

**SOCIAL NETWORK ANALYSIS**  
**Sociology 920:571:01 (491:02)**  
**Paul McLean**

**Department of Sociology**  
**Rutgers University**  
**Fall 2011**

Location and time: Davison Seminar room, Tuesdays, 9:50-12:30  
Office hours: M 12:30-1:30 [LSC]; T 1:00-2:00 [Davison 049], and by appointment  
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Over the last few decades, and over the last ten years or so especially, there has been an enormous increase in the attention paid to social networks as key determinants of many elements of social life, including motivations, identities, social mobility, group organization and mobilization, resource distributions, decision-making, patterns of innovation, diffusion of disease and attitudes, and the organization of belief systems. One could also say without much exaggeration that a whole new science of networks has emerged, not only within sociology but across multiple disciplines. The basic idea of social network analysis is that we must study the social order *relationally*: actors/events are interdependent, and structure emerges as patterns in these interdependencies. Sometimes this core idea involves the study of social interaction patterns inductively from the ground up; sometimes it involves looking for particular structural forms that are believed to shape behavior and structure the social environment. Sometimes it involves a radical re-thinking of what an actor is and where a relation can be found.

Network analysis is increasingly a mainstream idea, even though the tools it uses are distinctly different from mainstream sociology. Indeed there are ways to incorporate network ideas into 'mainstream' research. But in its most radical formulations, the study of networks vies to become a kind of fundamental theory of social organization. In this respect it dovetails with the development over the last decade of a theory of networks as the constitutive material of the physical, biological, technological, and economic worlds.

Together we will have three main goals pertaining to social network analysis in this course. *First*, we will consider theoretical justifications for the study of networks and key concepts used in the field, using classical sociological formulations of these concepts (e.g., Simmel, Nadel) and more recent statements (e.g., Wellman, Emirbayer, Watts, JL Martin). We will also explore the differences between interactionist and structuralist approaches to networks. While the differences are not absolute, the former tends to look at concrete relations in concrete contexts as determinants of outcomes, focusing on elements and topics like *dyads, influence, cohesion, centrality, reach, cliques, diffusion, and small worlds*. The latter regards patterns of structural positions as key and uses concepts like *structural equivalence, roles, blockmodelling, brokerage, structural holes, triad censuses, and clustering* to describe how networks matter.

*Second*, while this course is not primarily focused on practical skill development, we will get acquainted with certain methods and computer applications, including specifically the

program PAJEK, for the visualization and quantitative analysis of social networks. Pajek is available for free download (see **HYPERLINK** "<http://vlado.fmf.uni-lj.si/pub/networks/book/>" <http://vlado.fmf.uni-lj.si/pub/networks/book/>). Another popular program—UCINET—is freely available for a trial period, and it is also loaded on a handful of machines in the Sociology computer lab. Other packages (less tried and true and not familiar to me personally) are beginning to appear as well. For this element of the course, I hope to provide you with data, but if you have some of your own, that would be great! You will have a small number of short assignments to complete, to get your hands a little dirty.

*Third*, we will sample from the large (and growing) volume of empirical work that adopts a networks perspective in one form or another, including work on small groups, friendship networks, political elites, social movements, disease diffusion, immigration, formal organizations, markets, industries, cultural repertoires, and large-scale historical transformation. I believe it is very important to see how network ideas are being applied in exciting, empirically rich research projects.

We will follow a discussion format whenever possible, but sometimes I will spend part of the class lecturing on some of the key ideas and arguments. At the end of the semester, you will submit a 15 page term paper. This will be: 1) your own original research, taking the form of an empirical paper using network data (most preferred, but also most difficult); OR 2) a coherent secondary analysis of a dataset you studied in connection with the course; OR 3) a paper applying network concepts in an exploratory but meaty way to a substantive topic of your choosing; OR 4) a detailed critical review of a body of literature in the field. We can discuss this require more as the semester goes on.

## Requirements

To summarize, your grade will be based on the following factors:

participation in class (20%)  
short assignments (40% in total)  
term paper (40%)

## Required Readings

The **required** readings for each class session are printed in **bold**. Many of these readings are on **sakai** or can be easily found online. Some are taken from books you will need to purchase. These books are:

Stanley Wasserman and Katherine Faust, *Social Network Analysis: Methods and Applications* (Cambridge, 1994)

John Levi Martin, *Social Structures* (Princeton, 2009)

Albert-László Barabási, *Linked: The New Science of Networks* (Perseus, 2002)

Also on the **sakai** workspace you will find a selection of chapters from the book, *Exploratory Social Network Analysis with Pajek* (Cambridge, 2005), by Wouter de Nooy, Andrej Mrvar, and

Vladimir Batagelj. These materials may help you with the hands-on work of actually doing network analysis.

Finally, I list in the syllabus many readings which are not at all required. Indeed I have no expectation that you will do those readings, and I personally haven't read a lot of them! However, they provide you with an entryway into a broader literature concerned with particular topics, and they sometimes provide you with a sense of how inquiry on particular topics has developed over time.

## Schedule of Classes

**Week 1 (9/6)** Introduction to the Course

Overview of the syllabus, and an in-class exercise or two

**Read: Stephen P. Borgatti, Ajay Mehra, Daniel J. Brass, and Giuseppe Labianca, "Network Analysis in the Social Sciences," *Science* (13 February 2009): 892-95**

**Week 2 (9/13)** Network Analysis as a Fundamental Sociological Paradigm

**Read: 1) Georg Simmel, "The Problem of Sociology," in Don Levine (ed.), *Georg Simmel on Individuality and Social Forms*, pp. 23-35**

**2) Barry Wellman, "Structural Analysis: From Method and Metaphor to Theory and Substance," in Barry Wellman and S. D. Berkowitz (eds.), *Social Structures: A Network Approach* (Cambridge, 1988), pp. 19-61**

**3) Mustafa Emirbayer, "Manifesto for a Relational Sociology," *American Journal of Sociology* 103,2:281-317**

**4) Wasserman and Faust, pp. 3-22**

An assortment of other useful and/or foundational materials, NOT to be read for class:

John Scott, *Social Network Analysis: A Handbook* (2<sup>nd</sup> edition), chapters 1 and 2

Harrison C. White, *Identity and Control* (Princeton, 1992; new edition, 2008)

Ronald S. Burt, *Toward a Structural Theory of Action* (Academic Press, 1982), chapters 1 and 9

Peter Blau, *Exchange and Power in Social Life* (Transaction, 1983 [1964])

A.R. Radcliffe-Brown, "On Social Structure," *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 70:188-204

Georg Simmel, "The Triad," in Kurt Wolff (ed.), *The Sociology of Georg Simmel* (Free Press, 1950), pp. 145-169

Ronald L. Breiger, "The Analysis of Social Networks," in Melissa Hardy and Alan Bryman (eds.), *Handbook of Data Analysis* (Sage, 2003), pp. 505-26.

Peter Monge and Noshir Contractor, *Theories of Communication in Networks* (Oxford, 2003)

Jeremy Boissevain, *Friends of Friends: Networks, Manipulators, and Coalitions*, especially chapter 1

Claude Levi-Strauss, "Social Structure," in his *Structural Anthropology*, chapter 15

### Week 3 (9/20)      Types of Networks and Ways of Representing Them

**Read: 1) Wasserman and Faust, pp. 28-59, 69-166, 291-344**

**(Note: This LONG reading provides the basic vocabulary of network analysis. Certain concepts not discussed here have become objects of attention in recent years; we'll cover those another time. Skip the sections marked with circles and railroad crossing signs)**

**2) Carter T. Butts, "Revisiting the Foundations of Network Analysis," *Science* (24 July 2009): 414-16**

Some Work on Ego-Centered Networks:

Scott Feld, "Why Your Friends Have More Friends Than You Do," *American Journal of Sociology* 96:1464-77  
Peter Marsden, "Core Discussion Networks for Americans," *American Sociological Review* 52:122-131  
Thomas A. DiPrete, Andrew Gelman, Tyler McCormick, Julien Teitler, and Tian Zheng, "Segregation in Social Networks Based on Acquaintanceship and Trust," *American Journal of Sociology* 116, 4 (January 2011): 1234-83  
B. Cornwell, E. O. Laumann, and L. Philip Schumm, "The Social Connectedness of Older Adults: A National Profile," *American Sociological Review* 73, 2 (April 2008): 185-203  
Barry Wellman, "An Egocentric Network Tale." *Social Networks* 15 (Dec, 1993): 423-36  
Christoph Müller, Barry Wellman and Alexandra Marin. "How to Use SPSS to Study Ego-Centered Networks," *Bulletin de Methode Sociologique* 69 (Oct., 1999): 83-100

