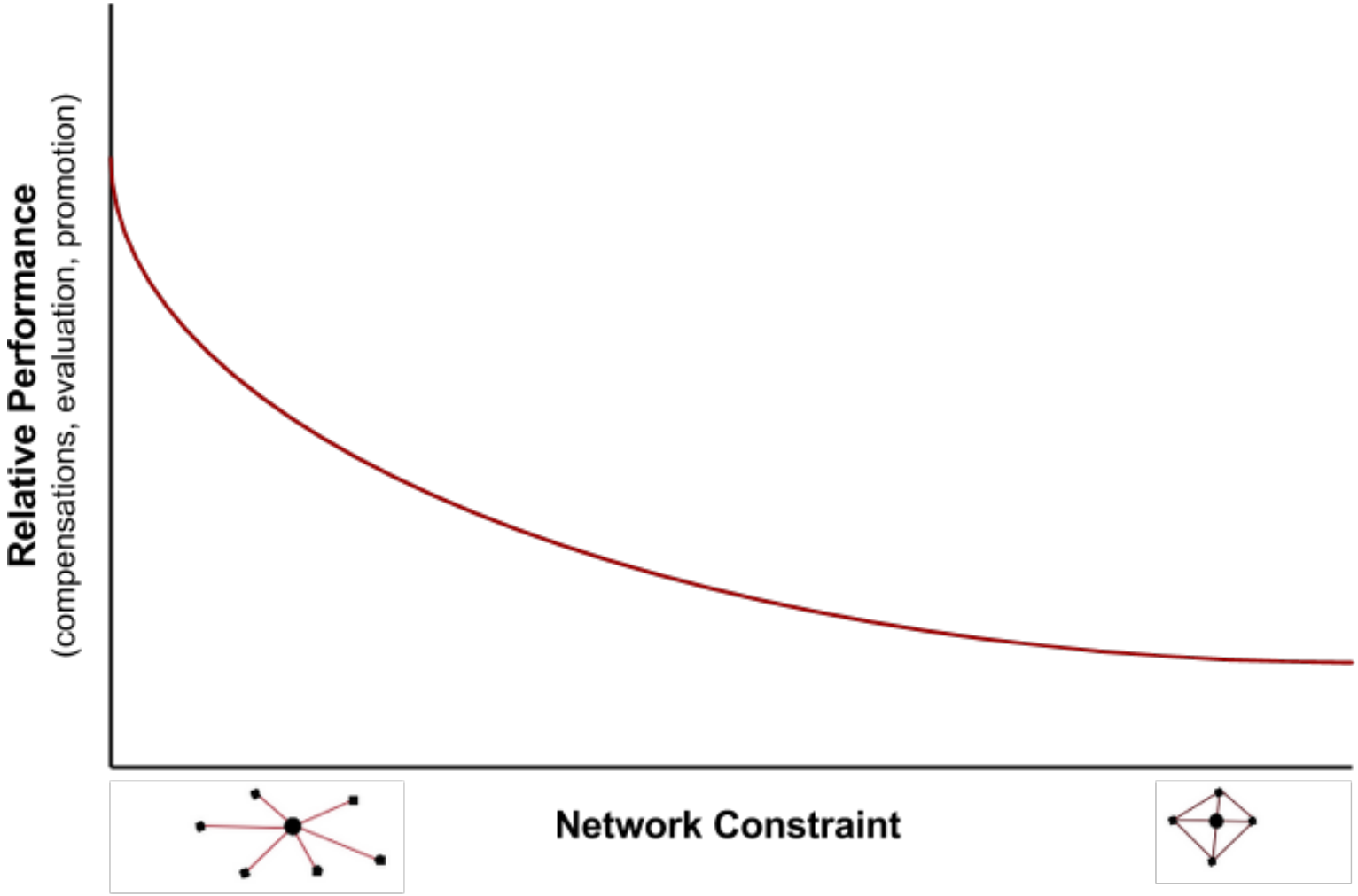


Source: `http://www.forbes.com/sites/michaelsimmons/2015/01/15/this-is-the-1-predictor-of-career-success-according-to-network-science/`



