

SOCIAL NETWORK ANALYSIS
Sociology 920:577:01 (491:05)
Paul McLean

Department of Sociology
Rutgers University
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Location and time: Davison Seminar room, Tuesdays, 1:00-3:40
Office hours: M 12:00-2:00; W 1:00-3:00, Davison 101A, and by appointment
E-mail: pmclean@rutgers.edu

Over the last few decades, and over the last fifteen 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 and power relations, decision-making, patterns of innovation, diffusion of disease and attitudes, and the organization of belief systems. Conversely, sociologists have also been increasingly interested in the factors—structural, cultural, motivational, emotional—that drive the *formation* and *evolution* of networks.

While social networks used to be a highly specialized area of inquiry, nowadays networks are frequently invoked in mainstream sociological research—even though the specific tools of network analysis remain distinctly different from those most commonly used in such ‘mainstream’ research, whether it be quantitatively or qualitatively oriented. Certainly there are ways to incorporate network elements (as variables, or as metaphor, for example) into many research projects. But in its more radical formulations, the study of networks vies to become a kind of fundamental theory of social organization, not just an add-on. 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.

The fundamental idea of *social* network analysis specifically is that we must study the social order *relationally*: actors (organizations, actions, events) are interdependent and mutually constitutive, and structure emerges as patterns in these interdependencies. Social network analysis (SNA) is not the only approach available for studying the social relationally (think of Bourdieu, or Latour, or symbolic interaction, for example), but it is among the most important and versatile, and it offers a rich assortment of tools for exploring the relational quality of social life systematically. Some of you may dabble in networks; I hope all of you will become, minimally, educated consumers. Hopefully, many of you will become producers of exciting new networks research, and perhaps one or two of you will become committed to networks as an orienting sociological perspective.

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 and more recent statements.
- Second, we will begin to learn certain methods and computer applications, including specifically working with two programs:
 1. PAJEK, for the graph visualization and quantitative analysis of social networks. Pajek is available for free download (see <http://vlado.fmf.uni-lj.si/pub/networks/pajek/>) (or you may look for <http://vlado.fmf.uni-lj.si/pub/networks/book/> for a version of the program that is more compatible with the de Nooy et al. book mentioned below).
 2. UCINET, for the representation, manipulation, and analysis of network data in matrix format. UCINET is freely available for a trial period, or for \$40 for a student license; plus it is loaded on a handful of machines in the Sociology computer lab.

I will assign some exercises throughout the semester to get you working with data in these two programs. You can work on them in groups if you like. I will provide access to some data, but if you have data of your own, you can try to use that, too.

- 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.

Concerning class format: I will spend part of many class sessions lecturing on some of the key ideas and arguments. Still, I want there to be ample opportunity for questions and discussion, especially as we get into the empirical readings.

Requirements

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

- participation and engagement in class (approximately 20%)
- short assignments (approximately 20% in total)
- term paper (approximately 60%)

The term paper is obviously the main requirement for this seminar, and it should take the form of an empirical research paper. It may be based on a brand new idea you develop in

this class, or something you are looking to expand upon from a previous class. By empirical, I mean you need to use and analyze network data. These need not be data you collect yourself (although that would be great); there are plenty of network datasets available for free online with just a little digging around. If you are intent on collecting your own data, you should make sure to have IRB approval first, OR you could collect data from publically available information (voting records, trade networks, citations, company and boards of directors are a few good examples). You may use this class to work on an existing dissertation project (M.A. or Ph.D.), as long as you clearly use network data and/or ideas. Please discuss your goals and options with me early in the semester.

Required Readings

The **required** readings for each class session are printed in **bold**. Most of these readings are on **sakai** or can be easily found online. The one book you really must purchase is:

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

It covers all the basic terminology and many of the core concepts, and it has served generations of networks scholars as a kind of Bible/gazetteer.

