

# Social Network Analysis: Advanced Topics

Spring 2018

Wed, 12.15-13.45, AND-4-02

University of Zurich

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## Course description

Social network analysis investigates the relationships between individuals or organizations, such as friendship, advice, or trust. In contrast to other approaches, interdependencies between entities are center-stage. Such a perspective allows the visualization and study of structural features of network structures such as centrality of network nodes and their importance for other aspects of social life. Social networks affect many important outcomes—health behaviors, labor market opportunities, romantic relationships, and the spread of information. They are also a source of resources and insurance against negative shocks. Understanding social networks and how they change have important policy implications on whether we should target resources or spread them over the entire network and how best to spread the effects of intervention efforts through a network. This course focuses on advanced topics in social network analysis, theoretical developments, methodological innovations and current empirical research in the field. More specifically, this course investigates six different themes: advantages in structures, network exposure and perception, social influence, status and solidarity, homophily and its origins, consequences of networks.

This course is reading-intensive and requires all students to read the required reading (marked by \*) every week. The readings will be made available through OLAT.

## Assignments

- All students read the required texts (marked by \*) for each week.
- Each week one student prepares a 20-30min presentation that summarizes the main findings of the assigned readings (both required and optional texts for a topic). Every student gives two presentations over the course of the semester.
- Each week one student (other than the one who gives the presentation) is the student seminar leader for the first half of the discussion of the class. During this part of the discussion, you will not hear me speak. Instead, student seminar

leaders will choose to run the class in whatever way they wish—unconventional seminar formats are encouraged! . . . In the second half of the seminar I will jump in to make sure that everyone takes away what they're meant to take away from the readings.

- At the end of the semester, each student submits a 3000-words essay (Hausarbeit), which not only summarizes existing work, but also tries to make an argument.

## **Assessment**

- 30 % presentation
- 20 % discussion leader
- 50 % end-of-term essay

## **Semester plan**

### **0. Introduction and assignment of presentations (21 Feb 2018)**

#### **Part I: Advantages in structures**

##### **1. Weak ties (28 Feb 2018)**

\*Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78, 1360–1380.

Friedkin, N. (1980). A Test of Structural Features of Granovetter's Strength of Weak Ties Theory. *Social Networks*, 2, 411-422.

##### **2. Structural holes (7 Mar 2018)**

\*Burt, R. (2004). Structural holes and good ideas" *American Journal of Sociology*, 110, 349–399.

Buskens, V. and van de Rijjt, A. (2008). Dynamics of Networks if Everyone Strives for Structural Holes. *American Journal of Sociology*, 114, 371-407.

### **3. Structural folds (14 Mar 2018)**

\*Vedres, B. and Stark, D. (2010). Structural Folds: Generative Disruption in Overlapping Groups. *American Journal of Sociology*, 115, 1150-1190

de Vaan, M., Vedres, B and Stark, D. (2015). Game Changer: The Topology of Creativity. *American Journal of Sociology*, 120, 1144-1194.

## **Part I: Network exposure and perception**

### **4. Friendship paradox (21 Mar 2018)**

\*Feld, S. (1991). Why Your Friends Have More Friends Than You Do. *American Journal of Sociology*, 96, 1464-1477.

Christakis, N. and Fowler, L. (2010). Social Network Sensors for Early Detection of Contagious Outbreaks. *Plos One*, 5(9), e12948.

Grund, T. (2014). Why Your Friends Are More Important and Special Than You Think. *Sociological Science*, 1, 128-140.

### **5. Network perception (28 Mar 2018)**

\*Krackhardt (1990), Assessing the Political Landscape: Structure, Cognition and Power in Networks. *Administrative Science Quarterly*, 35, 342-369.

Brent Simpson et al. (2011). Power and the Perception of Social Networks. *Social Networks*, 33, 166-171.

## **Part III: Social Influence**

### **6. Diffusion in networks (11 Apr 2018)**

\*Coleman, James, Elihu Katz, and Herbert Menzel. 1957. The Diffusion of an Innovation among Physicians. *Sociometry*, 20, 253-270.

Bearman, P. and Moody, J. (2004) Suicide and friendships among American adolescents. *American Journal of Public Health*, 94, 89-95.

Van den Bulle, C. (2011) Medical Innovation Revisited: Social Contagion versus Marketing Effort. *American Journal of Sociology*, 106, 1409-1435.

## **7. Complex contagion (18 Apr 2018)**

\*Centola, D. and Macy, M.W. (2007). Complex contagion and the weakness of long ties. *American Journal of Sociology*, 113(3):702-734.

Centola, D. (2010). The spread of behavior in an online social network experiment. *Science*, 329(5996):1194-1197.

## **Part IV: Status and solidarity**

### **8. Social balance (25 Apr 2018)**

\*Davis, J. A. (1963). Structural Balance, Mechanical Solidarity, and Interpersonal Relations. *American Journal of Sociology*, 68, 444-62.

Doreian, P., R. Kapuscinski, D. Krackhardt, and J. Szczypula. (1996). A Brief History of Balance Through Time. *Journal of Mathematical Sociology*, 21, 113-131.

### **9. Status and hierarchies (2 May 2018)**

\*Gould, R. (2002). The Origins of Status Hierarchies: A Formal Theory and Empirical Test. *American Journal of Sociology*, 107, 1143-1178.

Chase, I. (1980). Social Process and Hierarchy Formation in Small Groups: A Comparative Perspective. *American Sociological Review*, 45, 905-924.

## **Part V: Homophily and its origins**

### **10. Birds of a feather (9 May 2018)**

\*McPherson, M., Smith-Lovin, L. and Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology*, 27, 415-444.

\*Centola, D. 2011. An Experimental Study of Homophily in the Adoption of Health Behavior. *Science* 2, 334(6060), 1269-1272.

Kossinets, G. and Watts, D. J. (2009). Origins of Homophily in an Evolving Social Network, *American Journal of Sociology*, 115, 405-450.

### **11. Focused organization of social ties (16 May 2018)**

\*Feld, S. (1981). The Focused Organization of Social Ties. *American Journal of Sociology*, 86, 1015-1035.

Feld, S. and Grofman, B. (2009). Homophily and Focused Organization of Ties. In: Hedström, P. and Bearman, P. (eds.). *The Oxford Handbook of Analytical Sociology*. Oxford: Oxford University Press, chapter 22, 521-543.

## **Part VI: Consequences of networks**

### **12. Networks and norms (23 May 2018)**

\*Piskorski, M. J. and Gorbatai, A. (2017). Testing Coleman's Social-Norm Enforcement Mechanism: Evidence from Wikipedia. *American Journal of Sociology*, 122, 1183–1222.

Suh, C. S., Shi, Y. and Brashears, M. E. (2017). Negligible Connections? The Role of Familiar Others in the Diffusion of Smoking among Adolescents. *Social Forces*, 96, 423-448,

### **13. Network externalities (30 May 2018)**

\*DiMaggio, P, Garip, F. 2011. How Network Externalities Can Exacerbate Intergroup Inequality. *American Journal of Sociology*, 116(6), 1887-1933.

DellaPosta, D., Shi, Y. and Macy, M. 2015. Why Do Liberals Drink Lattes? *American Journal of Sociology*, 120(5), 1473-1511.