Some Classic One-Mode Network Studies, Single and Multiple Types of Ties:

David Krackhardt, "Informal Networks: The Company Behind the Chart," *Harvard Business Review* (July 1993):105-111  
David Krackhardt, "The Strength of Strong Ties: The Importance of Philos in Organizations," in Nitin Nohria and Robert G. Eccles (eds.), *Networks and Organizations: Structure, Form, and Action*  
S.F. Sampson, *A Novitiate in a Period of Change. An Experimental and Case Study of Social Relationships* (PhD thesis Cornell University, 1968) (data used all over the place)  
F. J. Roethlisberger and William J. Dickson, "The Internal Organization of the Group in the Bank Wiring Observation Room," in their *Management and the Worker* (Harvard, 1939), pp. 493-510  
Elizabeth Bott, "Urban Families: Conjugal Roles and Social Networks," *Human Relations* 8:345-84  
Elizabeth Bott, *Family and Social Network* (Tavistock, 1957)  
J. A. Barnes, "Classes and Committees in a Norwegian Island Parish," in Samuel Leinhardt (ed.), *Social Networks: A Developing Paradigm*, pp. 233-52 (Academic, 1977)  
Emmanuel Lazega and M. A. J. van Duijn, "Position in Formal Structure, Personal Characteristics, and Choices of Advisors in a Law Firm: A Logistic Regression Model for Dyadic Network Data," *Social Networks* 19:375-97  
James R. Lincoln and Jon Miller, "Work and Friendship Ties in Organizations," *Administrative Science Quarterly* 24:181-99

Some Work on Two- (or more) Mode (Affiliation) Networks:

Ronald L. Breiger, "The Duality of Persons and Groups," *Social Forces* 53:181-90  
J. Miller McPherson, "Hypernetwork Sampling: Duality and Differentiation Among Voluntary Organizations," *Social Networks* 3:225-49  
Stephen P. Borgatti and Martin Everett, "Network Analysis of 2-Mode Data," *Social Networks* 19:243-69  
Bernice Pescosolido and Beth Rubin, "The Web of Group Affiliations Revisited: Social Life, Postmodernism, and Sociology," *American Sociological Review* 65:52-76

James G. Ennis, "The Social Organization of Sociological Knowledge: Modeling the Intersection of Specialties," *American Sociological Review* 57:259-65

Katherine Faust, "Centrality in Affiliation Networks," *Social Networks* 19:157-91

George Barnett, "Correspondence Analysis: A Method for the Description of Communication Networks," in W. D. Richards and G. Barnett (eds.), *Progress in Communication Science* (Ablex, 1993), pp. 136-63.

John M. Roberts, "Correspondence Analysis of Two-Mode Network Data," *Social Networks* 22:65-72

Georg Simmel, "The Web of Group Affiliations" (in his *Conflict and the WoGA*, Free Press, 1955)

J. Miller McPherson, "Voluntary Affiliation: A Structural Approach," in Peter Blau and Robert Merton (eds.), *Continuities in Structural Inquiry*, pp. 325-51

Peter Blau and Joseph Schwartz, *Crosscutting Social Circles* (Transaction, 1997)

Thomas J. Fararo and Patrick Doreian, "Tripartite Structural Analysis: Generalizing the Breiger-Wilson Formalism," *Social Networks* 6, 2 (June 1984): 141-75

Ann Mische and Philippa Pattison, "Composing a Civic Arena: Publics, Projects, and Social Settings," *Poetics* 27, 2-3 (March 2000): 163-94

Neha Gondal, "The Local and Global Structure of Knowledge Production in an Emergent Research Field: An Exponential Random Graph Analysis," *Social Networks* 33, 1: 20-30

#### Some Concerns about Network Data Collection and Measurement

Peter V. Marsden, "Network Data and Measurement," *Annual Review of Sociology* 16:435-63

Peter D. Killworth and H. Russell Bernard, "Informant Accuracy in Social Network Data," *Human Organization* 35:269-86

Peter D. Killworth and H. Russell Bernard, "Informant Accuracy in Social Network Data III: A Comparison of Triadic Structure in Behavioral and Cognitive Data," *Social Networks* 2:10-46

W. H. Bernard, P. Killworth, and L. Sailer, "Informant Accuracy in Social Networks, Part IV: Comparison of Clique-level Structure in Behavioral and Cognitive Network Data," *Social Networks* 2: 191-218

Linton C. Freeman, A. K. Romney, and S. C. Freeman, "Cognitive Structure and Informant Accuracy," *American Anthropologist* 89:310-25

Ove Frank, "Network Sampling and Model Fitting," in Peter Carrington et al. (eds.), *Models and Methods in Social Network Analysis* (Cambridge, 2005), chapter 3

Ronald L. Breiger, "Introduction to Special issue: Ethical Dilemmas in Social Network Research," *Social Networks* 27, 2: 89-93

Charles Kadushin, "Who Benefits from Network Analysis: Ethics of Social Network Research," *Social Networks* 27, 2: 139-53

#### **Week 4 (9/27)**      Personal Ego-Networks, Social Support, and Identity

**Read: 1) J. Miller McPherson, Lynn Smith-Lovin, and Matthew Brashears, "Social Isolation in America: Changes in Core Discussion Networks over Two Decades," *American Sociological Review* 71, 3 (June 2006): 353-375**

**2) Peter S. Bearman and Paolo Parigi, "Cloning Headless Frogs and Other Important Matters: Conversation Topics and Network Structure," *Social Forces* 83, 2:535-557**

**3) Bonnie Erickson, "The Relational Basis of Attitudes," in Barry Wellman and S. D. Berkowitz (eds.), *Social Structures: A Network Approach* pp. 99-121 (Cambridge, 1988)**

Some other materials:

Claude S. Fischer, *To Dwell Among Friends* (Chicago, 1982)

Barry Wellman and S. Wortley, "Different Strokes from Different Folks: Community Ties and Social Support," *American Journal of Sociology* 96:558-88

Claire Bidart and Daniel Lavenu, "Evolutions of Personal Networks and Life Events," *Social Networks* 27, 4: 359-76

Filip Agneessens, Hans Waeghe, and John Lievens, "Diversity in Social Support by Role Relations: A Typology," *Social Networks* 28, 4: 427-41

Benjamin Cornwell, Edward O. Laumann, and L. Philip Schumm, "The Social Connectedness of Older Adults: A National Profile," *American Sociological Review* 73, 2 (April 2008): 185-203

S. M. Kana'iaupuni et al., "Counting on Kin: Social Networks, Social Support, and Child Health Status," *Social Forces* 83:1137-64

Maureen T. Hallinan, "The Process of Friendship Formation," *Social Networks* 1:193-210

Robert Huckfeldt, "Social Contexts, Social Networks, and Urban Neighborhoods: Environmental Constraints on Friendship Choice," *American Journal of Sociology* 89:651-669

Candice Feiring, "Other-Sex Friendship Networks and the Development of Romantic Relationships in Adolescence," *Journal of Youth and Adolescence* 28:495-512

John Levi Martin and King-To Yeung, "Persistence of Close Personal Ties Over a 12-year Period," *Social Networks* 28, 4: 331-62

T. C. Antonucci, A. M. Sherman, and H. Akiyama, "Social Networks, Support, and Integration," in J. E. Birren (ed.), *Encyclopedia of Gerontology Age, Aging, and the Aged* (Academic, 1996), pp. 505-14

Jill Sutor and Shirley Keeton, "Once a Friend, Always a Friend? Effects of Homophily on Women's Support Networks across a Decade," *Social Networks* 19:51-62

**Week 5 (10/4)**            Interactionism: Homophily, Triadic Closure, Cohesion, Subgroups

**Read: 1) Wasserman and Faust, pp. 220-90 and 556-602**

**2) Kara Joyner and Grace Kao, "Interracial Relationships and the Transition to Adulthood," *American Sociological Review* 70, 4 (August 2005): 563-81**

**3) Gueorgi Kossinets and Duncan J. Watts, "Origins of Homophily in an Evolving Social Network," *American Journal of Sociology* 115, 2 (September 2009): 405-450**

More on the notions of attraction and homophily:

James Coleman, *The Adolescent Society* (Free Press, 1961[71]), especially chapter 7

J. Miller McPherson, Lynn Smith-Lovin, and James Cook, "Birds of a Feather: Homophily in Social Networks," *Annual Review of Sociology* 27:415-44

John W. Kidd, "An Analysis of Social Rejection in a College Men's Residence Hall." In J. L. Moreno (ed.), *The Sociometry Reader* (Free Press, 1960), pp. 428-36.

