

UNIVERSITY OF SOUTHERN CALIFORNIA
Annenberg School for Communication
COMM 645: Organizational Communication Network
Thursdays, 12:30 - 3:30 pm, ANSC 236
Spring Semester 2005

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Course Description

This seminar is intended to review theoretical, conceptual, and analytic issues associated with network perspectives on organizations. The course focuses on network formulations of selected communication, organizational, social-psychological, and sociological theories. It emphasizes the influences and consequences of communication patterns, processes, and content. As with most graduate seminars, the majority of class time will be spent discussing the assigned readings. To facilitate learning and discussion, everyone is expected to post comments, thoughts, and questions generated by the readings on the Blackboard Discussion Board by Wednesday noon. Students will also choose topics and work with me to organize class discussions and supplementary materials each week. A series of laboratory exercises will provide experience with computer-based network analysis. The term paper provides an opportunity to explore interesting network topics in depth.

Required Readings

The following texts are assigned for this course.

Monge, P. R., & Contractor, N. S. (2003). *Theories of communication networks*. New York: Oxford University Press.

Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*. New York: Cambridge University Press.

The following text is strongly recommended.

Scott, J. (1997). *Social network analysis: A handbook*. London: Sage

The Monge & Contractor, Wasserman & Faust, and Scott texts are available at the USC bookstore. Additional assigned readings are available on the course website.

The UCINET 6 network analysis software will be available at the computer lab. Students interested in obtaining their own copies may order them via the Internet from Analytic Technologies at <http://www.analytictech.com/>. Student versions of UCINET cost \$50. The documentation for the program is included with the software.

Borgatti, S., Everett, M., Freeman, L. (2005) *UCINET 6 for Windows software for social network analysis*. Harvard, MA:: Analytic Technologies

Copies of MultiNet (4.55) will be distributed to everyone in class. It is also available from Bill Richards at Simon Fraser University. Contact Bill at: Richards@sfu.ca or visit the MultiNet website at: <http://www.sfu.ca/~richards/Multinet/Pages/multinet.htm>

Expectations & Evaluation

There are two requirements for the course: five network labs and one term paper. The five network labs will require you to conduct computational analyses on network data. Equal emphasis will be given to conducting the analysis and interpreting (and reporting) the results. The lab assignments due dates are shown below. You are free to revise these reports as often as you wish before April 28th to obtain full credit.

The term paper should develop or elaborate a theory of your choice, explicitly incorporating a network perspective. It should review the relevant research literature and include a research design that tests network hypotheses. Papers need to be prepared according to the guidelines specified in the *Publication Manual of the American Psychological Association* (5th ed.), or the guidelines for a specific journal of your choosing. You are free to use this as an opportunity to develop a working paper or dissertation proposal or to develop ideas you have worked on in other courses. The term paper is due on May 2. Everyone will give a brief (20 minute) class presentation about your research on April 28th.

Your final grade will be allocated between the two requirements as follows:

Network Labs:	25% (5% each)
Term Paper	75%

Course Outline

<u>Date</u>	<u>Activity</u>
Jan. 13	Introduction to the Class
Jan. 20	Overview of Organizational Network Analysis

TCN. Cp. 1: Networks and Flows in Organizational Communication

Wasserman, S., & Faust, K. (1994) *Social network analysis: Methods and applications*. New York: Cambridge University Press. Cp. 1, Social Network Analysis in the Social and Behavioral Sciences, Cp. 2, Social Network Data: Collection and Applications, and Cp. 3, Notation for Social Network Data.

Brass, D. J., Galaskiewicz, J., Greve, H., & Wenpin, T. (2004). Taking stock of networks and organizations: A multilevel approach. *Academy of Management Journal*, 47, 795-819.

Human, S. E., & Provan. K. G. (2000). Legitimacy building in the evolution of small-firm multilateral networks: A comparative study of success and demise *Administrative Science Quarterly*, 45, 327-365.

Also Recommended:

Scott, J. (2000). *Social network analysis: A handbook* (2nd ed.). Newbury Park, CA: Sage. Cp. 1, Networks and Relations, Cp. 2, The Development of Social Network Analysis.

Jan. 27 Organizational Network Concepts, Measures, & the MTML Model

TCN, Cp. 2: Theories, Concepts, Measures and the Multitheoretical, Multilevel Analytic Framework.

Wasserman & Faust, Cp. 4: Graphs and Matrices

Monge, P.R., & Contractor, N. (1988). Communication networks: Measurement techniques. In C.H. Tardy (Ed.), *A handbook for the study of human communication* (pp. 107-138). Norwood, NJ: Ablex.

Monge, P. R., & Matei, S. A. (2004). The role of the global telecommunications network in bridging economic and political divides, 1989 to 1999. *Journal of Communication*, 54, 511-531.

