

Sociology 8200 ~ Spring 2005
Social Network Analysis

Meeting:	W 5:45-8:45	Professor:	Dr. Dawn T. Robinson
Classroom:	322 Baldwin	Office:	217A Baldwin
Office Hours:	W 2:00-4:00 pm and by appointment*	Phone:	542-8948
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*I also welcome brief drop-in visits at your convenience. However, please make an appointment for more involved meetings. You can make an appointment email, phone, or by catching me before or after class. E-mail is also a great way to ask quick questions, or to share brilliant insights.

I. Course Overview and Objectives

Social network analysis is somewhere between a meta-theoretical approach and an analytic toolkit. What distinguishes the social network approach from other conventional sociological approaches is that it takes seriously the interdependence of individuals situated in larger systems of relations. Network analysts consider relations to be the focal units of analysis – and the basis of social structure. This methods seminar will familiarize you with a set of tools and techniques used in analyzing social relations. Methods and substantive theory are unusually tightly linked in this subfield. Consequently, we will stay focused on substantive and theoretical origins and applications of all of the techniques that we survey this semester. Comprehensive, in-depth coverage of the variety of methodologies employed in social network analysis would be beyond the scope of a semester course. Consequently, we will survey a core subset of techniques, trying to strike a balance between depth and breadth. You should become comfortable with basic network concepts, gain a working knowledge of the most common approaches to network analysis, and become familiar with several advanced methodologies for analyzing social networks. During the semester you will produce your own scholarly project using some of the techniques covered in the semester.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

II. Course Materials

Course Web Site

On the course website you will find the course syllabus, details about lab assignments and final projects, and links to course related information. , a bulletin board for forming virtual study groups, and more. *You should check the course website at least once per week.* Please forward your WebCT mail to the email address of your choice. To access the course web site, go to the following url: <https://webct.uga.edu/www/> Log on using your UGA myID and password. This course should appear as one of your courses. If you successfully log on and do not see this course listed, please email me so that I can make sure you are registered. If you follow the above procedures but cannot successfully log on, then check this website for help: <https://webct.uga.edu/www/student/guide/#login-mywebct>

Required Readings

Available at the University Bookstore:

Wasserman, Stanley and Katherine L. Faust. 1994. Social Network Analysis: Methods and Applications. New York: Cambridge University Press. (Abbreviated 'WF' in the schedule.)

Scott, John. 2000. Social Network Analysis: A Handbook. Second Edition. Thousand Oaks, CA: Sage Publications. (Abbreviated 'S' in the schedule.)

Any additional readings not available electronically will be placed on reserve in mailroom.

Software

Many applications of network methods involve substantial manipulation of quantitative data. Some of this can be undertaken using elements of standard statistical software packages such as SPSSx, SAS, or Stata; these packages often include multidimensional scaling and hierarchical clustering routines, for example (Stata appears to have rather less here than do other general purpose statistical packages). For some network analysis, it will be helpful to use software developed specifically for these purposes. In this class we will use:

Borgatti, Steven P., Martin G. Everett and Linton C. Freeman. 2002. UCINET 6. Harvard, MA: Analytic Technologies. This software is required for the course, and the labs will aid you in learning how to use it. It is available at a student price (\$40) from its distributor./.

Also useful are:

- (1) KRACKPLOT, which can be used to visualize network data. A public-use copy of this is available on some computers computer lab. KRACKPLOT also is available at a student price (\$25), at <http://www.analytictech.com>.
- (2) NETDRAW now packaged with UCINET at no additional charge and has a smooth interface with UCINET.
- (3) PAJEK. A free program for analyzing large networks. You can download the most recent version of PAJEK at: <http://vlado.fmf.uni-lj.si/pub/networks/pajek/default.htm>

III. Class Activities and Evaluation

The course will meet once a week for three hours. In-class participation will be crucial for the success of this type of methods seminar. During most weeks, you will turn in short lab assignments (see the tentative course schedule below). Occasionally, you will be asked to present on your own work or to aid in discussion of course readings. Finally, you will write an individual project consisting of a network analysis paper on the topic of your choice.

Your grade will be based mainly on in-class participation and your final paper, with a greater emphasis on the latter. I will also factor in my assessment of the knowledge you demonstrate on the lab assignments.