Paul Holland and Samuel Leinhardt, "An Exponential Family of Probability Distributions for Directed Graphs," *Journal of the American Statistical Association* 76:33-50

Jere Cohen, "Sources of Peer Group Homogeneity," *Sociology of Education* 50:227-41

Denise Kandel, "Homophily, Selection, and Socialization in Adolescent Friendships," *American Journal of Sociology* 84:427-36

Leon Festinger, Stanley Schachter and Kurt Back, *Social Pressures in Informal Groups: A Study of Human Factors in Housing* (Stanford, 1950)

Theodore M. Newcomb, *The Acquaintance Process* (Holt Rinehart Winston, 1961)

Chas. Kadushin, "Friendship Among the French Financial Elite," *American Sociological Review* 60:202-21

Other materials on the notion of balance:

Howard Taylor, *Balance in Small Groups* (Von Nostrand Reinhold, 1970), chapter 2  
Fritz Heider, "Attitudes and Cognitive Orientation," *Psychological Review* 52:358-74 (also reprinted in Samuel Leinhardt (ed.), *Social Networks: A Developing Paradigm* [Academic Press, 1977])  
Dorwin Cartwright and Frank Harary, "Structural Balance," *Psychological Review* 63:277-93 (also reprinted in Samuel Leinhardt (ed.), *Social Networks: A Developing Paradigm*)  
James A. Davis, "Clustering and Structural Balance in Groups," in Samuel Leinhardt (ed.), *Social Networks: A Developing Paradigm* (Academic Press, 1977), pp. 27-34  
Patrick Doreian et al., "A Brief History of Balance Through Time," *Journal of Mathematical Sociology* 21: 113-31  
Patrick Doreian and David Krackhardt, "Pre-transitive Balance Mechanisms for Signed Networks," *Journal of Mathematical Sociology* 25:43-67

On the notion of cliques and isolates, a good deal of it empirical:

Kenneth Frank and Jeff Yasumoto, "Social Capital Within and Between Groups," *American Journal of Sociology* 104:642-86  
Noah Friedkin, "The Structure of Social Space," pp. 125-62 in his *A Structural Theory of Social Influence*  
John Cottrell, *Social Networks and Social Influences in Adolescence* (Routledge, 1996)  
Karl P. Reitz, "Social Groups in a Monastery," *Social Networks* 10: 343-57  
Wayne Baker, "The Social Structure of a National Securities Market," *American Journal of Sociology* 89:775-811  
James Lincoln, Michael Gerlach, and Christiana Ahmadjian, "Keiretsu Networks and Corporate Performance in Japan," *American Sociological Review* 61:67-88  
Maureen Hallinan, "Patterns of Cliquing Among Youth," in H. C. Foot, A. J. Chapman, and J. R. Smith (eds.), *Friendship and Social Relations in Children* (Wiley, 1980), chapter 12  
James Moody, "Race, School Integration, and Friendship Segregation in America," *American Journal of Sociology* 107, 3: 679-716  
Derek A. Kreager, "Strangers in the Halls: Isolation and Delinquency in School Networks," *Social Forces* 83, 1 (September 2004): 351-90  
Kenneth A. Frank et al., "The Social Dynamics of Mathematics Coursetaking in High School," *American Journal of Sociology* 113, 6: 1645-96

Technical extensions and relaxations of the notion of clique:

James Moody and Douglas R. White, "Structural Cohesion and Embeddedness: A Hierarchical Concept of Social Groups," *American Sociological Review* 68:103-27  
Douglas R. White and Frank Harary, "The Cohesiveness of Blocks in Social Networks: Node Connectivity and Conditional Density," *Sociological Methodology* 31:305-59  
Kenneth A. Frank, "Identifying Cohesive Subgroups," *Social Networks* 17:27-56  
James Moody, "Peer Influence Groups: Identifying Dense Clusters in Large Networks," *Social Networks* 23: 261-283

**Week 6 (10/11)**      Network Positions and their Consequences: Centrality, Power, Reachability

**Read: 1) Wasserman and Faust, pp. 169-219**

**2) Robert Faris and Diane Felmlee, "Status Struggles: Network Centrality and Gender Segregation in Same- and Cross-Gender Aggression," *American Sociological Review* 76, 1 (Feb 2011): 48-73**

**3) Peter S. Bearman, Katherine Stovel, and James Moody, "Chains of Affection: The Structure of Adolescent Romantic and Sexual Networks," *American Journal of Sociology* 110: 44-91**

**4) Wayne Baker and Robert Faulkner, "The Social Organization of Conspiracy: Illegal Networks in the Heavy Electrical Equipment Industry," *American Sociological Review* 58: 837-60**

Some other empirical examples of how centrality matters, and stuff on the measures:

Roger Gould, "Power and Social Structure in Community Elites," *Social Forces* 68:531-52

Edward O. Laumann, Peter Marsden, and Joseph Galaskiewicz, "Community-Elite Influence Structures: Extension of a Network Approach," *American Journal of Sociology* 83:594-631

Noah Friedkin, "Theoretical Foundations for Centrality Measures," *American Journal of Sociology* 96:1478-1504

D. C. Bell, J. S. Atkinson, and J. W. Carlson, "Centrality Measures for Disease Transmission Networks," *Social Networks* 21:1-21

J. M. Bolland, "Sorting Out Centrality: An Analysis of the Performance of Four Centrality Models in Real and Simulated Networks," *Social Networks* 10:233-53

Linton Freeman, "A Set of Measures of Centrality Based on Betweenness," *Sociometry* 40:35-41

K. Stephenson and M. Zelen, "Rethinking Centrality: Methods and Examples," *Social Networks* 11:1-37

John Scott, "Centrality and Centralization," in his *Social Network Analysis: A Handbook* (2nd ed.), ch. 5

Steven P. Borgatti, "Centrality and Network Flow," *Social Networks* 27, 1: 55-71

Benjamin Cornwell, Edward O. Laumann, "Network Position and Sexual Dysfunction: Implications of Partner Betweenness for Men," *American Journal of Sociology* 117, 1 (July 2011): 172-208

Reach and the idea of the strength of weak ties:

Mark S. Granovetter, "The Strength of Weak Ties," *American Journal of Sociology* 78:1360-80

Mark Granovetter, *Getting a Job: A Study of Contacts and Careers* (Chicago, 1974; 2nd edition 1995)

Freeman, L. C. 1992. "The Sociological Concept of 'Group:.'" An Empirical Test of Two Models," *American Journal of Sociology* 98: 152-66

M. T. Hansen, "The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge Across Organization Subunits," *Administrative Science Quarterly* 44:82-111

A. K. Gupta, and V. Govindarajan, "Knowledge Flows Within Multinational Corporations," *Strategic Management Journal* 21:473-96

A. Hargadon and R. Sutton, "Technology Brokering and Innovation in a Product Development Firm," *Administrative Science Quarterly* 42:716-49.

Noah Friedkin, "A Test of Structural Features of Granovetter's Strength of Weak Ties Theory," *Social Networks* 2:411-22

Gabriel Weimann, "On the Importance of Marginality," *American Sociological Review* 47:764-73

Peter Marsden and K. E. Campbell, "Measuring Tie Strength," *Social Forces* 63:482-501

Stephen Hansell, "Cooperative Groups, Weak Ties, and the Integration of Peer Friendships," *Social Psychology Quarterly* 47:316-28

Peggy Giordano, "Wider Circle of Friends in Adolescence," *American Journal of Sociology* 101:661-97

Paul D. McLean, *The Art of the Network: Strategic Interaction and Patronage in Renaissance Florence*, chapter 6

Network Position as 'Social Capital':

James Coleman, "Social Capital in the Creation of Human Capital," *American Journal of Sociology* 94:S95-S120.

