POLS 370− POLITICS & DECISION THEORY

Spring 2021

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Course Description

This course is an introduction to networked decision making and behavior. Individuals shape their behavior with respect to their own interests, goals, and ideas, as well as other people's behavior. Using concepts from network analysis, this course will explore the mechanisms whereby individuals affect group dynamics and groups influence and constrain individual behavior. Specifically, we will discuss how social, economic, and political networks shape individual strategies. This course will be run as a seminar. Students are expected to actively participate in discussions and do presentations. Throughout the semester, students will develop a group project, where they shall apply the concepts that they will have learned in class on a dataset of their own choosing. These projects will be presented on the last day of classes. Problem sessions are an integral part of this class. I highly recommend attending problem sessions to do hands-on exercises using R.

By the end of the course, students will have acquired a sound understanding of the basic concepts of network analysis, and will have developed skills in R to do an original research project and analyze relational data. Network analysis is a fundamental branch of computational social science. Therefore, this course is highly recommended for those who want to have an introduction to computational social science and/or want to deepen their skills in this field.

This course is tough. On the one hand, it is <u>cumulative</u> –missing one lecture will make it incredibly difficult for you to follow upcoming sessions. On the other hand, your background in regression techniques (if you have any) will not tremendously be helpful, since network analysis relies on fundamentally different assumptions. Some preliminary knowledge of R is necessary –if you are willing to take the class but have no experience in R, you may contact the instructor to learn about the best ways to develop these skills.

Course Requirements

- Attendance: 10%

- Class participation: 10%

- Class presentation: 15%

- Project: 65%

Attendance: Students are allowed to have two unexcused absences throughout the semester. Further absences will only be excused if students present a medical report. Unjustified absences will result in a detraction of the overall course grade by 5%.

Class participation: Students are required to actively participate to class discussions *every* session. In addition, they are expected to post discussion questions to the discussion board on the Moodle page of the course by midnight <u>before</u> the day of the class. Late submissions

will receive half points.

Class presentation: Every week, students will present assigned reading materials to their classmates (i.e., explain the argument and main points of articles).

Term project: Term project consists of analyzing a relational dataset to answer a political science question. If your project does not answer a political science question (e.g., you use some wine dataset from the Internet), you will not receive any credits for this assignment. The plan of your research design is due for Week 7, (i.e., the dataset, the research question, hypotheses).

Required books

no required books

Academic integrity

Cheating and plagiarism during the midterm and the final exam will not be tolerated. Students should work on their exams independently. The Department of Political Science and International Relations at Bogazici University has the following rules and regulations regarding academic honesty.

1. Copying work from others or giving and receiving answers/information during exams either in written or oral form constitutes cheating.

2. Submitting take-home exams and papers of others as your own, using sentences or paragraphs from another author without the proper acknowledgement of the original author, insufficient acknowledgement of the consulted works in the bibliography, all constitute plagiarism. For further guidelines, you can consult.
http://www.buowl.boun.edu.tr/students/favoidingplagiarism.htm

3. Plagiarism and cheating are serious offenses and will result in:
a) an automatic F for the assignment or the exam
b) an oral explanation before the Departmental Ethics Committee
c) losing the opportunity to request and receive any references from the entire faculty
d) losing the opportunity to apply in exchange programs
e) losing the prospects of becoming a student assistant or a graduate assistant in the department
The students may further be sent to the University Ethics committee or be subject to disciplinary action.

Schedule of Topics, Readings, and Assignments

Week 1: Introduction

- Discuss course objectives and expectations

- Behavior, rationality, & social norms

Week 2: Behavior & decision making

- Rational choice & the logic of appropriateness

- Rationality & social norms

- Bounded rationality

Required reading
James G. March and Johan P. Olsen, "The Logic of Appropriateness," in the Oxford Handbook of Political Science, ed. Robert E. Goodin (Oxford: Oxford University Press, 2011), 479–504.

Avner Greif and David D. Laitin, "A Theory of Endogenous Institutional Change," American Political Science Review 98, no. 4 (2004): 633–52.

Week 3: What are networks?

- The underlying assumptions of network analysis

- Social, political, and economic networks

- Network analysis vs. game theory and regression techniques

Required reading
Mark E. J Newman, Networks: An Introduction (Oxford: Oxford Univ. Press, 2010) Chapters 2 and 3.

Week 4: What are networks? (cont'd)

- Elements of a network

- Adjacency matrices

- Graphs and digraphs

- Constructing networks in R

Required reading
Robert A. Hanneman and Mark Riddle. Introduction to social network methods. University of California, Riverside. (2005). Chapters 1, 2, and 3. (links to chapters) http://faculty.ucr.edu/~hanneman/nettext/C1_Social_Network_Data.html, http://faculty.ucr.edu/~hanneman/nettext/C2_Formal_Methods.html, http://faculty.ucr.edu/~hanneman/nettext/C3_Graphs.html

Week 5: Centrality & power

- Degree, structural hole, degree centrality

- Hubs and authorities

- Examine centrality and power measures in R

Required readings
Ronald S. Burt, "Structural Holes and Good Ideas," American Journal of Sociology 110, no. 2 (September 2004): 349–99

Mark S. Granovetter, "The Strength of Weak Ties," American Journal of Sociology 78, no. 6 (1973): 1360–80.

Week 5: Embeddedness

- Paths, density

- Reciprocity, transitivity

- Hands-on exercises in R

Required reading
John F. Padgett and Christopher K. Ansell, "Robust Action and the Rise of the Medici, 1400-1434," The American Journal of Sociology 98, no. 6 (May 1993): 1259–1319.

Week 6: Cliques & sub-groups

- Cliques, components, and resilience

- Hands-on exercises in R

Required reading
Robert A. Hanneman and Mark Riddle. Introduction to social network methods. University of California, Riverside. (2005). Chapter 11. (link to chapter) http://faculty.ucr.edu/~hanneman/nettext/C11_Cliques.html

Week 7: Some mechanisms of tie formation

- Homophily, heterophily

- Preferential attachment

- Present research design in class

Required reading
Miller McPherson, Lynn Smith-Lovin, and James M. Cook, "Birds of a Feather: Homophily in Social Networks," Annual Review of Sociology 27 (2001): 415–44.

Week 8: Diffusion

- Cascade & tipping points

Required reading
Damon Centola, How Behavior Spreads: The Science of Complex Contagions, Princeton Analytical Sociology Series (Princeton; Oxford: Princeton University Press, 2018) Chapters 2 and 3.

Week 9: Random networks and small worlds

- Erdos-Renyi graphs

- Small worlds

Required reading
Brian Uzzi and Jarrett Spiro, "Collaboration and Creativity: The Small World Problem," American Journal of Sociology 111, no. 2 (September 1, 2005): 447–504, https://doi.org/10.1086/432782.

Duncan J. Watts, "Networks, Dynamics, and the SmallWorld Phenomenon," American Journal of Sociology 105, no. 2 (September 1, 1999): 493–527, https://doi.org/10.1086/210318.

Week 10: Random and small world networks vs. real networks

- Hands-on exercises

Week 11: Hands-on exercises

Week 12: Wrap-up

- Presentations of research projects in class & wrap-up