IV. Student Rights and Obligations

Your responsibilities to this class – and to your education as a whole – include attendance and participation. You are also expected to be honest and honorable in your fulfillment of assignments and in test-taking situations. You have a responsibility to the rest of the class – and to the instructor – to help create a classroom environment where all may learn. At the most basic level, this means that you will respect the other members of the class and the instructors, and treat them with the courtesy you hope to receive in turn. Please turn off pagers and cell phones when you enter the classroom and refrain from disruptive or distracting behavior that might diminish the educational experience of your classmates.

Students with disabilities I would like to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements can be made. Please see me after class or during my office hours so that I can direct you to the appropriate university resources.

Academic Misconduct Policy *All academic work must meet the standards contained in “A Culture of Honesty.” Each student is responsible to inform themselves about those standards before performing any academic work.* I encourage you to work together on course assignments and to solicit feedback from myself and each other on your developing projects. However, I will assume that all work submitted during the semester – including work labs and final projects – is ultimately your own.

Questions or Concerns If you have questions or concerns about this course, please bring them to my attention. If you remain concerned, you may contact Dr. William Finlay, Head of the Department of Sociology. If the matter remains unresolved, you may submit a written complaint to the Chair of the Human Rights Committee, Department of Sociology, University of Georgia. For more information on the sociology department’s human rights policy on the department website.

Tentative Course Outline

(readings and topic order subject to change as needed during the semester)

<u>Date</u>	<u>Topic</u>	<u>Readings</u>	<u>Lab</u>
1/12	Introduction		
1/19	Foundations of Structural Thinking	<p><i>Texts:</i> S1-2; WF1</p> <p><i>Articles:</i></p> <p>Mayhew, Bruce. 1980. "Structuralism vs. Individualism: Part 1, Shadowboxing in the Dark." <u>Social Forces</u> 335-375.</p> <p>Mayhew, Bruce. 1981. "Structuralism vs. Individualism: Part 1, Ideological and Other Obfuscations." <u>Social Forces</u> 627-648.</p> <p>Emirbayer, M. 1997. "Manifesto for Relational Sociology." <u>American Journal of Sociology</u> 103:281-317.</p> <p>Granovetter, Mark. 1973. The strength of weak ties. <u>American Journal of Sociology</u>. 78:1360-1380.</p>	Basics
1/26	Egocentric Networks & Network Measurement	<p><i>Texts:</i> S3; WF2</p> <p><i>Articles:</i></p> <p>Marsden, Peter V. 1990. "Network Data and Measurement." <u>Annual Review of Sociology</u> 16:435-463.</p> <p>Wellman, B. and S. Wortley. 1990. "Different Strokes From Different Folks: Community Ties and Social Support." <u>American Journal of Sociology</u> 96:558-88.</p> <p>Renzulli, L. A., H. Aldrich, and J. Moody. 2000. "Family Matters: Gender, Networks, and Entrepreneurial Outcomes." <u>Social Forces</u>.</p> <p>Granovetter, Mark. 1973. The strength of weak ties. <u>American Journal of Sociology</u>. 78:1360-1380.</p> <p>Suitor, J. Jill, Karl Pillemer and Shirley Keeton. 1995. "When Experience Counts: The Effects of Experiential and Structural Similarity on Patterns of Support and Interpersonal Stress." <u>Social Forces</u> 73:1573-88</p> <p>McPherson, J. Miller and Lynn Smith-Lovin. 1982. "Women and Weak Ties: Differences by Sex in the Size of Voluntary Organizations." <u>American Journal of Sociology</u>. 87: 883-904.</p>	Path Lists
2/2	Small World, Balance, Class Size Paradoxes	<p><i>Texts:</i> S4; WF6</p> <p><i>Articles:</i></p> <p>Travers, J. and S. Milgram. "An experimental study of the small world Problem" <u>Sociometry</u> 32:425-443 (CP)</p> <p>Watts, Duncan J. 1999. "Networks, Dynamics, and the Small-World Phenomenon" <u>American Journal of Sociology</u>. 105: 493-527.</p> <p>Feld. 1991. "Why Your Friends Have More Friends Than You Do." <u>American Journal of Sociology</u> 96:1464-77.</p> <p>Feld, Scott L and Carter, William C. 1998. "When Desegregation 'Reduces' Interracial Contact: A Class Size Paradox for Weak Ties." <u>American Journal of Sociology</u>. 103:1165-86.</p>	Balance