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. However, you might find it very useful to own a copy of this book, which was re-issued in an expanded second edition in 2011. This book may help you with the hands-on work of actually doing network analysis within the Pajek program, especially focusing on its graph-related aspects. More recently still, the book *Analyzing Social Networks*, by Stephen P. Borgatti, Martin G. Everett, and Jeffrey C. Johnson (Sage, 2013) takes you through the steps of network analysis from research design and data collection to data manipulation and analysis, largely using UCINET. This might also be a useful book for you to purchase.

Finally, I list in the syllabus many readings which are not at all required. The volume of publications on networks is overwhelming. It includes myriad articles and books on methods, measures, techniques, and so on. And it includes a huge volume of empirical applications. And it all keeps getting bigger. I find it intimidating to ponder the volume and diversity of this research. Don't make the mistake of assuming I have read all this stuff! What I have tried to do is simply list some subset of useful materials that may provide you with some leads into a broader literature concerned with particular topics. Sometimes those items listed may provide you with a sense of how inquiry on particular topics has developed over time.

Schedule of Classes

Week 1 (9/2) Introduction: Networks as Fundamental 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) Stephen P. Borgatti, Ajay Mehra, Daniel J. Brass, and Giuseppe Labianca, “Network Analysis in the Social Sciences,” *Science* (13 February 2009): 892-95

Some other foundational work, NOT to be read for class:

Mustafa Emirbayer, “Manifesto for a Relational Sociology,” *American Journal of Sociology* 103: 281-317

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

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

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

J. L. Moreno and H. H. Jennings. 1938. “Statistics of Social Configurations.” *Sociometry* 1 (3/4): 342-374

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)

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

Marin, Alexandra and Barry Wellman. 2011. “Social Network Analysis: An Introduction.” In *The Sage Handbook of Social Network Analysis* edited by John Scott and Peter J. Carrington pp. 11-25

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

Albert-Laszlo Barabasi, *Linked: How Everything Is Connected to Everything Else and What It Means for Business, Science, and Everyday Life* (Plume, Penguin Books, 2002)

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

Week 2 (9/9) Types of Networks and Ways of Representing Them

Read: Wasserman and Faust, chapters 1-4

(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)

A brief assortment of other useful texts covering basic (and not so basic) network analytic concepts:

- Charles Kadushin, *Understanding Social Networks: Theories, Concepts, and Findings* (Oxford, 2012)
 Nicholas A. Christakis and James H. Fowler, *Connected: How Your Friends' Friends' Friends Affect Everything you Feel, Think, and Do* (Little, Brown and Company, 2009)
 John Scott, *Social Network Analysis: A Handbook* (Sage, 3rd edition, 2013)
 Peter Monge and Noshir Contractor, *Theories of Communication in Networks* (Oxford, 2003)
 David Knoke and Song Yang, *Social Network Analysis* (Sage, 2007)
 Matthew O. Jackson, *Social and Economic Networks* (Princeton, 2008)
 Albert-László Barabási, *Linked: The New Science of Networks* (Perseus, 2002)
 Mark Newman, *Networks: An Introduction* (Oxford University Press, 2010)
 Duncan J. Watts, *Six Degrees: The Science of a Connected Age* (Norton, 2003)

Some Classic One-Mode Network Studies, Describing Single and/or 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 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
 Carter T. Butts, "Revisiting the Foundations of Network Analysis," *Science* (24 July 2009): 414-16
 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 3 (9/16) Personal Ego-Networks and Social Support

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) Barry Wellman, "The Community Question: The Intimate Networks of East Yorkers," *American Journal of Sociology* 84: 1201-1231

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

4) S. M. Kana'iaupuni, K. M. Donato, T. Thompson-Colon and M. Stainback, "Counting on Kin: Social Networks, Social Support, and Child Health Status," *Social Forces* 83: 1137-64

Some other materials related to ego networks and/or social support:

Claude S. Fischer, *Still Connected: Family and Friends in America Since 1970* (Russell Sage, 2011)

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

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

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

Jennifer Schultz and Ronald L. Breiger. 2010. "The Strength of Weak Culture." *Poetics* 38: 610-24

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

Danching Ruan, "The Content of the General Social Survey Discussion Networks: An Exploration of General Social Survey Discussion Name Generator in a Chinese Context," *Social Networks*, 20: 247-64