Venkatraman, N., & Lee, C-H. (2004). Preferential linkage and network evolution: A conceptual model and empirical test in the U.S. video game sector. *Academy of Management Journal*, 47, 876-892.

Also Recommended:

Scott, Cp. 3: Handling Relational Data and Cp. 4: Point, Lines, and Density

Feb. 3 Network Computer Programs I: UCINET 6

Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002) *UCINET 6 for Windows software for social network analysis: User's guide*. Harvard, MA: Analytic Technologies. Available with the UCINET 6 Software.

Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002) *UCINET 6 for Windows Reference Guide*. Harvard, MA: Analytic Technologies. Available with the UCINET 6 Software.

Hanneman, R. A. (2001). *Introduction to social network methods*. Harvard, MA: Analytic Technologies. Available with the UCINET 6 Software.

Wasserman & Faust: Cp. 5, Centrality and Prestige

Assignment: Networks Lab 1: Density & Centrality (Due Feb. 17)

Also Recommended:

Krackhardt, D., Blythe, J., & McGrath, C. (1995). *KrackPlot 3.0: User's Manual*. Harvard, MA: Analytic Technologies

Scott, Cp. 5: Centrality and Centralization

Feb. 10 Network Formulations of Theories of Self-interest & Collective Interests

TCN, Cp. 5

Wasserman & Faust, Cp. 6: Structural Balance and Transitivity and Cp. 7: Cohesive subgroups. (Cp. 8: Affiliations and Overlapping Subgroups, is good to read, but optional.)

Burt, R. S. (2000) Network structure of social capital. *Research on Organizational Behavior*, 22, preprint.

Ajuha, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly*, 45, 425-455.

Stevenson, W. B., & Greenberg, D. Agency and social networks: Strategies of action in a social structure of position, opposition, and opportunity. *ASQ*, 45, 651-678.

Also Recommended:

Scott, Cp. 6: Components, Cores, and Cliques

- Inkpen, A. C., & Tsang, E. W. K.(2005). Social Capital, Networks, and Knowledge Transfer. *Academy of Management Review*, 30, 146-165.
- Feb. 17 Sunbelt Social Networks Conference, Redondo Beach
- Feb. 24 No Class
- Mar. 3 Network Formulations of Theories of Contagion, Cognition, & Semantics
- TCN, Cp. 6
- Wasserman & Faust, Cp. 9: Structural Equivalence
- Krackhardt, D. (1987). Cognitive social structures. *Social Networks*, 9, 109-134.
- Krackhardt, D. (1990). Assessing the Political Landscape: Structure, Cognition, and Power in Organizations, *Administrative Science Quarterly*, 35, 342-369.
- Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, 48, 240-267.
- Stohl, C. (1993). European managers' interpretations of participation: A semantic network analysis. *Human Communication Research*, 20, 97-117.
- Assignment: Networks Lab 2, CSS & Structural Equivalence (Due Mar. 24)**
- Also Recommended:
- Scott, Cp. 7: Position, Roles, and Clusters
- Mar. 10 Network Theories of Evolution
- Assignment: Research Paper proposal due**
- TCN, Cp. 9
- Astley, G. (1985). The two ecologies: Population and community perspective on organizational evolution. *Administrative Science Quarterly*, 30, 224-241.
- Powell, W. W., White, D. R., Koput, K. W., & Owen-Smith, J. (in press). Network dynamics and field evolution: The growth of interorganizational cooperation in the life sciences. *American Journal of Sociology*.
- Baum, J. A. C., & Oliver, C. (1991). Institutional Linkages and organizational mortality. *Administrative Science Quarterly*, 36, 187-218.

Bryant, J. A. (2004). *From Networks to Nickelodeon to Noggin: A Communication Networks Perspective on the Evolution of the Children's Television Community*. Unpublished paper under review.

Also Recommended

Marquis, C. (2003). The pressure of the Past: Network imprinting in intercorporate communities. *ASQ*, 48, 655-689.

Mar. 17 Spring Break, Enjoy!!

Mar 24 Network Computer Programs II: MultiNet, p*, and blockmodels

Wasserman & Faust, Cp. 10: Blockmodels and Cp. 15: Statistical Analysis of Single Relational Networks.

Monge, P. R., & Matei, S. A. (2004). The role of the global telecommunications network in bridging economic and political divides, 1989 to 1999. *Journal of Communication*, 54, 511-531.

Seary, A. J., & Richards, W. D. (2000). Fitting to p* models in MultiNet. *Connections*, 23, 84-101.

Crouch, B, Wasserman, S., & Contractor, N. (2000) A practical guide to fitting p* social network models via logistic regression. Unpublished manuscript, Department of Speech-Communication, University of Illinois at Urbana-Champaign.