2/9	Centrality & Centralization	<p><i>Texts:</i> S5; WF5</p> <p><i>Articles:</i></p> <p>Bonacich, Philip. 1987. "Power and Centrality: A Family of Measures." <u>American Journal of Sociology</u> 5:1170-1182.</p> <p>Freeman, Linton C. 1978/9. "Centrality in Social Networks: Conceptual Clarification." <u>Social Networks</u> 1:215-239.</p> <p>Friedkin, Noah E. 1991. "Theoretical Foundations for Centrality Measures." <u>American Journal of Sociology</u> 96:1478-504.</p> <p>Cook, Karen S. 1982. "Network Structures from an Exchange Perspective." Pp. 177-99 in Marsden & Lin (eds.) <u>Social Structure and Network Analysis</u>.</p> <p>Markovsky, Barry, David Willer, and Travis Patton. 1988. "Power Relations in Exchange Relations." <u>American Sociological Review</u> 53:220-236.</p> <p>Irwin, Michael and Holly Hughes. 1981. "Centrality and the Structure of Urban Interaction: Measures, Concepts, and Applications." <u>Social Forces</u> 71:17-51.</p>	Centrality
2/16	<i>INSNA Conference - no meeting</i>		
2/23	Network Visualization	<p><i>Texts:</i> S8</p> <p><i>Articles:</i></p> <p>Freeman, Linton C. 2000. "Visualizing Social Networks." <u>Journal of Social Structure</u></p> <p>Krackhardt, David, Jim Blythe and Cathleen McGrath. 1994. "KrackPlot 3.0: An Improved Network Drawing Program." <u>Connections</u> 17: 53-55.</p> <p>TBA</p>	Visualization
3/2	Subgroups: Cohesion & Cliques	<p><i>Texts:</i> S6; WF7</p> <p><i>Articles:</i></p> <p>Burt, R. S. 1987. "Social Contagion and Innovation: Cohesion Versus Structural Equivalence." <u>American Journal of Sociology</u> 92:1287-335.</p> <p>Freeman, Linton C. 1992. "The Sociological Concept of 'Group': An Empirical Test of Two Models." <u>American Journal of Sociology</u> 98: 152-166.</p> <p>Frank, Kenneth A. 1995. "Identifying Cohesive Subgroups." <u>Social Networks</u> 17: 27-56.</p> <p>Moody, James. 2001. "Peer Influence Groups: Identifying dense clusters in large networks." <u>Social Networks</u> 23:261-283</p> <p>McPherson, J. Miller and Lynn Smith-Lovin. 2002. Cohesion and membership duration: Linking groups, relations and individuals in an ecology of affiliation" <u>Advances in Group Processes</u> 19-1-36</p>	Cliques