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

Wellman, B., R. Wong, D. Tindall, and N. Nazer, "A Decade of Network Change: Turn-over, Mobility and Stability," *Social Networks* 19(1): 27-51

Neha Gondal, "Who "Fills in" for Siblings and How? A Multilevel Analysis of Personal Network Composition and Its Relationship to Sibling Size," *Sociological Forum* 27: 732-55

C. Wetherell, A. Plakans, and B. Wellman, "Social Networks, Kinship, and Community in Eastern Europe," *Journal of Interdisciplinary History* 24(4): 639-663

Tom Snijders, M. Spreen, and R. Zwaagstra, "The Use of Multilevel Modeling for Analyzing Personal Networks: Networks of Cocaine Users in an Urban Area," *Journal of Quantitative Anthropology* 5: 85-110

S. Roberts, G. Dunbar, T. V. Pollet, and T. Kuppens, "Exploring Variation in Active Network Size: Constraints and Ego Characteristics," *Social Networks* 31(2): 138-146.

Danching Ruan, L. C. Freeman, X. Dai, Y. Pan, and W. Zhang, "On the Changing Structure of Social Networks in Urban China," *Social Networks* 19(1): 75-89

- G. Plickert, R. R. Côté, and B. Wellman, "It's Not Who You Know, It's How You Know Them: Who Exchanges What with Whom?" *Social Networks* 29(3): 405–429
- Joel M. Podolny and James N. Baron, "Resources and Relationships: Social Networks and Mobility in the Workplace," *American Sociological Review* 62(5): 673–693
- G. Lai, "Social Support Networks in Urban Shanghai," *Social Networks* 23(1): 73–85
- R. P. L. Lee, D. Ruan, and G. Lai. 2005. "Social Structure and Support Networks in Beijing and Hong Kong," *Social Networks* 27(3): 249–274
- E. Litwak and I. Szelenyi, "Primary Group Structures and Their Functions: Kin, Neighbors, and Friends," *American Sociological Review* 34(4): 465–81
- M. Grossetti, "Are French Networks Different?" *Social Networks* 29(3): 391–404
- A. Degenne and M. O. Lebeaux, "The Dynamics of Personal Networks at the Time of Entry into Adult Life," *Social Networks* 27(4): 337–58
- M. H. Cantor, "Neighbors and Friends: An Overlooked Resource in the Informal Support System," *Research on Aging* 1(4): 434–463.
- Susan Bastani, "Family Comes First: Men's and Women's Personal Networks in Tehran," *Social Networks* 29(3): 357–374
- 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
- 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

Week 4 (9/23) Local Network Processes

- Read: 1) J. Miller McPherson, Lynn Smith-Lovin, and James Cook, "Birds of a Feather: Homophily in Social Networks," *Annual Review of Sociology* 27:415-44**
- 2) Mark T. Rivera, Sara B. Soderstrom, and Brian Uzzi. 2010. "Dynamics of Dyads in Social Networks: Assortative, Relational, and Proximity Mechanisms." *Annual Review of Sociology* 36: 91–115**
- 3) 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: 583-642**
- 4) Wasserman and Faust, chapters 13 and 14 (if we can get to it)**

Some other materials on fundamental aspects of tie formation and/or sites of tie-formation:

- Gueorgi Kossinets and Duncan J. Watts, "Origins of Homophily in an Evolving Social Network," *American Journal of Sociology* 115, 2 (September 2009): 405-450
- James Coleman, *The Adolescent Society* (Free Press, 1961[71]), especially chapter 7
- 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 Kandell, "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)
- C. Kadushin, "Friendship Among the French Financial Elite," *American Sociological Review* 60:202-21
- Ann Mische and Pip Pattison. 2000. "Composing a civic arena: Publics, projects, and social settings." *Poetics*, 27:163-194
- Georg Simmel, "The Triad," in Kurt Wolff (ed.), *The Sociology of Georg Simmel* (Free Press, 1950), pp. 145-169
- Randall Collins, "On the microfoundations of macrosociology." *American Journal of Sociology* 86: 984-1014
- Randall Collins, *Interaction Ritual Chains*. (Princeton, 2004)
- Eric Leifer, "Interaction Preludes to Role Setting: Exploratory Local Action" *American Sociological Review* 53(6): 865-878
- Howard Becker and R. Useem, "Sociological Analysis of the Dyad." *American Sociological Review*, 7 (1942): 13-26
- Kara Joyner and Grace Kao, "Interracial Relationships and the Transition to Adulthood," *American Sociological Review* 70, 4: 563-81