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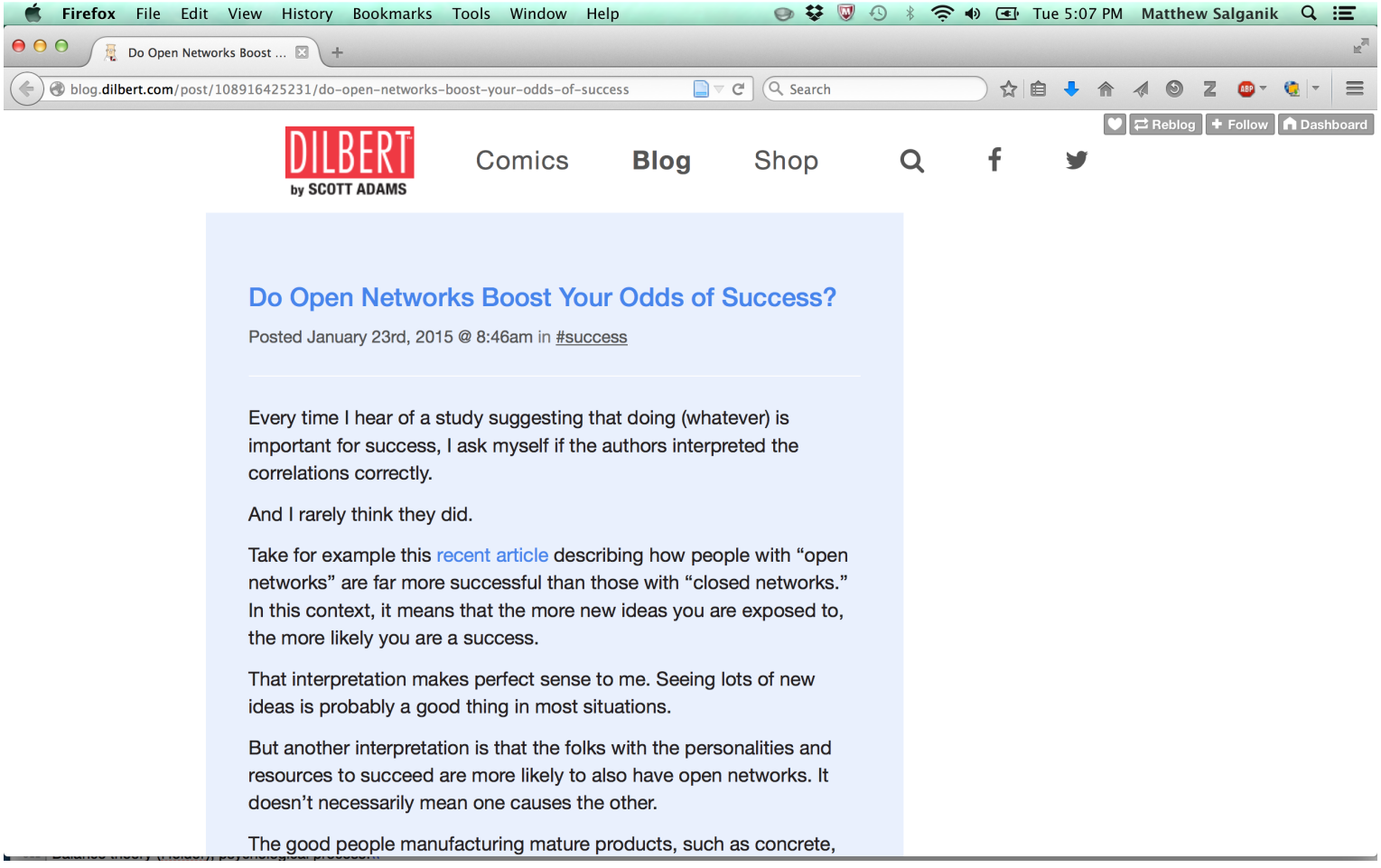
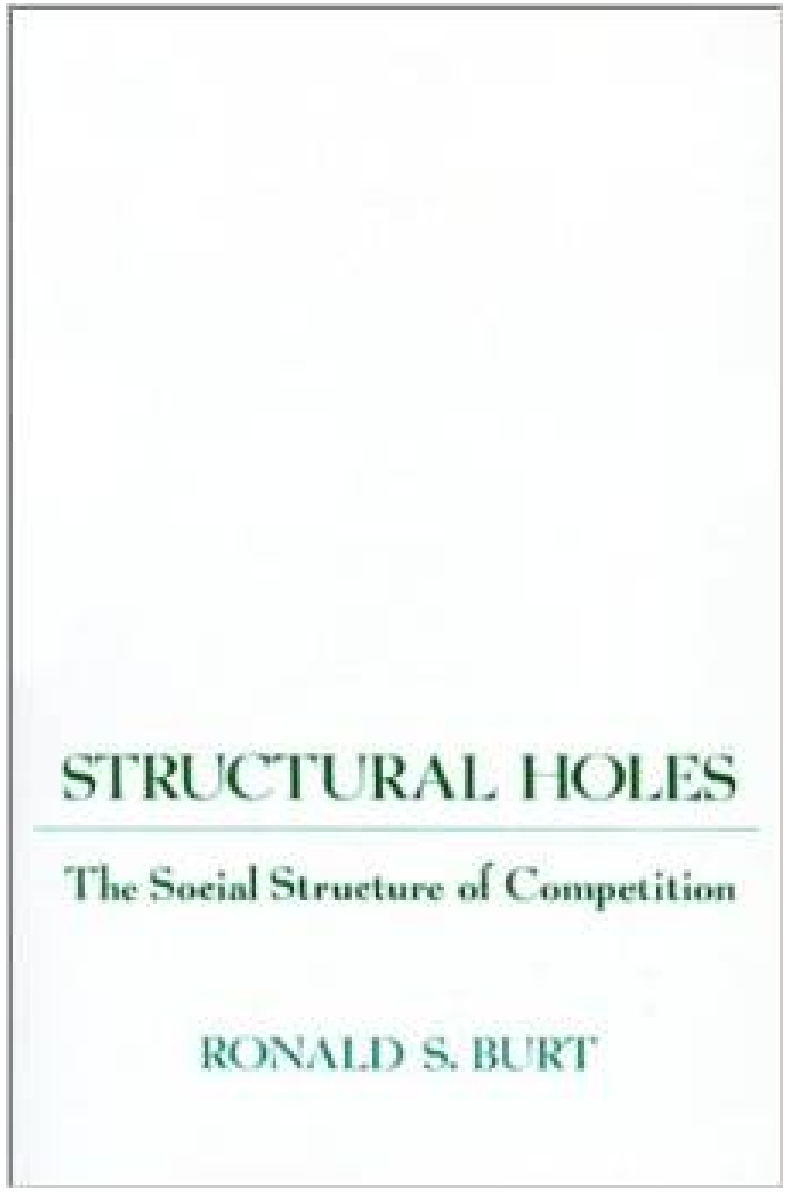