James Coleman, *Foundations of Social Theory* (Harvard, 1990), pp. 300-21

Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91:481-510.

James Moody and Pamela Paxton, "Building Bridges: Linking Social Capital and Social Networks to Improve Theory and Research," *American Behavioral Scientist* 52: 1491-1506



Paul DiMaggio and Filiz Garip, "How Network Externalities Can Exacerbate Intergroup Inequality," *American Journal of Sociology* 116, 6 (May 2011): 1887-1933

Exchange, Power and Resource Dependency Theory:

Richard Emerson, "Power-Dependence Relations," *American Sociological Review* 27:31-41.

Karen S. Cook and Richard M. Emerson, "Power, Equity and Commitment in Exchange Networks," *American Sociological Review* 43:721-39

Karen S. Cook, Richard Emerson, M. R. Gillmore, and T. Yamagishi, "The Distribution of Power in Exchange Networks: Theory and Experimental Results," *American Journal of Sociology* 89:275-305

Karen Cook and Joseph Whitmeyer, "Two Approaches to Social Structure," *Annual Review of Sociology* 18:109-27

T. Yamagishi, M. R. Gillmore, and Karen Cook, "Network Connections and the Distribution of Power in Exchange Networks," *American Journal of Sociology* 93:833-51

Jeffrey Pfeffer and Gerald Salancik, *The External Control of Organizations* (Harper & Row, 1978)

Linda Molm, "The Dynamics of Power in Social Exchange," *American Sociological Review* 55:427-47

Peter Marsden, "Restricted Access in Networks and Models of Power," *American Journal of Sociology* 88:686-717

Barry Markovsky, David Willer and T. Patton, "Power Relations in Exchange Networks," *American Sociological Review* 53:220-36

Edward J. Lawler, Shane R. Thye, and Jeongkoo Yoon, "Social Exchange and Micro Social Order," *American Sociological Review* 73, 4 (August 2008): 519-42

Robb Willer, "Groups Reward Individual Sacrifice: The Status Solution to the Collective Action Problem," *American Sociological Review* 74, 1 (February 2009): 23-43

Marcel Van Assen and Arnout van de Rijt, "Dynamic Exchange Networks," *Social Networks* 29, 2: 266-78

Arnout Van de Rijt and Marcel van Assen, "Theories of Network Exchange: Anomalies, Desirable Properties, and Critical Networks," *Social Networks* 30, 3: 259-271

**Week 7 (10/18)**      Transitivity: Hierarchy out of Interactions?

**Read: 1) John Levi Martin, *Social Structures*, selections**

**2) Val Burris, "The Academic Caste System: Prestige Hierarchies in PhD Exchange Networks," *American Sociological Review* 69:239-64**

Other work on hierarchies and hierarchy formation:

Ivan Chase, "Social Process and Hierarchy Formation in Small Groups: A Comparative Perspective," *American Sociological Review* 45:905-24

Ivan Chase, "Models of Hierarchy Formation in Animal Societies," *Behavioral Sciences* 19:374-82

Frans de Waal, *Chimpanzee Politics*

Cecilia Ridgeway and David Diekema, "Dominance and Collective Hierarchy Formation in Male and Female Task Groups," *American Sociological Review* 54:79-93

Eugene Rosa and Allan Mazur, "Incipient Status in Groups," *Social Forces* 58:18-37

Allan Mazur et al, "Physiological Aspects of Communication Via Mutual Gaze," *American Journal of Sociology* 86:50-74

Steve Elyson and John Dovidio (eds.), *Power, Dominance, and Nonverbal Behavior* (Springer, 1985)

F. F. Strayer, "Child Ethology and the Study of Preschool Social Relations," in H. C. Foot, A. J. Chapman, and J. R. Smith (eds.), *Friendship and Social Relations in Children* (Wiley, 1980), chapter 9.

Donald Omark, F. F. Strayer, and Daniel Freedman, *Dominance Relations: An Ethological View of Human Conflict in Social Interaction*, esp. chapters 7-12, 21-3, 26 (Garland, 1980)

Roger Gould, "The Origins of Status Hierarchies: A Formal Theory and Empirical Test," *American Journal of Sociology* 107:1143-78

Shin-Kap Han, "Tribal Regimes in Academia: A Comparative Analysis of Market Structure Across Disciplines," *Social Networks* 25:251-280

Classic material specifically on the idea of transitivity:

Maureen T. Hallinan and W. N. Kubitschek, "The Effects of Individual and Structural Characteristics on Intransitivity in Social Networks," *Social Psychology Quarterly* 51:81-92

Paul Holland and Samuel Leinhardt, "A Method for Detecting Structure in Sociometric Data," *American Journal of Sociology* 76:492-513

Paul Holland and Samuel Leinhardt, "Transitivity in Structural Models of Small Groups," *Comparative Group Studies* 2:107-24

Eugene Johnsen, "Network Macrostructure Models for the Davis-Leinhardt Set of Empirical Sociomatrices," *Social Networks* 7:203-24

Harrison C. White, "Management Conflict and Sociometric Structure," *American Journal of Sociology* 67:185-7.

Steffen W. Schmidt, James C. Scott, Carl Landé, and Laura Guasti (eds.), *Friends, Followers, and Factions: A Reader in Political Clientelism* (California, 1977)

## **Week 8 (10/25)**      The New Science of Networks: Concerns, Concepts, Applications

**Read: 1) Albert-László Barabási, *Linked: The New Science of Networks*, chapters 1-7, 9-13**

**2) Brian Uzzi and Jarrett Spiro, "Collaboration and Creativity: The Small World Problem," *American Journal of Sociology* 111:2, 447-504**

**3) James Moody, "The Structure of a Scientific Collaboration Network," *American Sociological Review* 69:213-38**

Other related materials, a good deal of which is quite technical:

Mark Newman, Steve Strogatz and Duncan Watts, "Random Graphs with Arbitrary Degree Distributions and the Applications," *Physical Review E*:64

Steven H. Strogatz, "Exploring Complex Networks," *Nature* 410 (2001): 268-276

Mark Newman, "The Structure and Function of Complex Networks," *SIAM Review* 45:167-256

Duncan J. Watts, *Small Worlds: The Dynamics of Networks Between Order and Randomness* (Princeton)

Duncan J. Watts, Peter Sheridan Dodds, and Mark Newman, "Identity and Search in Social Networks," *Science* 296:1302-1305

Stanley Milgram, "The Small World Problem," *Psychology Today* 2:60-67

Duncan J. Watts, *Six Degrees: The Science of a Connected Age* (Norton, 2003)

Duncan J. Watts, Networks, Dynamics, and the Small-World Phenomenon," *American Journal of Sociology* 105:493-527

Matthew J. Salganik, Peter Sheridan Dodds, and Duncan J. Watts, "Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market," *Science* 311 (2006): 854-856 (on musical tastes)

## **Week 9 (11/1)**      Classic Structuralist Approaches to Networks: Blocks, Roles

**Read: 1) Wasserman and Faust, pp. 345-424 and 461-502**

**2) S. F. Nadel, *The Theory of Social Structure*, pp. 1-9, 62-73, 79-92, 97-104, 147-52**

**3) Peter Bearman, "Generalized Exchange," *American Journal of Sociology* 102:1383-1415**

Other materials:

John Scott, *Social Network Analysis: A Handbook*, chapters 7 and 8

Stephen Borgatti and Martin Everett, "Notions of Position in Social Network Analysis," *Sociological Methodology* 22:1-35

Harrison C. White, Scott Boorman, and Ronald Breiger, "Social Structure from Multiple Networks. I: Blockmodels of Roles and Positions," *American Journal of Sociology* 81:730-80

Scott Boorman and Harrison C. White, "Social Structure from Multiple Networks. II: Role Structures," *American Journal of Sociology* 81:1384-1446

Ronald L. Breiger and Philippa Pattison, "Cumulated Social Roles: The Duality of Persons and Their Algebras," *Social Networks* 8:215-56

Ronald L. Breiger, "Career Attributes and Network Structure: A Blockmodel Study of Biomedical Research Specialty," *American Sociological Review* 41:117-135

