Sociology 323: Social networks

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Office Hours: Tuesday 2-4

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Introduction

This course provides an introduction to social networks. Topics include the small-world puzzle (six degrees of separation), the strength of weak ties, centrality, data collection, and the spread of diseases and fads. These concepts and others will then be used to understand empirical research on phenomena including the spread of HIV/AIDS, finding a job, collusion in industry, cooperative relationships between firms in the Garment District in New York, and the struggle for power among elite families in 15th-century Florence.

Structure of the course

During the first part of the course I will lecture on many of the main concepts and techniques of social network analysis. Then we will have an in-class exam. Following the exam, students will take turns presenting empirical research articles that use the ideas developed in the first part of the course in order to understand a range of topics. Many of the readings will be drawn from journals, but there will be one required text for this class:


Your grade will be based on the following:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>In-class exam</td>
<td>30%</td>
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<tr>
<td>Final paper</td>
<td>30%</td>
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<tr>
<td>Homework/Quizzes</td>
<td>10%</td>
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<tr>
<td>Presentation</td>
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<tr>
<td>Class participation</td>
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Lecture schedule

1 Course introduction

2 The connected age and the small world problem

- Watts (Introduction and Chapter 1)


Further reading:

3 Historical background

• Watts (Chapter 2)


Further reading:

4 Understanding the small world phenomenon

• Watts (Chapter 3)


Further reading:

5 Degree distribution and power-laws

• Watts (Chapter 4 (p. 101-114))


Further reading:

6 Affiliation networks (2-mode data)

- Watts (Chapter 4 (p. 118-129)

Further reading:

7 Search and the small world problem

- Watts (Chapter 5)

8 Spread of disease

- Watts (Chapter 6)
9 The “madness” of crowds

- Watts (Chapter 7)

10 Thresholds and cascades

- Watts (Chapter 8)

11 Organizations

- Watts (Chapter 9)
- Watts (Chapter 10 and 11)

12 Data collection

13 Friends of friends


14 Centrality and structural holes


15 Homophily


16 Strength of weak ties


Further reading:
17 Visualizing network data


18 Sampling


19 In-class exam

20-24 Putting it all together: Empirical applications

Now we have all the theoretical and technical tools we need to begin to use social network thinking to understand the world. In the remaining classes, students will take turns presenting research articles. The presentations should describe:

1. the question or problem that the article addresses
2. the data that the authors use and how it was collected
3. the way that the authors use the data to address the question of interest
4. the conclusions of the paper
5. limitations or weaknesses of the paper

Here are some suggested articles for presentation. If you would prefer to present another article, please see the instructor for permission.


... and your suggestions.