
TOPICS IN SOCIAL NETWORK ANALYSIS

Period: a.y. 2025/26

Instructor:

Class times:
Wednesday, 2:45pm - 6pm
Room 4-E4-SR01

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Course Overview.

Organizations and individuals don't operate in isolation—they are embedded in complex webs of relationships that shape such outcomes as power, innovation, and performance. From alliances between firms to mentorship in the workplace, from informal influence networks to industry ecosystems, who you are connected to matters as much as what you do. Social network analysis offers a powerful lens for uncovering these hidden structures and understanding how relationships drive organizational and individual outcomes.

This course is designed for PhD students in management who seek to integrate network ideas into their research. It offers a dual focus on theory and application, providing both a conceptual foundation in relational theories and hands-on experience with network data and software. Through a mix of theoretical discussions and empirical applications, we will explore how network structures determine opportunities and constraints. Readings will include classic and contemporary research, covering the key debates in the field. Sessions will combine critical discussions of network theories with practical exercises, where students will work directly with social network data and analytical tools to apply these concepts in real-world contexts.

Course Structure.

This course is a hybrid between a seminar and a workshop. We will meet once a week and the class will be a discussion format. I may occasionally lecture on specific topics, but the focus will be on developing an understanding of the materials and techniques through discussion, exercises, and debate. As such, it is essential that you come prepared to class.

My hope is that after you complete this course, you will be a more thoughtful consumer of research on social networks, and, more generally, of social science research. While some of the research perspectives emphasized in this course may not suit your interests, as a participant in the scholarly community you should be able to understand the research of others and judge it on its own terms.

Sequence of Topics.

The selected topics for the six sessions are listed below.

1. The Foundations of Social Network Analysis.

New knowledge is anything that allows you to predict some outcome more accurately than before. The enterprise of network analysis is one example of a focused search for new knowledge. Network scholars seek to find patterns in human relationships that explain important outcomes—health, economic, and political—that are ignored, nonobvious, or run counter to conventional wisdom. The readings for this class helped set the stage for the network revolution in the social sciences. They articulate, very clearly, what our prior assumptions were about how the world worked, and systematically showed us that we should think differently.

Mandatory Readings:

- 1.1 Milgram, S. (1967). The small world problem. *Psychology Today*, 1(1), 61–67.
- 1.2 Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.
- 1.3 Blau, P. M. (1974). Presidential address: Parameters of social structure. *American Sociological Review*, 39(5), 615–635.
- 1.4 Borgatti, S. P., Mehra, A., Brass, D. J., & Labianca, G. (2009). Network analysis in the social sciences. *Science*, 323(5916), 892–895.

2. Network Positions and Performance.

The most frequent use of network analysis has been to examine the relationship between network "position" and the performance of people and organizations. This line of research has produced exciting and important ideas, including those of structural holes, status, and closure. Network ideas have also helped scholars reformulate ideas about power, leadership, and identity. The readings from this class will introduce you to some of the central ideas about network positions and their relationship to performance outcomes such as innovation or promotion.

Mandatory Readings:

- 2.1 Podolny, J. M. (1993). A status-based model of market competition. *American Journal of Sociology*, 98(4), 829–872.
- 2.2 Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly*, 45(3), 425–455.
- 2.3 Burt, R. S. (2004). Structural holes and good ideas. *American Journal of Sociology*, 110(2), 349–399.
- 2.4 Aral, S., & Van Alstyne, M. (2011). The diversity-bandwidth trade-off. *American Journal of Sociology*, 117(1), 90–171.

3. Personality and Social Networks.

Social networks do not exist in isolation from individual differences—personality shapes both the networks people form and how they benefit from them. Some individuals are more likely to build diverse, expansive



networks, while others cultivate strong, tightly knit ties. Traits like extraversion, openness, and self-monitoring influence the extent to which people seek out, maintain, and leverage social connections. This highlights the role of agency in social networks—people are not merely embedded in networks, but actively shape and reshape them through their interactions and strategic decisions. The readings for this class explore how personality intersect with network structure, influencing key outcomes such as career success, leadership, and innovation.

Mandatory Readings:

- 3.1 Mehra, A., Kilduff, M., & Brass, D. J. (2001). The social networks of high and low self-monitors: Implications for workplace performance. *Administrative Science Quarterly*, 46(1), 121-146.
- 3.2 Burt, R. S. (2012). Network-related personality and the agency question: Multirole evidence from a virtual world. *American Journal of Sociology*, 118(3), 543-591.
- 3.3 Fang, R., Landis, B., Hang, Z., Anderson, M. H., Shaw, J. D., & Kilduff, M. (2015). Integrating personality and social networks: A meta-analysis of personality, network position, and work outcomes in organizations. *Organization Science*, 26(4), 1243-1260.
- 3.4 Carnabuci, G., & Quintane, E. (2023). When people build networks that hurt their performance: Structural holes, cognitive style, and the unintended consequences of person-network fit. *Academy of Management Journal*, 66(5), 1360-1383.

4. Network Formation and Evolution.

Are there general patterns in how networks are shaped and evolve? What forces lead these patterns to emerge and what are the implications for social processes that we care about (e.g., the generation of innovations)? In this class we will cover some core ideas behind the formation of social networks including homophily, triadic closure, reciprocity, and at the macro-scale small worlds and clusters.