Philippa Pattison, *Algebraic Models for Social Networks* (Cambridge, 1994)

François Lorrain and Harrison C. White, "Structural Equivalence of Individuals in Social Networks," *Journal of Mathematical Sociology* 1:49-80

Ronald L. Breiger, Scott Boorman, and Phipps Arabie, "An Algorithm for Clustering Relational Data with Applications to Social Network Analysis and Comparison with Multidimensional Scaling," *Mathematical Psychology* 12:328-83

Katherine Faust, "Comparison of Methods for Positional Analysis: Structural and General Equivalences," *Social Networks* 10:313-41

Ronald S. Burt, "Models of Network Structure," *Annual Review of Sociology* 6:79-141

Ronald S. Burt, "Social Contagion and Innovation: Cohesion versus Structural Equivalence," *American Journal of Sociology* 92:1287-335

Peter Bearman and James Moody, "Adolescent Suicidality," *American Journal of Public Health* 94: 89-95

William Panning, "Blockmodels from Relations to Configurations," *American Journal of Political Science* 26:585-608

G. A. Cohen, *Karl Marx's Theory of History* (Princeton, 2001 [1978])

Vacancy Chains as another model of interdependence:

John F. Padgett, "Mobility as Control: Congressmen through Committees," in Ronald L. Breiger (ed.), *Social Mobility and Social Structure* (Cambridge, 1990), pp. 27-58

Harrison C. White, *Chains of Opportunity* (Harvard, 1970), especially chapter 1

Ivan D. Chase, "Vacancy Chains," *Annual Review of Sociology* 17:133-54

Andrew Abbott, "Vacancy Models for Historical Data," in Ronald L. Breiger (ed.), *Social Mobility and Social Structure*, pp. 80-102 (Cambridge, 1990)

Andrew Abbott and Alexandra Hrycak, "Measuring Resemblance in Sequence Data: An Optimal Matching Analysis of Musicians' Careers," *American Journal of Sociology* 96:144-85

D. Randall Smith and Andrew Abbott, "A Labor Market Perspective on the Mobility of College Football Coaches," *Social Forces* 61:1147-67

Katherine Stovel, Michael Savage, and Peter Bearman, "Ascription into Achievement: Models of Career Systems at Lloyds Bank, 1890-1970," *American Journal of Sociology* 102:358-99

Katherine Stovel and Mike Savage, "Mergers and Mobility: Organizational Growth and the Origins of Career Migration at Lloyds Bank," *American Journal of Sociology* 111:1080-1121

King-to Yeung, "Repressing Rebels, Managing Bureaucrats: State Organizational Adaptation During the Taiping Rebellion, 1851-64," unpublished ms., Rutgers University

Anthropological and historical materials on kinship:

Claude Lévi-Strauss, *The Elementary Structures of Kinship*

Harrison C. White, *An Anatomy of Kinship* (Prentice-Hall, 1963)

Franklin E. Tjon Sie Fat, *Representing Kinship: Simple Models of Elementary Structures*. Leiden University dissertation

Robin Fox, *Kinship and Marriage*, chapters 1, 3, 4, 6-8

Paula Rubel and A. Rosman, *Your Own Pigs You May Not Eat* (Chicago, 1978)

Andrew Strathern, *The Rope of Moka: Big Men and Ceremonial Exchange in New Guinea*

Douglas R. White and Paul Jorion, "Representing and Computing Kinship: A New Approach," *Current Anthropology* 33:454-63

David Herlihy, "Family Solidarity in Medieval Italian History," in David Herlihy et al. (eds.), *Economy, Society and Government in Medieval Italy* (Kent State, 1969)

John F. Padgett, "Open Elite? Social Mobility, Marriage and Family in Renaissance Florence, 1282-1494," *Renaissance Quarterly* 63, 2: 357-411

Yusheng Peng, "When Formal Laws and Informal Norms Collide: Lineage Networks versus Birth Control Policy in China," *American Journal of Sociology* 116, 3 (November 2010): 770-805

## Week 10 (11/8)

## Economic Relations

**Read: 1) Valery Yakubovich, "Weak Ties, Information, and Influence: How Workers Find Jobs in a Local Russian Labor Market," *American Sociological Review* 70, 3 (June 2005): 408-21**

**2) Balázs Vedres and David Stark, "Structural Folds: Generative Disruption in Overlapping Groups," *American Journal of Sociology* 115, 4 (January 2010): 1150-90**

**3) Ronald S. Burt, "Structural Holes and Good Ideas," *American Journal of Sociology* 110, 2: 349-99**

Various network approaches to transactions and markets

John F. Padgett and Paul D. McLean, "Economic Credit in Renaissance Florence." *Journal of Modern History* 83, 1 (March 2011): 1-47

John F. Padgett and Paul D. McLean, "Organizational Invention and Elite Transformation: The Birth of Partnership Systems in Renaissance Florence," *American Journal of Sociology* 111:1463-1568

Paul D. McLean and John F. Padgett, "Was Florence a Perfectly Competitive Market? Transactional Evidence from the Renaissance," *Theory and Society* 26:209-44

Emily Erikson and Peter Bearman. 2006. "Malfeasance and the Foundations for Global Trade: The Structure of English Trade in the East Indies, 1601–1833." *American Journal of Sociology* 112, 1:195-230.

Theodore P. Gerber and Olga Mayorova, "Getting Personal: Networks and Stratification in the Russian Labor Market, 1985–2001," *American Journal of Sociology* 116, 3 (November 2010): 855-908

Brian Uzzi, "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect," *American Sociological Review* 61:674-98

Brian Uzzi and Ryon Lancaster, "Embeddedness and Price Formation in the Corporate Law Market," *American Sociological Review* 69:319-44

Brian Uzzi, "Social Relations and Networks in the Making of Financial Capital," *American Sociological Review* 64:481-505

Joel Podolny, "Networks as the Pipes and Prisms of the Market," *American Journal of Sociology* 107:33-60

Ranjay Gulati and Martin Gargiulo, "Where Do Interorganizational Networks Come From?" *American Journal of Sociology* 104:1439-93

Joel Podolny, Toby E. Stuart, and Michael T. Hannan, "Networks, Knowledge, and Niches: Competition in the Worldwide Semiconductor Industry, 1984-1991," *American Journal of Sociology* 102:659-89

Stuart Macaulay, "Non-Contractual Relations in Business: A Preliminary Study," *American Sociological Review* 28:55-67

Bruce G. Carruthers, *City of Capital* (Princeton, 1996)

Ezra W. Zuckerman and Stoyan V. Sgourev, "Peer Capitalism: Parallel Relationships in the U.S. Economy," *American Journal of Sociology* 111:1327-66

Mark S. Mizruchi and Linda Brewster Stearns, "Getting Deals Done: The Use of Social Networks in Bank Decision-Making," *American Sociological Review* 66:647-71

Mark S. Mizruchi, Linda Brewster Stearns, and Christopher Marquis, "The Conditional Nature of Embeddedness: A Study of Borrowing by Large U.S. Firms, 1973-1994," *ASR* 71:310-32

Roberto M. Fernandez and Isabel Fernandez-Mateo, "Networks, Race, and Hiring," *ASR* 71:42-71

Emilio J. Castilla, "Social Networks and Employee Performance in a Call Center," *American Journal of Sociology* 110:1243-83

W. W. Powell, "Neither Market nor Hierarchy: Network Forms of Organization," *Research in Organizational Behavior* 12:295-336.

Joel Podolny and Karen Page, "Network Forms of Organization," *Annual Review of Sociology* 24 (1998):57-76

Paul Dimaggio and Hugh Louch, "Socially Embedded Consumer Transactions: For What Kinds of Purchases Do People Most Often use Networks?" *American Sociological Review* 63, 5: 619-37

#### Networks and ownership:

Mark S. Mizruchi and Linda B. Stearns, "A Longitudinal Study of the Formation of Interlocking Directorates," *Administrative Science Quarterly* 33:194-210

Donald Palmer, Roger Friedland, and J. V. Singh, "The Ties that Bind: Organizational and Class Bases of Stability in a Corporate Interlock Network," *American Sociological Review* 51:781-96

Mark S. Mizruchi, *The Structure of Corporate Political Action* (Harvard, 1992)

Yusheng Peng, "Kinship Networks and Entrepreneurs in China's Transitional Economy," *American Journal of Sociology* 109:1045-74

William G. Roy, "The Unfolding of the Interlocking Directorate Structure of the United States," *American Sociological Review* 48:248-57

Val Burris, "Interlocking Directorates and Political Cohesion among Corporate Elites," *American Journal of Sociology* 111, 1: 249-83

Bruce Kogut and Gordon Walker, "The Small World of Germany and the Durability of National Networks," *American Sociological Review* 66, 3: 317-35

David Stark and Balász Vedres. 2006. "Social Times of Network Spaces: Network Sequences and Foreign Investment in Hungary." *American Journal of Sociology* 111(5): 1367-1411.