3/9	Subgroups: Positions and Roles	<p><i>Texts:</i> S7; WF9-10</p> <p><i>Articles:</i> White, Harrison C., Scott A. Boorman and Ronald L. Breiger. 1976. "Social Structure from Multiple Networks. I. Blockmodels of Roles and Positions." <u>American Journal of Sociology</u> 81: 730-779.</p> Mandel, M. 1983. "Local Roles and Social Networks." <u>American Sociological Review</u> 48:376-86. Padgett, J. F. and C. K. Ansell. 1993. "Robust Action and the Rise of the Medici, 1400-1434." <u>American Journal of Sociology</u> 98:1259-319. Breiger, Ronald L. and Philippa E. Pattison. 1983. "The Joint Role Structure of Two Communities' Elites." Pp. 326-336 in <u>Applied Network Analysis: A Methodological Introduction</u> edited by Ronald S. Burt and Michael J. Minor. Sage Press. Everett, Martin. G. 1985. "Role Similarity and Complexity in Social Networks." <u>Social Networks</u> 7:353-359. Robinson, Dawn T. 1996. "Identity and Friendship: Affective Dynamics and Network Formation." <u>Advances in Group Processes</u> 13:93-113	Blockmodels
3/16	<i>Spring Break - no meeting</i>		
3/23	Multi-mode & Multi-level Networks	<p><i>Texts:</i> WF8</p> <p><i>Articles:</i> Breiger, R. L. 1974. "The Duality of Persons and Groups." <u>Social Forces</u> 53:181-90.</p> Feld, Scott. 1981. "The Focused Organization of Social Ties." <u>American Journal of Sociology</u> 86:1015-1034. McPherson, J. Miller. "Hypernetwork Sampling" <u>Social Forces</u> Mizruchi, Mark S; Bunting, David. "Influence in Corporate Networks: An Examination of Four Measures." <u>Administrative Science Quarterly</u> ; 26:475-89.	2-Mode Nets
3/30	Diffusion & Influence	<p><i>Articles:</i> Klovndahl, A. S. 1985. "Social Networks and the Spread of Infectious Diseases: The AIDS Example." <u>Social Science Medicine</u> 21:1203-16.</p> Strang, David and Nancy Brandon Tuma. 1993. "Spatial and Temporal Heterogeneity in Diffusion." <u>American Journal of Sociology</u> 99: 614-639. Coleman, James, Elihu Katz, and Herbert Menzel. 1957. The diffusion of innovation among physicians. <u>Sociometry</u> . 20:253-270. Burt, Ronald. 1987. Social contagion and innovation. <u>American Journal of Sociology</u> . 92:1287-1335 Van den Bulte, Christophe and Gary L. Lilien. 2001. Medical Innovation revisited: social contagion versus marketing effort. <u>American Journal of Sociology</u> . 106:1409-35. Meyers, Daniel J. 2000. The diffusion of collective violence: infectiousness, susceptibility, and mass media networks. <u>American Journal of Sociology</u> . 106:173-208.	Diffusion
4/6	Project Presentations		

4/13	Statistical Approaches: distributional	<p><i>Texts:</i> WF13-14</p> <p><i>Articles:</i></p> <p>Baker, Frank B. And Lawrence J. Hubert. 1981. "The Analysis of Social Interaction Data: A Nonparametric Technique." <u>Sociological Methods and Research</u> 9: 339-361.</p> <p>Cartwright, d. and Harary, F. 1977. "A graph-theoretic approach to the investigation of system-environment relationships." <u>Journal of Mathematical Sociology</u> 5:87-111.</p> <p>Krackhardt, David. 1987. "QAP Partialling as a Test of Spuriousness." <u>Social Networks</u> 9:171-186.</p> <p>Holland & Leinhardt 1970. "A Method for Detecting Structure in Sociometric Data." <u>American Journal of Sociology</u> 70:492-513.</p> <p>Holland & Leinhardt. 1981. "An exponential family of probability distributions for directed graphs. <u>Journal of the American Statistical Association.</u> 76:33-65.</p>	Log-linear
4/20	Statistical Approaches: random graphs* & log-linear	<p><i>Texts:</i> WF15-16</p> <p><i>Articles:</i></p> <p>Pattison, P., and Wasserman, S. 1999. Logit models and logistic regressions for social networks: II. Multivariate relations. <u>British Journal of Mathematical and Statistical Psychology.</u> 52, 169-193</p> <p>Anderson, Carolyn J., Stanley Wasserman and Bradley Crouch. 1999. "A p* Primer: Logit Models for Social Networks." <u>Social Networks</u> 21: 37-66.</p> <p>Crouch, Bradley and Stanley Wasserman. 1997. "A Practical Guide to Fitting p* Social Network Models Via Logistic Regression." <u>Connections</u> 21: 87-101.</p>	P*
4/27	Dynamic Networks	<p><i>Articles:</i></p> <p>Doreian, Patrick., R. Kapuscinski, David. Krackhardt, and J. Szczypula. 1996. "A Brief History of Balance Through Time." <u>Journal of Mathematical Sociology</u> 21(1-2):113-31.</p> <p>Morgan, David. L., M. B. Neal, and P. Carder. 1997. "The Stability of Core and Peripheral Networks Over Time." <u>Social Networks</u> 19:9-25.</p> <p>Suitor, J. Jill, B. Wellman, and D. L. Morgan. 1997. "It's About Time: How, Why and When Networks Change." <u>Social Networks</u> 19:</p> <p>Snijders, Tom A.B. 1996. "Stochastic Actor-Oriented Models for Network Change." <u>Journal of Mathematical Sociology</u> 21:149-172.</p>	