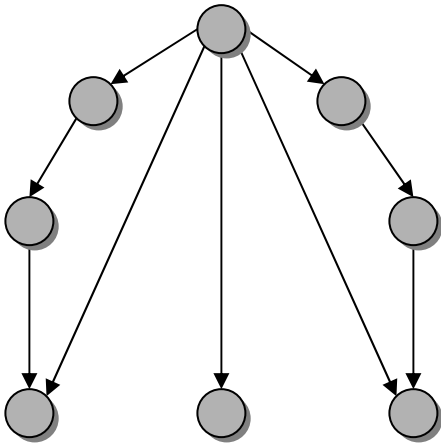

SOCIOLOGY 590

Networks and Social Structure
Winter 2007
Mondays 1:30-3:20 /Savery 209

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This seminar is intended as a theoretical and analytical introduction to structural network analysis. Though network analysis is an interdisciplinary endeavor, its roots can be found in classical anthropology and sociology. Essentially, network analysis focuses on *patterns of relations between actors*. Both relations and actors can be defined in many ways, depending on the substantive area of inquiry. For example, network analysis has been used to study the structure of affective links between persons, flows of commodities between organizations, shared members between social movement organizations, shared needles between drug users, the citation structure in academic disciplines, and

the world wide web. What is central is an emphasis on the structure of relationality, which serves to link micro- and macro-level processes.

We will spend the early part of the quarter becoming familiar with the theoretical foundations of structural network analysis, including principles of balance and transitivity, homophily, the implications of connectivity and density, the relationship between categories and networks, the nature of exchange structures, and power and centrality. The final few weeks of the quarter will be devoted to specific substantive applications of the network approach. Though the focus of the course is on theory, it is impossible to make progress without paying attention to some of the technical innovations in network analysis. Thus we will also address methodological issues *in passim* along the way. If you are interested, I will schedule several “methods labs” during the course of the quarter to help you learn how to analyze network data.

REQUIREMENTS

The basic requirement of this course is to write a seminar paper (15-20 pages) that explores some aspect of network theory. Ideally this paper will serve as the background for empirical study of some phenomenon you are interested in. I will ask for updates on your topic and progress throughout the quarter. Please talk to me if you are at loss in terms of what to write about; I can help you find a topic.

In addition, each student is responsible for writing at least two brief memos (2-3 pages) responding to the assigned readings. The goal of the memos is to connect an idea, concept, or substantive application from one of the assigned readings to another recent research paper. Memos are due in class the day the readings are to be discussed; you are invited to write your memos collaboratively.

Of course, active participation in the seminar is expected.

READINGS AND SOFTWARE

The basic reference for this class is Wasserman and Faust's book, Social Network Analysis (1994, Cambridge University Press). It is readily available at trade bookstores and through on-line booksellers including Barnes and Noble (www.bn.com) and Amazon (www.amazon.com). I strongly encourage you to buy it; it is a good book to have on your shelf. Other readings can be found in book chapters or journal articles. For many of these you will be able to download the text from JSTOR (www.JSTOR.org), ProQuest, or another electronic full-text service. Photocopies of other assigned readings will be made available. I have put a great deal of reading on the preliminary syllabus, in part to introduce you to the traditions and diversity of structural analysis. However, we will identify the key readings for each week in advance.

In addition to Wasserman and Faust, you might want to pick up a copy of John Scott's book, Social Network Analysis: A Handbook (1991, Sage Press) which is a very readable introduction to networks and a useful guide. I can also recommend other good reference books that will help you become familiar with social network analysis.

COURSE OUTLINE

N.B. I consider this outline a work-in-progress. I will revisit it regularly and modify as necessary to take into consideration the substantive interests of members of the seminar.

Week 1

(Jan 8)

Introduction and Course Overview, Basic Concepts

- Bott, Elizabeth. 1957. "Urban Families: Conjugal roles and social networks." *Human Relations* 8: 345-83.
- Simmel, Georg. 1955. "The Web of Group-Affiliations." Pp. 125-195 in *Conflict and The Web of Group-Affiliations*. New York, the Free Press.
- Granovetter, Mark S. 1985. "Economic Action and Social Structure: The Problem of Embeddedness." *AJS* 91:481-510.
- Barry Wellman, "Structural analysis: from method and metaphor to theory and substance," pp. 19-61 in Wellman, Barry and S. D. Berkowitz, eds. 1988. *Social Structures: A Network Approach*. Cambridge, UK: Cambridge University Press.

Week 2

Martin Luther King Day

(Jan 15)

No Class

Week 3

(Jan 22)

Clumping in Networks: balance, density, clustering, homophily

Overview:

- Wasserman and Faust. 1994. "Structural Balance and transitivity." Chapter 6 in *Wasserman and Faust, Social Network Analysis*. Cambridge University Press.
- Miller McPherson, Lynn Smith-Lovin, and James M Cook. 2001. "BIRDS OF A FEATHER: Homophily in Social Networks." *Annual Review of Sociology*. 27:415-444.