#### Brokerage and Structural Holes:

Roberto Fernandez and Roger Gould, "A Dilemma of State Power: Brokerage and Influence in the National Health Policy Domain," *American Journal of Sociology* 99:1455-91

Roger Gould and Roberto Fernandez, "Structures of Mediation: A Formal Approach to Brokerage in Transaction Networks," *Sociological Methodology* 19:89-126.

Ronald S. Burt, *Structural Holes* (Chicago, 1992), especially Introduction and chapter 1

Isabel Fernandez-Mateo, "Who Pays the Price of Brokerage? Transferring Constraint through Price Setting in the Staffing Sector," *American Sociological Review* 72, 2 (April 2007): 291-317

Henning Hillman, "Mediation in Multiple Networks: Elite Mobilization before the English Civil War," *American Sociological Review* 73,3 (June 2008): 426-54

Vincent Buskens and Arnout van de Rijt, "Dynamics of Networks if Everyone Strives for Structural Holes," *American Journal of Sociology* 114, 2 (September 2008): 371-407

#### Networks, strategy, innovation, and reputations:

Robert Faulkner, *Music on Demand: Composers and Careers in the Hollywood Film Industry*  
Ronald S. Burt, *Structural Holes* (Chicago, 1992), especially Introduction and chapter 1  
Robin Cowan and Nicolas Jonard, "Structural Holes, Innovation and the Distribution of Ideas," *Journal of Economic Interaction and Coordination* 2: 93-110  
Wayne Baker and Robert Faulkner, "Role as Resource in the Hollywood Film Industry," *American Journal of Sociology* 97:279-309

International Trade:

David A. Smith and Douglas R. White, "Structure and Dynamics of the Global Economy: Network Analysis of International Trade, 1965-1980," *Social Forces* 70:857-93  
David Snyder and Edward Kick, "Structural Position in the World System and Economic Growth, 1955-1970," *American Journal of Sociology* 84:1096-1126  
Steve Borgatti, "Models of Core-Periphery Structure," *Social Networks* 21:375-395

**Week 11 (11/15)** History and Politics through a Social Network Lens

**Read: 1) John F. Padgett and Christopher K. Ansell, "Robust Action and the Rise of the Medici, 1400-1434," *American Journal of Sociology* 98 (May 1993): 1259-1319**

**2) Jason Beckfield, "The Social Structure of the World Polity," *American Journal of Sociology* 115, 4 (January 2010): 1018-68**

Politics in various places:

Peter Bearman, James Moody, and Robert Faris, "Blocking the Future," *Social Science History* 23:501-33  
Peter Bearman, James Moody, and Robert Faris, "Networks and History," *Complexity* 8,1:61-71  
Peter S. Bearman, *Relations into Rhetorics*, especially pp. 1-18, 24-5, 42-5, 72-93, 95-111, 131-181  
Roger V. Gould, *Insurgent Identities* (Chicago, 1995), especially chapters 1, 2, 6, 7  
Roger V. Gould, "Patron-Client Ties, State Centralization, and the Whiskey Rebellion," *American Journal of Sociology* 102:400-429  
Christopher K. Ansell, "Symbolic Networks: The Realignment of the French Working Class, 1887-1894," *American Journal of Sociology* 103:359-90  
Richard Lachmann, *Capitalists In Spite of Themselves* (Oxford, 2000)  
Daniel P. Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928* (Princeton, 2001)  
James D. Montgomery, "The Structure of Norms and Relations in Patronage Systems," *Social Networks* 29, 4: 565-84  
Paul D. McLean, "A Frame Analysis of Favor Seeking in the Renaissance: Agency, Networks, and Political Culture," *American Journal of Sociology* 104:51-91  
Paul D. McLean, "Widening Access while Tightening Control: Office-holding, Marriages, and Elite Consolidation in Early Modern Poland," *Theory and Society* 33:167-212  
Paul D. McLean, "Patronage, Citizenship, and the Stalled Emergence of the Modern State in Renaissance Florence," *Comparative Studies in Society and History* 47:638-64  
Paul D. McLean, "Patrimonialism, Elite Networks, and Reform in Late Eighteenth Century Poland," *Annals of the American Association of Political and Social Science* 636 (July 2011): 88-110  
Carl H. Landé, "Networks and Groups in Southeast Asia: Some Observations on the Group Theory of Politics," *American Political Science Review* 67:103-27  
Fredrik Barth, *Political Leadership Among the Swat Pathans* (Athlone, 1965), especially chapters 7 and 9  
S. Schmidt, James Scott, Carl Landé, and Laura Guasti (eds.), *Friends, Followers, and Factions*  
Lily Ross Taylor, *Party Politics in the Age of Caesar* (California 1968 [1949])

Dale Kent, *The Rise of the Medici: Faction in Florence, 1426-34* (Oxford, 1978)  
Martin Shefter, "The Emergence of the Political Machine: An Alternate View," in Willis D. Hawley et al. (eds.), *Theoretical Perspectives on Urban Politics* (Prentice-Hall, 1976)  
Edward O. Laumann and David Knoke, *The Organizational State* (Wisconsin, 1987)  
Henning Hillman, "Localism and the Limits of Political Brokerage: Evidence from Revolutionary Vermont," *American Journal of Sociology* 114, 2: 287-331  
Adam Slez and John Levi Martin, "Political Action and Party Formation in the United States Constitutional Convention," *American Sociological Review* 72,1 (February 2007): 42-67  
Delia Baldassarri and Peter S. Bearman, "Dynamics of Political Polarization," *American Sociological Review* 72, 5 (October 2007): 784-811

Some social movements literature:

David Snow, Louis Zurcher, and Sheldon Eklund-Olson, "Social Networks and Social Movements: A Microstructural Approach to Differential Recruitment," *American Sociological Review* 45:787-801  
Roberto Fernandez and Doug McAdam, "Social Networks and Social Movements: Multiorganizational Fields and Recruitment to Mississippi Freedom Summer," *Sociological Forum* 92:64-90.  
Marc Dixon and Vincent J. Roscigno, "Status, Networks, and Social Movement Participation: The Case of Striking Workers," *American Journal of Sociology* 108:1292-1327  
Florence Passy, "Social Networks Matter. But How?" in Mario Diani and Doug McAdam (eds.), *Social Movement Analysis: The Network Perspective* (Oxford, 2003), pp. 21-48  
Maryjane Osa, "Networks in Opposition: Linking Organizations through Activists in the Polish People's Republic," in Mario Diani and Doug McAdam (eds.), *Social Movement Analysis: The Network Perspective* (Oxford, 2003), pp. 77-104  
Roger V. Gould, "Why Do Networks Matter? Rationalist and Structuralist Interpretations," in Diani and McAdam (eds.), *Social Movement Analysis: The Network Perspective* (Oxford, 2003), pp. 233-57  
Delia Baldassarri and Mario Diani, "The Integrative Power of Civic Networks," *American Journal of Sociology* 113:3, 735-80  
Kenneth T. Andrews and Michael Biggs, "The Dynamics of Protest Diffusion: Movement Organizations, Social Networks, and News Media in the 1960 Sit-Ins," *American Sociological Review* 71, 5 (October 2006): 752-77

Migration:

Alberto Palloni et al., "Social Capital and International Migration: A Test Using Information on Family Networks," *American Journal of Sociology* 106:1262-98  
B. Davis, G. Steckloy, and P. Winters, "Domestic and International Migration from Rural Mexico: Disaggregating the Effects of Network Structure and Composition," *Population Studies* 56:291-309  
Thomas Bauer and Klaus F. Zimmermann, "Network Migration of Ethnic Germans," *International Migration Review* 31:143-9  
S. J. Gold, "Gender, Class, and Network: Social Structure and Migration Patterns Among Transnational Israelis," *Global Networks: A Journal of Transnational Affairs* 1:57-78  
N. M. Shah and I. Menon, "Chain Migration through the Social Network: Experience of Labour Migrants in Kuwait," *International Migration* 37:361-82

Politics and Terrorism:

James Moody, "Fighting a Hydra: A Note on the Network Embeddedness of the War on Terror," *Structure and Dynamics: eJournal of Anthropological and Related Sciences* 1(2): Article 9.  
Scott Gartner, "Ties to the Dead: Connections to Iraq War and 9/11 Casualties and Disapproval of the President," *American Sociological Review* 73, 4: 690-95

**Week 12 (11/22)**

**Diffusion Processes**

**Read: 1) Damon Centola and Michael Macy, "Complex Contagions and the Weakness of Long Ties," *American Journal of Sociology* 113, 3: 702-734**

**2) N. A. Christakis and J. H. Fowler, "The Spread of Obesity in a Large Network," *New England Journal of Medicine* 357: 370-379**

**3) Ka-Yuet Liu, Marissa King, and Peter S. Bearman, "Social Influence and the Autism Epidemic," *American Journal of Sociology* 115, 5 (March 2010): 1387-1434**

Classic work on diffusion:

James Coleman, Elihu Katz, and Herbert Menzel, *Medical Innovation: A Diffusion Study* James Coleman, Elihu

Katz and H. Menzel, "The Diffusion of an Innovation Among Physicians," *Sociometry* 20:253-70

Ronald S. Burt, "Cohesion Versus Structural Equivalence as a Basis for Network Subgroups," in Ronald Burt and M. Minor (eds.), *Applied Network Analysis: A Methodological Introduction*, pp. 262-82

Noah Friedkin, "Structural Bases of Interpersonal Influence in Groups," *American Sociological Review* 58:862-72

Friedkin, N.E. 1998 *A Structural Theory of Social Influence* Cambridge

Everett M. Rogers, *Diffusion of Innovations*, 5<sup>th</sup> edition

Everett Rogers, "Network Analysis and the Diffusion of Innovations," in Paul Holland and Samuel Leinhardt (eds.), *Perspectives on Social Network Research* (Academic Press, 1979)

David Strang and John W. Meyer, "Institutional Conditions for Diffusion," *Theory and Society* 22:487-511

David Strang and Michael W. Macy, "In Search of Excellence: Fads, Success Stories, and Adaptive Emulation," *American Journal of Sociology* 107:147-82

Leon Festinger, Stanley Schacter, and Kurt Black, *Social Pressures in Informal Groups* (Stanford, 1950)

Diana Crane, *Invisible Colleges: Diffusion of Knowledge in Scientific Communities* (Chicago, 1988 [1972])

Peter V. Marsden and Noah Friedkin, "Network Studies of Social Influence," *Sociological Methods and Research* 22:127-51

Gary Alan Fine, "Folklore Diffusion through Interactive Social Networks: Conduits in a Preadolescent Community," in his *Manufacturing Tales: Sex and Money in Contemporary Legends* (Tennessee, 1992)

Cohen, J. M. 1983. "Peer Influence on College Aspirations," *American Sociological Review* 48: 728-34.

Thomas W. Valente, *Network Models of the Diffusion of Innovations* (Hampton, 1995)

Thomas W. Valente and Rebecca L. Davis, "Accelerating the Diffusion of Innovations Using Opinion Leaders," *Annals of the American Academy of the Political and Social Sciences* 566:55-67

Myong-Hun Chang and Joseph E. Harrington, Jr., "Discovery and Diffusion of Knowledge in an Endogenous

Social Network," *American Journal of Sociology* 110: 937-76 Craig Rawlings and Daniel A. McFarland, "The Ties that Influence: How Social Networks Channel Faculty Grant Productivity." *Social Science Research* (Forthcoming)

Gerald F. Davis and Henrich R. Greve, "Corporate Elite Networks and Governance Changes in the 1980s.

*American Journal of Sociology*, 103, 1 (July 1997): 1-37

M. J. Salganik and D. J. Watts, "Leading the Herd Astray: An Experimental Study of Self-fulfilling Prophecies in an Artificial Cultural Market," *Social Psychology Quarterly* 71: 338-55

Epidemiology specifically:

Samuel Friedman et al., "Sociometric Risk Networks and Risk for HIV Infection," *American Journal of Public Health* 87,8:1289-96

Martina Morris, "Epidemiology and Social Networks," *Sociological Methods and Research* 22:99-126. [see other Morris work as well]

James Moody, "The Importance of Relationship Timing for STD Diffusion: Indirect Connectivity and STD Infection Risk," *Social Forces* 81:25-56

Rothenberg et al., "Choosing a Centrality Measure: Epidemiological Correlates in the Colorado Springs Study of Social Networks," *Social Networks* 17:273-97

Benjamin Cornwell, Edward O. Laumann, "Network Position and Sexual Dysfunction: Implications of Partner Betweenness for Men," *American Journal of Sociology* 117, 1 (July 2011): 172-208



M. J. Salganik, D. Fazito, N. Bertoni, A. H. Abdo, M. B. Mello, and F. I. Bastos, "Assessing Network Scale-up Estimates for Groups Most at Risk for HIV/AIDS: Evidence from a Multiple Method Study of Heavy Drug Users in Curitiba, Brazil," *American Journal of Epidemiology*, in press.

**Week 13 (11/29)**                      Networks and Culture

**Read: 1) Ann Mische, "Cross-Talk in Movements: Reconceiving the Culture-Network Link," in Mario Diani and Doug McAdam (eds.), *Social Movement Analysis: The Network Perspective* (Oxford, 2003), pp. 258-80**

**2) Stephen Vaisey and Omar Lizardo, "Can Cultural Worldviews Influence Network Composition?" *Social Forces* 88, 4 (June 2010): 1595-1618**

**3) John Mohr, "Soldiers, Mothers, Tramps, and Others: Discourse Roles in the 1907 New York City Charity Directory," *Poetics* 22:327-57**

Discourse and Interaction:

Ann Mische, *Partisan Publics: Communication and Contention Across Brazilian Youth Activist Networks*

Ann Mische, "Relational Sociology, Culture, and Agency," In *The Sage Handbook of Social Network Analysis*.

Edited by John Scott and Peter Carrington.

David Gibson, "Taking Turns and Talking Ties: Networks and Conversational Interaction," *American Journal of Sociology* 110:1561-97

Mustafa Emirbayer and Jeff Goodwin, "Network Analysis, Culture, and the Problem of Agency," *American Journal of Sociology* 99:1411-54

Harrison C. White, *Identity and Control* (Princeton, 1992; new edition, 2008)

Ann Mische and Harrison C. White, "Between Conversation and Situation: Public Switching Dynamics Across Network Domains," *Social Research* 65:695-724

Jan A. Fuhse, "The Meaning Structure of Social Networks," *Sociological Theory* 27: 51-73

Mark Pachucki and Ronald L. Breiger, "Cultural Holes: Beyond Relationality in Social Networks and Culture," *Annual Review of Sociology* 36 (2010): 205-24

Paul D. McLean, *The Art of the Network: Strategic Interaction and Patronage in Renaissance Florence*

Robert Faulkner, *Music on Demand: Composers and Careers in the Hollywood Film Industry* (especially the Foreword, Preface, and chs. 3, 5, 8, and 9)

Eric Leifer, "Interaction Preludes to Role-Setting: Exploratory Local Action," *American Sociological Review* 53:865-78

David Smilde, "A Qualitative Comparative Analysis of Conversion to Venezuelan Evangelicalism: How Networks Matter," *American Journal of Sociology* 111, 3 (November 2005): 757-96

Ronald S. Burt, "Bandwidth and Echo: Trust, Information, and Gossip in Social Networks," in James Rauch and Alessandra Casella (eds.), *Networks and Markets* (Russell Sage, 2001), pp. 30-74

Omar Lizardo, "How Cultural Tastes Shape Personal Networks," *American Sociological Review* 71: 778-807