Week 5 (9/30) Power in Networks: Centrality, Balance, and Hierarchy

Read: 1) Wasserman and Faust, chapters 5 and 6

2) Gabriel Rossman, Nicole Esparza and Phillip Bonacich, "I'd Like to Thank the Academy, Team Spillovers, and Network Centrality," *American Sociological Review*, 75(1) 31-51

3) Val Burris, "The Academic Caste System: Prestige Hierarchies in PhD Exchange Networks." *American Sociological Review* 69, 239-264

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 various measures:

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

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

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

Steve Borgatti and Martin Everett, "Models of Core-Periphery Structure," *Social Networks* 21:375-395

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

John H. Evans, "Stratification in Knowledge Production: Author Prestige and the Influence of an American Academic Debate." *Poetics* 33 (2): 111-133

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
Other materials on the idea 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
Wouter de Nooy, "A Literary Playground: Literary Criticism and Balance Theory," *Poetics* 26: 385-404.

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 Ellyson 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 6 (10/7) Subgroups and Cohesion

Read: 1) Wasserman and Faust, chapter 7

2) James Moody and Douglas R. White, “Structural Cohesion and Embeddedness: A Hierarchical Conception of Social Groups,” *American Sociological Review* 68:103-127

3) James Moody, “Race, School Integration, and Friendship Segregation in America,” *American Journal of Sociology* 107: 679-716

On the notion of cliques, near-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

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

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 7 (10/14) Large-Scale Network Topologies: Small-Worlds and Reachability

Read: 1) Mark S. Granovetter, “The Strength of Weak Ties,” *American Journal of Sociology* 78: 1360–1380

2) Duncan Watts, “Networks, Dynamics, and the Small-World Phenomenon,” *American Journal of Sociology* 105: 493-527

3) James Moody, “The Structure of a Social Science Collaboration Network: Disciplinary Cohesion from 1963 to 1999.” *American Sociological Review* 69: 213–238

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

Other materials on reach, the strength of weak ties, and understanding macrostructure:

- 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
- Walter 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
- Brian Uzzi and Jarrett Spiro, “Collaboration and Creativity: The Small World Problem,” *American Journal of Sociology* 111:2, 447-504
- 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
- Rick Grannis, “Six Degrees of ‘Who Cares?’” *American Journal of Sociology* 115: 991-1017
- Paul McLean, *The Art of the Network: Strategic Interaction and Patronage in Renaissance Florence*, ch. 6

Some stuff from the ‘new science of networks, 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

Week 8 (10/21) Duality: Varieties of Two-Mode (and N-Mode) Networks

Read: 1) Ronald L. Breiger, “The Duality of Persons and Groups.” *Social Forces* 53: 181–190

2) Val Burris, “Interlocking Directorates and Political Cohesion Among Corporate Elites,” *American Journal of Sociology* 111: 249-283

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

4) Frédéric Godart and Charles Galunic, “Style Popularity in High Fashion, Resilience, Replication, and Embeddedness of Cultural Elements,” Paper presented at ASA 2014, San Francisco, CA

Some other work on affiliation networks:

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

Steve Borgatti and Daniel Halgin, “Analyzing Affiliation Networks,” In *The Sage Handbook of Social Network Analysis*, edited by John Scott and Peter J. Carrington, pp. 417-433 (Sage, 2011)

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

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

Week 9 (10/28) Classic Structuralist Approaches: Positions, Blocks, Roles

Read: 1) Wasserman and Faust, chapters 9-12 (skim 11)

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

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

5) John Mohr, "Soldiers, Mothers, Tramps, and Others: Discourse Roles in the 1907 New York City Charity Directory," *Poetics* 22: 327-57 (if we can get to it)

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

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

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 (11/4) 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

Lots of 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*, 5th 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

Dan J. Wang and Sarah A. Soule, "Social Movement Organizational Collaboration: Networks of Learning and the Diffusion of Protest Tactics, 1960-1995" *American Journal of Sociology* 117: 1674-1722.