History:

- Simmel, Georg. 1950. "The Triad." Pp. 118-169 in *the Sociology of Georg Simmel*. New York: Free Press.
- Davis, James. 1963. "Structural balance, mechanical solidarity, and interpersonal relations." *AJS*. 68:444-462.
- Fritz Heider. 1946. "Attitudes and Cognitive Organization," *Psychological Review* 52:358-374
- Dorwin Cartwright and Frank Harary. 1956. "Structural Balance," *Psychological Review* 63:277-293
- Paul Holland and Samuel Leinhardt. 1970. "A Method for Detecting Structure in Sociometric Data" *American Journal of Sociology* 70: 492-513.

Applications:

- D. Baldassarri, M. Diani "[The Integrative Power of Civic Network](#)," R&R at *American Journal of Sociology*

Week 4

(Jan 29)

Small worlds and the implications of a little randomness

- Granovetter, Mark. 1973. "The Strength of Weak Ties." *AJS*.
- Burt, Ron. 1980. *Structural holes or selections from his new book on brokers*
- Watts, Duncan. 1999. *Networks, Dynamics, and the Small World Phenomenon*. *AJS* 105: 493-527
- Travers, Jeffrey and Stanley Milgram. 1969. "An Experimental Study of the Small World Problem." *Sociometry*. 32:425-443.

Silver, Alan. 1990. "Friendship in commercial society: eighteenth-century social theory and modern sociology." *AJS*.

supplemental:

de Sola Pool, Ithiel and Manfred Kochen. 1978. "Contacts and Influence." *Social Networks*. 1: 5-49.

Rapoport, A. and W. J. Horvath. 1961. "A study of a large sociogram." *Behavioral Science*. 6:279-291.

Killworth, Peter and H.R. Bernard. 1978. "The reverse small world problem." *Social Networks*. 1: 159-92.

Week 5

(Feb 5)

Inequality in Networks: power, asymmetry, hierarchy, preferential attachment

Scott Feld. 1991. "Why Your Friends Have More Friends Than You Do." *American Journal of Sociology* 96:1464-77.

Barabasi, selected readings

Cook, Emerson, and Yamagishi, "The Distribution of Power in Exchange Networks: Theory and Experimental Results." *American Journal of Sociology* 89(1983):275-305.

Roger Gould, 2002. "The Evolution of Status Hierarchies." *American Journal of Sociology* 107: 1143-1178.

Chase, Ivan. 1980. "Social Process and hierarchy formation in small groups: A comparative perspective." *American Sociological Review*. 45:905-924.

Supplemental:

Bonacich, Philip. 1987. "Power and centrality: A family of measures." *AJS*. 92:1170-1182.

Wasserman and Faust. 1994. "Centrality and Prestige." Chapter 5 in Wasserman and Faust, *Social Network Analysis*. Cambridge University Press.

Freeman, Linton. 1979. "Centrality in Social networks: conceptual clarification." *Social Networks*. 1:215-240.

Week 6

(Feb 12)

Roles, Categories, and Positions (equivalence)

S. F. Nadel, *Social Structure*, selections TBA

White, Harrison, Scott Boorman, and Ron Breiger. 1976. "Social Structure from multiple networks. I. Blockmodels of roles and positions." *AJS*. 81:730-779.

Wasserman and Faust. 1994. "Structural Equivalence," "Blockmodels," and "Network Positions and Roles." Chapters 9, 10, and 11 in Wasserman and Faust, *Social Network Analysis*. Cambridge University Press.

Padgett, John and Chris Ansell. 1993. "Robust Action and the rise of the Medici, 1400-1434." *AJS*. 98:1259-1319

Baker, Wayne and Robert Faulkner. 1991. "Role as Resource in the Hollywood Film Industry." *AJS*. 97:279-309.

Rytina, Steve and David Morgan. 1982. "The arithmetic of social relations: The interplay of category and network." *AJS* 88:88-113.

Lazega, E., & van Duijn, M.A.J. (1997). "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: 375-397.

supplemental:

Breiger, Ron. 1974. "The duality of persons and groups." *Social Forces*. 53:181-190.