Stephen Vaisey, "Structure, Culture, and Community: The Search for belonging in 50 Urban Communes," *American Sociological Review* 72, 6 (December 2007): 851-73

Vanina Leschziner, "Recognition by Omission: Authorship and Differentiation in the Culinary Field," University of Toronto, unpublished ASA conference paper

Cognition, meaning, and text mapping:

Peter S. Bearman and Katherine Stovel, "Becoming a Nazi: A Model for Narrative Networks," *Poetics* 27:69-90

Kathleen Carley, "Extracting Culture Through Textual Analysis," *Poetics* 22:291-312

Katherine Giuffre, "Sandpiles of Opportunity: Success in the Art World," *Social Forces* 77:815-32

Kathleen Carley, "Knowledge Acquisition as a Social Phenomenon," *Instructional Science* 14:381-438

Ann Mische and Philippa Pattison, "Composing a Civic Arena: Publics, Projects, and Social Settings," *Poetics* 27:163-94

Jennifer C. Lena and Richard A. Peterson, "Classification as Culture: Types and Trajectories of Music Genres," *American Sociological Review* 73, 5 (October 2008): 697-718

Linton C. Freeman, "Cliques, Galois Lattices, and the Structure of Human Social Groups," *Social Networks* 18:173-87

William Bechtel and Adele Abrahamsen, *Connectionism and the Mind: An Introduction to Parallel Processing in Networks* (Blackwell, 1991)

Edwin Hutchins, *Cognition in the Wild* (MIT, 1995)

Karin Knorr-Cetina, *Epistemic Cultures: How the Sciences Make Knowledge* (Harvard, 1999)

Barbara Entwisle, Katherine Faust, Ronald Rindfuss, and Toshika Kaneda, "Networks and Contexts: Variation in the Structure of Social Ties," *American Journal of Sociology* 112, 5: 1495-1533.

King-to Yeung, "What Does Love Mean? Exploring Network Culture in Two Network Settings," *Social Forces* 84:391-420

## Week 14 (12/6)

## Complexity, Dynamics, Statistics, Meaning

**Read: 1) W. W. Powell, Douglas R. White, Kenneth W. Koput, and Jason Owen-Smith, "Network Dynamics and Field Evolution: The Growth of Inter-organizational Collaboration in the Life Sciences," *American Journal of Sociology* 110:1132-1205**

**2) Neha Gondal and Paul D. McLean, "Discerning Meaning in Complex Structure: Varieties of Personal Lending in a Multiple-Network Ecology," unpublished ms.**

Santa Fe Institute work on complexity:

John F. Padgett, "Organizational Genesis in Florentine History: Four Multiple-Network Processes," unpublished ms.

John F. Padgett, "The Emergence of Simple Ecologies of Skill: A Hypercycle Approach to Economic Organization," in W. Brian Arthur et al. (eds.), *The Economy as an Evolving Complex System II* (Addison-Wesley, 1997)

John F. Padgett, "Organizational Genesis, Identity, and Control: The Transformation of Banking in Renaissance Florence," in James Rauch and Alessandra Casella (eds.), *Networks and Markets* (Russell Sage, 2001), pp. 211-57

Padgett, John F., and Walter W. Powell. "The Problem of Emergence," in John F. Padgett and Walter W. Powell, eds., *The Emergence of Organizations and Markets* (Princeton, forthcoming)

Walter Fontana and Leo Buss, "The Arrival of the Fittest: Toward a Theory of Biological Organization," *Bulletin of Mathematical Biology* 56:1-64

Walter Fontana and Leo Buss, "The Barriers of Objects: From Dynamical Systems to Bounded Organizations, in John Casti et al. (eds.), *Boundaries and Barriers*

Stuart Kauffman, *The Origins of Order: Self-Organization and Selection in Evolution* (Oxford, 1993)

Some other work on dynamics:

Akbar Zaheer and Giuseppe Soda, "Network Evolution: The Origins of Structural Holes," *Administrative Science Quarterly* 54, 1: 1-31

D. L. Morgan, M. B. Neal, and P. Carder, "The Stability of Core and Peripheral Networks Over Time," *Social Networks* 19, 1: 9-25

Peter Monge and Marshall Scott Poole, "The Evolution of Organizational Communication," *Journal of Communication* 58, 4: 679-692

R. Cowan, N. Jonard, and J.-B. Zimmermann, "Evolving Networks of Inventors," *Journal of Evolutionary Economics* 16, 1-2: 155-74

A. Degenne and M. O. Lebeaux. 2005. "The Dynamics of Personal Networks at the Time of Entry into Adult Life." *Social Networks* 27(4):337-358.

Maureen T. Hallinan and Edwin E. Hutchins, "Structural Effects on Dyadic Change," *Social Forces* 59:225-45

Barry Wellman, Renita Yuk-Lin Wong, David Tindall, and Nancy Nazer, "A Decade of Network Change: Turnover, Persistence, and Stability in Personal Communities," *Social Networks* 19:27-50

Ronald S. Burt, "Bridge Decay," *Social Networks* 24:333-363

V. Eguiluz et al., "Cooperation and the Emergence of Role Differentiation in the Dynamics of Social Networks," *American Journal of Sociology* 110:977-1008

Doug McAdam, "Beyond Structural Analysis: Toward a More Dynamic Understanding of Social Movements," in Mario Diani and Doug McAdam (eds.), *Social Movement Analysis: The Network Perspective* (Oxford, 2003), pp. 281-98

Scott Moss and Bruce Edmonds, "Sociology and Simulation: Statistical and Qualitative Cross-Validation," *American Journal of Sociology* 110:1095-1131

David Stark and Balázs Vedres, "Social Times of Network Spaces: Network Sequences and Foreign Investment in Hungary," *American Journal of Sociology* 111:1367-1411

Walter W. Powell, Kenneth Koput, and Laurel Smith-Doerr, 1996, "Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology," *Administrative Science Quarterly* 41:116-45

Rick Grannis, "Six Degrees of 'Who Cares?'" *American Journal of Sociology* 115, 4: 991-1017

#### Exponential Random Graph Models:

Garry Robins, Pip Pattison, Yuval Kalish, and Dean Lusher, "An Introduction to Exponential Random Graph ( $p^*$ ) Models for Social Networks," *Social Networks* 29, 2 (May 2007): 173-91

Garry Robins, J. Woolcock, and Philippa Pattison, "Small and Other Worlds: Global Network Structures from Local Processes," *American Journal of Sociology* 110: 894-936

Garry Robins, Tom Snijders, Peng Wang, Mark Handcock, and Philippa Pattison, "Recent Developments in Exponential Random Graph ( $p^*$ ) Models for Social Networks," *Social Networks* 29, 2: 192-215

Stanley Wasserman and Garry Robins, "An Introduction to Random Graphs, Dependence Graphs, and  $p^*$ ," in Peter Carrington et al. (eds.), *Models and Methods in Social Network Analysis* (Cambridge, 2005), pp. 148-61

Tom A. B. Snijders, "Models for Longitudinal Network Data," in Peter Carrington et al. (eds.), *Models and Methods in Social Network Analysis* (Cambridge, 2005), pp. 215-47

Tom A. B. Snijders, "The Statistical Evaluation of Social Network Dynamics," *Sociological Methodology* 31:361-95

Ashish Sanil, David Banks, and Kathleen Carley, "Models for Evolving Fixed Node Networks: Model Fitting and Model Testing," *Social Networks* 17:65-81

David Banks and Kathleen M. Carley, "Models of Social Network Evolution," *Journal of Mathematical Sociology* 21:173-96

Andreas Wimmer and Kevin Lewis, "Beyond and Below Racial Homophily: ERG Models of a Friendship Network Documented on Facebook," *American Journal of Sociology* 116, 2 (September 2010): 583-642

#### Dynamic visualization:

Skye Bender-deMoll and Daniel A. McFarland, "The Art and Science of Dynamic Network Visualization," *Journal of Social Structure*, vol. 7, no. 2

James Moody, Daniel A. McFarland, and Skye Bender-deMoll, "Dynamic Network Visualization: Methods for Meaning with Longitudinal Network Movies," *American Journal of Sociology* 110:1206-65

Paul D. McLean, "Pursuing and Representing Social Dynamics Radically: Marriage and Political Power in Early Modern Poland," ASA conference paper, Las Vegas, NV, August 2011

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