Paul D. McLean, *Intersections of Culture and Networks*, chapter 3 (draft)

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 11 (11/11) Economic and Politics

Read: 1) Balázs Vedres and David Stark, "Structural Folds: Generative Disruption in Overlapping Groups," *American Journal of Sociology* 115, 4 (January 2010): 1150-90

2) 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

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

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 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 and international agreements:

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

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
- Rebecca Kolins Givan, Kenneth M. Roberts, and Sarah A. Soule, eds., *The Diffusion of Social Movements: Actors, Mechanisms, and Political Effects* (Cambridge, 2010)

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 (11/18) Questions of Emergence

Read: 1) 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

2) John F. Padgett and Walter W. Powell, "The Problem of Emergence," In John F. Padgett and Walter W. Powell, eds., *The Emergence of Organizations and Markets* (Princeton, 2012)

3) John Levi Martin, *Social Structures* (Princeton, 2009), chapter 1, plus one more selected

Some other materials on emergence:

Jeanette Colyvas and S. Maroulis. 2012. "Academic Laboratories and the Reproduction of Proprietary Science: Modeling Organizational Rules through Autocatalytic Networks." In John F. Padgett and Walter W. Powell, eds., *The Emergence of Organizations and Markets*. Princeton: Princeton University Press.

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

Eric Leifer, "Interaction Preludes to Role Setting: Exploratory Local Action" *American Sociological Review* 53(6): 865-878.

John F. Padgett and Walter W. Powell, *The Emergence of Organizations and Markets*. Princeton: Princeton University Press, 2012

Ann E. Mische, *Partisan Publics: Contention and Mediation Across Brazilian Youth Activist Networks*. Princeton, NJ: Princeton University Press, 2007

NO CLASS 11/25 DUE TO RU SCHEDULE CHANGE

Week 13 (12/2) Networks and Culture

Read: 1) Neha Gondal and Paul D. McLean, "Linking Tie-meaning with Network Structure: Variable Connotations of Personal Lending in a Multiple-network Ecology," *Poetics* 41: 122-150

2) 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

3) Omar Lizardo, “How Cultural Tastes Shape Personal Networks,” *American Sociological Review* 71: 778-807

4) 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

Some research on discourse, interaction, and meaning:

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

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

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

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 (12/9) Exponential Random Graph Models

Read: 1) Gary Robins, Pip Pattison, Yuval Kalish, and Dean Lusher, "An Introduction to Exponential Random Graph (p^*) Models for Social Networks," *Social Networks*, 29:173-191

2) Neha Gondal and Paul D. McLean, "What Makes a Network Go Round: Exploring the Structure of a Strong Component using Exponential Random Graph Models." *Social Networks* 35: 499-513

3) Steven M. Goodreau, James A. Kitts, and Martina Morris, "Birds of a Feather, Or Friend of a Friend? Using Exponential Random Graph Models to Investigate Adolescent Social Networks," *Demography* 46: 103-125

4) N. Harrigan, "PNet for Dummies,"
<http://www.mysmu.edu/faculty/nharrigan/PNetForDummies.pdf>

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

Exponential Random Graph Models:

- Robins, G., P. Pattison, and P. Wang. 2009. "Closure, Connectivity and Degrees: New Specifications for Exponential Random Graph (p^*) Models for Directed Social Networks." *Social Networks* 31, 2: 105-17.
- Garry Robins, J. Woolcock, and Philippa Pattison, "Small and Other Worlds: Global Network Structures from Local Processes," *American Journal of Sociology* 110: 894-936
- Peng Wang, Sharpe, K., Robins, G., Pattison, P., 2009. "Exponential random graph models for affiliation networks." *Social Networks* 31 (1), 12-25.
- 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

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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