Week 7

Holiday: Class to be rescheduled

(Feb 19)

Why networks matter: social capital, regulation, monitoring, and mobilization

- James Coleman. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94:S95-S120.*
- Bearman, Peter, James Moody, and Katherine Stovel. 2004. "Chains of Affection: The Structure of Adolescent Romantic and Sexual Networks." *American Journal of Sociology*. 110(1)44-99.
- Kollock, Peter. 1994. "The Emergence of Exchange Structures: An experimental study of uncertainty, commitment, and trust." *AJS* 100: 313-345.
- McAdam, Doug and Ronnelle Paulsen. 1993. "Specifying the Relationship Between Social Ties and Activism." *AJS* 99:640-667.
- Gould, Roger. 1993. "Trade Cohesion, Class Unity, and urban Insurrection: Artisanal activism in the Paris Commune." *AJS*. 98:735-

Week 8

(Feb 27)

Why networks matters: Search and diffusion

- Podolny, Joel and James Baron. 1997. "Resources and Relationships: Social Networks and Mobility in the Workplace." *American Sociological Review*. 62:673-693.
- Granovetter, Mark. *Getting a Job* (selections).
- Kloddahl, Alden. 1985. "Social networks and the spread of infectious disease: the AIDS example." *Social Science Medicine*. 21:1203-16.
- Stovel and Fountain. manuscript. Hearing About A Job.
- Wayne Baker and Robert Faulkner. 1993. "The Social Organization of Conspiracy," *American Sociological Review* 58:837-860.
- Burt, Ronald. 2004. "Where good ideas come from." *AJS*

Week 9

(Mar 5)

Why networks matter: economics and organizations

- Ronald Burt, Structural Holes, Intro, Chapter 1.
- Joel Podolny, Toby E. Stuart, and Michael T. Hannan. 1996. "Networks, Knowledge, and Niches: Competition in the Worldwide Semiconductor Industry, 1984-1991," *American Journal of Sociology* 102: 659-89.
- Lincoln, James R. and Jon Miller. 1979. "Work and Friendship Ties in Organizations." *Administrative Science Quarterly* 24: 181-199
- Ezra Zuckerman and Stoyan Sgourev, "Peer Capitalism."
- Palmer, D., R. Friedland, & J.V. Singh. 1986. The Ties that Bind: Organizational and Class Bases of Stability in a Corporate Interlock Network. *American Sociological Review* 51: 781-196.
- Fernandez, Roberto, Emilio Castilla, and Paul Moore. 2000. "Social Capital at Work: Networks and Employment at a Phone Center." *AJS* 105: 1288-1356.
- supplemental:
- Baker, Wayne. 1984. "The Social Structure of a National Securities Market." *AJS*. 89:775-811.
- Podolny, Joel M., Toby E. Stuart, and Michael T. Hannan. 1996. "Networks, Knowledge and Niches: Competition in the Worldwide Semiconductor Industry, 1984-1991." *AJS* 102:659-89.
- White, Harrison. 1981. "Where do markets come from?" *AJS*. 87: 517-47.
- Podolny, Joel, and Karen L. Page. 1998. "Network Forms of Organization." *Annual Review of Sociology*. 1998, 24, 57-76.

Podolny, Joel and James Baron. 1997. "Resources and Relationships: Social Networks and Mobility in the Workplace." *American Sociological Review*. 62:673-693.

Social Network Resources

WEB SITES THAT MIGHT PROVE USEFUL FOR THIS COURSE

An accessible electronic introduction to Social Network Analysis

- <http://faculty.ucr.edu/~hanneman/SOC157/TEXT/TextIndex.html>
- <http://faculty.ucr.edu/%7Ehanneman/SOC157/Software/NETTEXT.PDF> (pdf version)

International Network for Social Network Analysis

- <http://www.insna.org/>
home page for all sorts of goodies, including information about the Sunbelts, the journal Social Networks, the journal Connections, etc, subscribing to SOCNET.

Journal of Social Structure

- <http://www.cmu.edu/joss/>

UC Irvine's Program in Social Network Analysis

- <http://aris.ss.uci.edu/socnet/socnet.html>

SOFTWARE

UCINET V

- <http://www.analytictech.com/>

Pajek

- <http://vlado.fmf.uni-lj.si/pub/networks/pajek/>
An amazing program for drawing large networks

DATA

Carnegie Mellon data archive (part of CASOS)

- http://www.casos.cs.cmu.edu/computational_tools/data.html

The Add Health Project

- <http://www.cpc.unc.edu/addhealth/>

JUST FOR FUN...

The Kevin Bacon Game

- <http://www.cs.virginia.edu/oracle/>

A network-based role-playing game on the web...

- <http://www.powersedge.net>

They Rule

- <http://www.theyrule.net>

Linked In

- <https://www.linkedin.com/>

Friendster

- <http://www.friendster.com/>

OTHER RESOURCES

- UCINET Manual
- Network handouts from Steve Borgatti (available from Analytic technologies website)
- xeroxed index to volumes 1-20 of Social Networks

A FEW OF THE MANY ONLINE BOOKSELLERS

<http://www.powells.com> (one of the really great bookstores in the Pacific NW)

<http://www.amazon.com> (Seattle's own...)

<http://www.bn.com> (much better than amazon for out-of print titles)