INTRODUCTION TO SOCIAL NETWORK ANALYSIS (27:202:653) – DRAFT 01.16.18

Professor: Andres F. Rengifo
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Office hours: Monday, 9-11 AM, or by appt.
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Overview

This graduate-level seminar focuses on the study of relationships between or among persons or organizations. Drawing on a long tradition of cross-disciplinary work on Social Network Analysis (SNA) we will describe the structure of these associations, its major components, measures, and patterns of stability and change. We will study network effects at the level of actors (attitudes, behavior, etc.) and groups (collective action/social movements, cohesion, etc.) and will consider contributions in terms of method and theory in sociology/criminology and beyond (health, business, political science, psychology, etc.). We also seek to cover the basics of SNA research in terms of instrument design, sampling, data collection, and simple computer-based analyses and graphs.

The first section of the course provides an overview of applications, origins, and theories supporting SNA. The second section focuses on network structure, actors, and measures. The third section maps out research on network effects and dynamics across disciplines and problems.

Objectives

By the end of the course, students should (1) know the most important theories and ideas that anchor network research in the social sciences, (2) be able to collect and analyze basic social network data and, (3) be able to integrate insights from social network theory/research with more conventional approaches to structure and behavior.

Prerequisites and format

Given that this is an introductory course, no prior knowledge of SNA is OK (also applies to R or UCINET). In fact, the course has no pre-requisites. However, some familiarity with graduate-level probability and statistics is assumed (standard hypothesis testing, regression methods, etc.). It is also expected that students have basic knowledge of social theory and/or criminology.

This class has a reading load of approximately 150-180 pages per week. Class time consists of a combination of lecture, discussion, and a student-led reaction to the readings. All classes will take place in CLJ 572 except for the two lab-based sessions (see class program, pp. 3-9).

Grading

Your final grade will be based on your scores for the oral presentation of a supplementary reading, two take-home assignments, a final term paper, and class participation (attendance, contributions to class discussion). The distribution of points is as follows:

In-class presentation (supplementary reading) 20
Assignments (2) 30
Term paper 40
Participation 10
Total points 100

The grading scale is as follows: A=90-100  B+=86-89.9  B=80-85.9  C=70-79.9  F=69.9 or lower
In-class presentation: Each student will prepare a 20-minute oral presentation that will summarize a supplementary reading. Students can use handouts, slides or any other support material aimed at triggering discussion, highlighting key fragments from the reading, and integrating themes across all sessions-related materials (20 points).

Take home assignments: Students will complete two take-home assignments aimed at preparing and expanding lab-based sessions. These assignments will combine simple SNA data collection/data entry and estimation routines with more substantive questions. Assignments will be distributed and collected on Blackboard. Late submissions will not be accepted. (30 points).

Term paper: The final term paper is due on May 7, 2018 (5:00 PM Blackboard). Students may pick one of the following options for their papers: a) [theory paper] Identify a theory of crime/deviance, map out potential SNA applications and review related empirical research. B) [empirical paper] Use secondary data analysis to examine a research question that involves the use of descriptive statistics/graphs. All papers need to be 12-20 pages all-inclusive (double-spaced, Criminology format). The instructor will approve paper topics and related materials (theories, datasets, etc.) by early April 2018. Late submissions will not be accepted. (40 points).

Participation: Students are expected to actively engage in class discussion by asking and answering questions. Therefore it is important that they do the readings, prepare substantive questions ahead of time, and think critically about the materials covered. Class participation will be assessed according to the quality and thoughtfulness of contributions (10 points).

Materials

Journal articles, book chapters, datasets and assignments will be posted on BLACKBOARD unless otherwise noted.

A. Books

*Required

*Recommended

B. Software

UCINet for Windows, Version 6 (download a free version at http://www.analytictech.com/)
The R System for Statistical Computing (download at http://www.r-project.org/). + statnet bundle
C. Tutorials

General: http://f.briatte.org/r/awesome-network-analysis-list
SNA in R: https://www.youtube.com/watch?v=b_qwazJWsZI
SNA in R: https://statnet.org/trac/raw-attachment/wiki/Resources/introToSNAinR_sunbelt_2012_tutorial.pdf

D. Datasets

UCINET: https://sites.google.com/site/ucinetsoftware/datasets
(Others TBA)

Policies and expectations

Students are expected attend all lectures, to arrive on time, to have read the assigned materials prior to the session in which they will be discussed, and to participate in class discussion. Please be courteous (turn-off cell phones, refrain from talking to others/texting).

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CLASS PROGRAM
(subject to change)

I. WARM-UP

<table>
<thead>
<tr>
<th>S1. Jan. 22</th>
<th>Applications</th>
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Supplementary materials:

The Economist. 2017. Many writers try to span America’s political divide. Rarely do they succeed. (September 30th)

<table>
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<tr>
<th>S2. Jan. 29</th>
<th>Intro and types of networks</th>
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Degenne & Forse. 1999. Ch. 1.

**Supplementary materials:**


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<th>S3. Feb. 05</th>
<th>The big picture</th>
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**Supplementary materials:**


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<th>S4. Feb. 12</th>
<th>Working with network data I (LAB)</th>
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**Supplementary materials:**


## II. NETWORK STRUCTURE

<table>
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<tr>
<th>5 Feb. 19</th>
<th>Social capital and tie strength</th>
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<tbody>
<tr>
<td>Degenne &amp; Forse. 1999. Ch. 5.</td>
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**Supplementary materials:**


**Assignment #1 due**

<table>
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<tr>
<th>6 Feb. 26</th>
<th>Power, centrality, influence</th>
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<td>Degenne &amp; Forse. 1999. Ch. 6.</td>
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**Supplementary materials:**


**Supplementary materials:**


**S10. Mar. 26 | Structural equivalence and homophily**


**Assignment #2 due**
Supplementary materials:


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<th>S11. Apr. 02</th>
<th>Communities, partitions and space</th>
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Supplementary materials:


**Deadline for approval of term paper option and materials**

### III. NETWORK EFFECTS

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<th>S12. Apr. 09</th>
<th>Diffusion</th>
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Supplementary materials:


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<th>S13. Apr 16</th>
<th>Support</th>
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Supplementary materials:

#Small, M.L. 2010. Unanticipated Gains. New York: Oxford University Press [Ch. 5-6].

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<th>S14. Apr 23</th>
<th>Action</th>
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Supplementary materials:


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<th>S15. Apr 30</th>
<th>Dynamics</th>
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Supplementary materials:

**Term paper due May 7, 2018**