Mandatory readings:

- 4.1 Gulati, R. & Gargiulo, M. (1999) Where do interorganizational networks come from? *American Journal of Sociology*, 104(5), 1439-1493.
- 4.2 Sasovova, Z., Mehra, A., Borgatti, S.P., & Schippers, M.C. (2010). Network churn: The effects of self-monitoring personality on brokerage dynamics. *Administrative Science Quarterly*, 55(4), 639-670.
- 4.3 Ahuja, G., Soda, G., & Zaheer, A. (2012). The genesis and dynamics of organizational networks. *Organization Science*, 23(2), 434-448.
- 4.4 Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., ... & Teevan, J. (2022). The effects of remote work on collaboration among information workers. *Nature Human Behaviour*, 6(1), 43-54.

5. Cognitive Social Structures: Perceptions are real in their consequences.

Social networks exist not only as objective structures, but also in the minds of individuals as perceived networks. These perceptions shape behavior, decision-making, and social dynamics—often with real consequences, even if they don't reflect the actual network. In organizations, for example, people form beliefs about who holds power, who collaborates, and who has



influence, which guide their interactions and opportunities. These mental maps have important consequences for a variety of different outcomes. The readings for this class explore how cognitive social structures emerge, why they differ from observed networks, and how they shape individual outcomes.

Mandatory readings:

- 5.1 Krackhardt, D. (1987). Cognitive social structures. *Social Networks*, 9(2), 109–134.
- 5.2 Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power in organizations. *Administrative Science Quarterly*, 35(2), 342–369.
- 5.3 Iorio, A. (2022). Brokers in disguise: The joint effect of actual brokerage and socially perceived brokerage on network advantage. *Administrative Science Quarterly*, 67(3), 769–820.
- 5.4 Aslarus, I. C., Son, J. Y., Xia, A., & FeldmanHall, O. (2025). Early insight into social network structure predicts climbing the social ladder. *Science Advances*, 11(25), eads2133.

6. Two-Mode Networks.

Traditional social network analysis often focuses on one-mode networks, where ties exist between individuals or firms. However, many real-world networks are two-mode (or bipartite) networks, in which ties link two distinct types of entities, such as people and organizations, researchers and publications, or employees and projects. These networks capture important structural dynamics that are overlooked in standard network models. Two-mode networks offer unique insights into resource access, influence, and affiliation. For example, individuals gain social capital not just through direct ties to others but also through shared memberships in institutions, events, or collaborations. The readings for this class will introduce core concepts in two-mode network analysis, including projection methods, affiliation networks, and centrality measures specific to bipartite structures.

Mandatory readings:

- 6.1 Breiger, R. L. (1974). The duality of persons and groups. *Social Forces*, 53(2), 181–190.
- 6.2 Borgatti, S. P., & Everett, M. G. (1997). Network analysis of 2-mode data. *Social Networks*, 19(3), 243–269.
- 6.3 Davis, G. F., Yoo, M., & Baker, W. E. (2003). The small world of the American corporate elite, 1982-2001. *Strategic Organization*, 1(3), 301–326.
- 6.4 Soda, G., Iorio, A., & Rizzo, L. (2025). In the network of the conclave: Social connections and the making of a pope. *Social Networks*, 83, 215–232.

Assessment Methods.

Effective class participation includes attendance to the sessions and making an active and constructive contribution to the discussion, asking questions, making constructive comments, and having a positive attitude toward learning. Your research proposal is due before the final class session and it



consists in a research idea of your interest based on the topics discussed in class. The final exam will be closed book and consist of one open-ended question and five multiple choice questions.

Students will be evaluated as follows:

Participation:	20%
Research Proposal:	30%
Final Written Exam:	50%

Tips on Reading Academic Journal Articles.

Reading academic journal articles can seem like a daunting task: They are usually full of domain-specific jargon, complicated statistics, and what seems like irrelevant and complex information. Thus, a lot of the information may seem irrelevant—but (usually) it is not. The details that are presented will help you to determine how much stock to put into the research. The methodological and statistical details, in particular, provide vital information for determining an article's strengths and weaknesses, and generally for determining whether it is an example of "good scholarship." Therefore, it is important that you learn how to read journal articles so that you gain the relevant information, yet be aware of their limitations.

A primary goal of this course is to get everyone up to speed with the skill of reading journal articles. We will discuss this at various points throughout the course, and you should feel free to ask any questions that you may have. Though you will develop your own strategy over time, it is useful to keep the following questions in mind when reading a given paper:

1. **Motivation:** Why do the authors think that their topic or question is important? What do the authors (implicitly or explicitly) regard as incomplete in existing research such that their research constitutes a significant contribution?
2. **Theory:** What distinguishes the theoretical viewpoint of the authors under consideration? What causal mechanism or mechanisms do the authors focus on and why? What are the potential advantages of a given focus and what are the drawbacks?
3. **Evidence:** What types of evidence do the authors bring to bear to support their argument? Which sorts of analyses do you find most compelling and why?
4. **Big Picture:** To what extent do you regard this article as making a significant contribution to the larger questions that animate research in "organization theory"? How could the work have made a bigger contribution?



Faculty Bio.

Alessandro Iorio is Assistant Professor in the Department of Management and Technology at Bocconi University (www.alessandroiorio.com). He received his Ph.D. in Organizational Behavior and Theory from Carnegie Mellon University's Tepper School of Business, where he was awarded the Herbert A. Simon Doctoral Dissertation Award in Behavioral Research in the Administrative Sciences. His research uses a multimethod approach to understand mechanisms and returns to informal network relationships defined within and across organizations. He is also interested in investigating the origins and evolution of social network structures, with a special emphasis on the link between formal organizational structures and informal social relationships. His research has been published in leading international journals, such as *Administrative Science Quarterly*, *Academy of Management Journal*, *Social Networks*, *Journal of Personality*, and *Organizational Behavior and Human Decision Processes*.