Assignment: Networks Lab 3: Blockmodeling and p* with MultiNet (Due April 7)

Mar 31 Network Formulations of Theories of Exchange and Dependency Theories

TCN, Cp. 7: Exchange and Dependency Theories

McGinn, K.L., & Keros, A.T. (2002). Improvisation and the logic of exchange in socially embedded transactions. *Administrative Science Quarterly*, 47, 442-473.

Miner, A. S., & Amburgey, T. L., & Stearns, T. M. (1990). Interorganizational linkages and population dynamics: Buffering and transformational shields. *Administrative Science Quarterly*, 35, 689-713.

Seabright, M. A., Levinthal, D. A., & Fichman, M. (1992). Role of individual attachments in the dissolution of interorganizational relationships. *Academy of Management Journal*, 35, 122-160.

**Assignment: Networks Lab 4: QAP correlations & MRQAP regressions
(Due April 21)**

Apr. 7 Network Formulations of Homophily, Proximity, & Social Support

TCN, Cp. 8

Ruef, M., Aldrich, H. A., & Carter, N. M. (2003). The structure of founding teams: Homophily, strong ties, and isolation among U.S. entrepreneurs. *American Sociological Review*, 68, 195-222.

Ibarra, H. (1992). Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, 37, 422-446.

McDonald, M. L., & Westphal, J. D. (2003). Getting by with the advice of their friends: CEO's advice networks and firms' strategic responses to poor performances. *ASQ*, 48, 1-32.

Apr. 14 Computational Network Modeling

TCN, CP. 4

RECOMMENDED:

Contractor, N., et al. (2005). Understanding the ties that bind: A longitudinal investigation of the evolution of a communication network. Manuscript under review.

Assignment: Networks Lab 5: BLANCHE models (Due April 28)

Apr. 21 The New Science of Networks

TCN, Cp. 10

Barabasi, A. (2002). *Linked: The new science of networks*. Cambridge, MA: Perseus. Cps. 2 & 3.

Watts, D. (2003). (2003, February 14) Unraveling the mysteries of the connected age. *Chronicle of Higher Education*. Volume 49, Issue 23, Page B7.

Apr. 28 Presentations of Term Papers

May 6 Final Papers due

Other References

Arquilla, J., & Ronfeldt, D. (2001). *Networks and netwars*. Santa Monica, CA: RAND.

Barabasi, A.-L. (2002). *Linked: the new science of networks*. Cambridge, MA: Perseus.

Barley, S. R. (1990). The alignment of technology and structure through roles and networks. *Administrative Science Quarterly*, 35, 61-103.

Burt, R. S. (1992). *Structural holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Burt, R. S. (2000) Network structure of social capital. *Research on Organizational Behavior*, 22, preprint.

Castells, M. (1996). *The rise of the network society*. Malden, MA: Blackwell.

Castells, M. (2001). *The Internet galaxy: Reflections of the Internet, business, and society*. New York: Oxford University Press.

Held, D., McGrew, A., Goldblatt, D., & Perraton, J. (1999). *Global transformations: Politics, Economics, and Culture*. Stanford, CA: Stanford University Press.

Inkpen, A. C., & Tsang, E. W. K. (2005). Social Capital, Networks, and Knowledge Transfer. *Academy of Management Review*, 30, 146-165.

Kilduff, M., & Tsai, W. (2003). *Social networks and organizations*. Thousand Oaks, CA: Sage.

Marquis, C. (2003). The pressure of the past: Network imprinting in intercorporate communities, *ASQ*, 48, 655-689.

Mattelart, A. (2000). *Networking the world, 1794-2000* (L. Carey-Libbrecht & J. A. Cohen, Trans.). Minneapolis, MN: University of Minnesota Press.

McNeill, J. R., & McNeill, W. H. (2002). *The human web: A bird's eye view of history*. New York: Norton.

Nohria, N., & Eccles, R. G. (Eds.) (1992). *Networks and organizations: Structure, form, and action*. Boston, MA: Harvard Business School Press.

- Pastor-Satorras, R., & Vespignani, A. (2004). *Evolution and structure of the Internet: A statistical physics approach*. New York: Cambridge University Press.
- Phillips, D. J. (2002). A genealogical approach to organizational life chances: The parent-progeny transfer among silicon valley law firms, 1946-1996. *ASQ*, 47, 474-506.
- Stohl, C. (1995). *Organizational Communication: Connectedness in Action*. Newbury Park, CA: Sage
- Tuomi, I. (2002). *Networks of innovation: Change and meaning in the age of the Internet*. New York: Oxford University Press.
- Valente, T. W. (1995). *Network models of the diffusion of innovations*. Cresskill, NJ: Hampton Press.
- Watts, D. J. (1999). *Small worlds: The dynamics of networks between order and randomness*. Princeton, NJ: Princeton University Press.
- Watts, D. J. (2003). *Six degrees: The science of a connected age*. New York: Norton.