Source: `http://blog.dilbert.com/post/108916425231/do-open-networks-boost-your-odds-of-success`


STRUCTURAL HOLES
The Social Structure of Competition
RONALD S. BURT

How does Lois Weisberg's story and the readings more generally change how we should think about networks?

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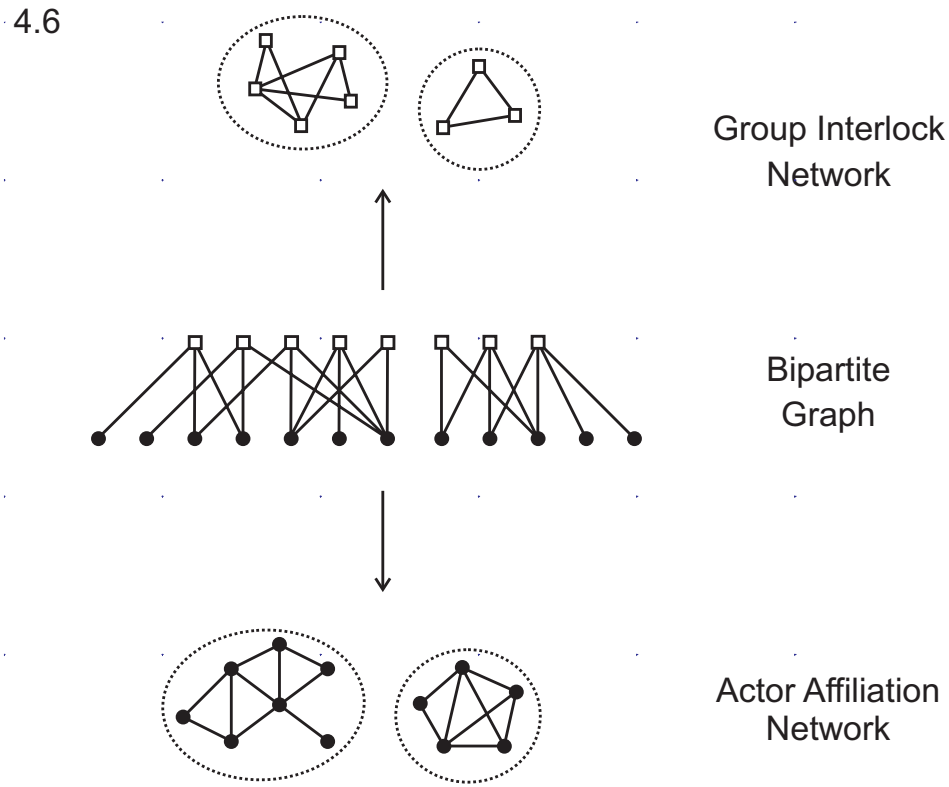
Combines

- network structure
- social structure

Affiliation network



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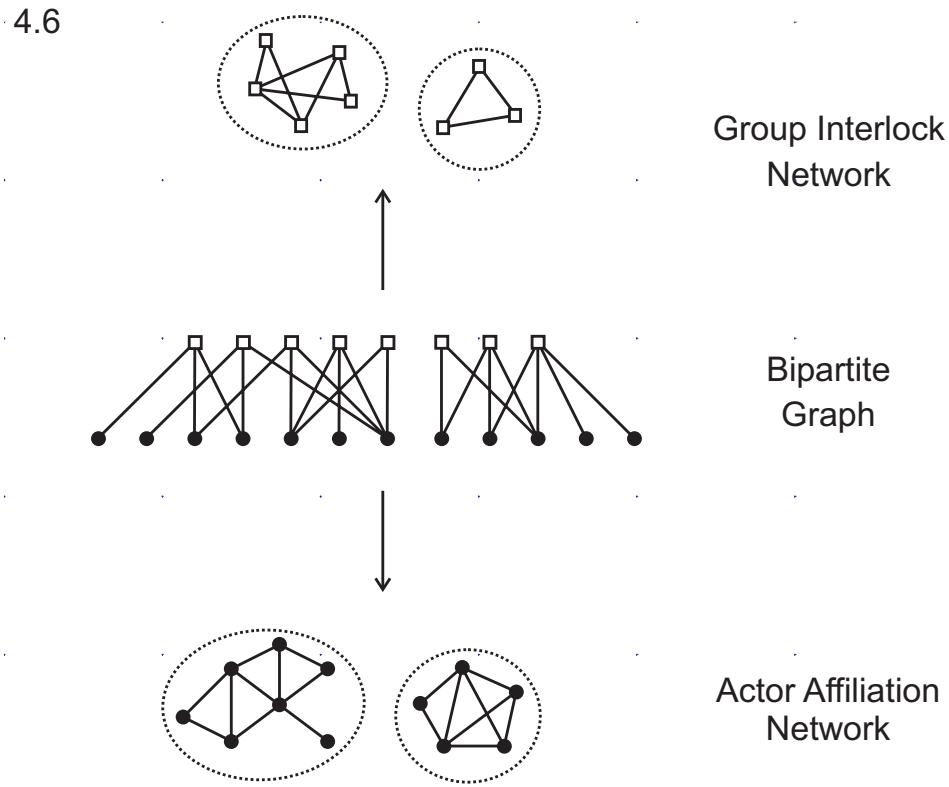

- actors and movies
- scientists and papers
- board members and boards of directors

The Focused Organization of Social Ties[1]

Scott L. Feld
State University of New York at Stony Brook

The Focused Organization of Social Ties[1]

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- you are stepping in a conversation

The Focused Organization of Social Ties[1]

Scott L. Feld
State University of New York at Stony Brook

- you are stepping in a conversation
- a very dense—but interesting—conversation

Foci: a social, psychological, or physical entity around which joint activities are organized.

Let's map out foci at Princeton along two dimensions:

- size: number of people involved
- constraint: the amount the focus leads individual to develop time and energy to joint activities

Explaining triadic closure:

- balance theory vs foci (psychology vs sociology)

Balance theorists offer a cognitive explanation of the tendency for indirect ties to lead to the development of direct ones. They suggest that psychological tendencies toward consistency lead individuals to bring members of their network together. Balance theory thus implies that the factors determining whether direct ties will develop are psychological characteristics of the individuals. The focus theory suggests that the factors determining whether direct ties will develop are characteristics of the social situation and the compatibility of the foci underlying the indirect connections.

The focused organization of social ties implies that a researcher should understand and measure relations to foci in order to understand the structure of a network. The patterns of relations to foci are likely to be crucial for explaining clusters and interrelations among clusters in a network, and ignoring these extra-network structural bases of ties may lead one to misinterpret (e.g., in terms of cognitive pressures toward consistency) patterns that are found among ties.

What do foci and groups have to do with Facebook and Google+ (and maybe Snapchat)?

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- affiliation networks (people and groups) help us understand patterns in personal network structure
- compare and contrast psychological vs sociological explanations for network structure
- sociological principles can shape the design of technical systems

http://bit.ly/socnet204

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Monday:

- Watts, Chapter 5. (not available from blackboard)
- Lee, N.H. (1969). The Search for an Abortionist: Preface, Chapter 1, and Chapter 5. (Available from blackboard).