

## **POLS 7334: Social Networks**

David Lazer  
10<sup>th</sup> floor, 177 Huntington  
d.lazer@northeastern.edu  
Office hours: by appointment

The objective of this course is to familiarize doctoral students with research on social networks. The emphasis of the course is not primarily methodological but conceptual—that is, why do we care how people are connected to each other? And in what ways are social networks consequential, for individuals and collectives? Note that I assume a very basic familiarity with network concepts. Those that need review of these concepts should consult one of the following textbooks:

Easley, D. and Kleinberg, J., 2010. *Networks, crowds, and markets: Reasoning about a highly connected world*. Cambridge University Press. This is available online. *I link to relevant chapters throughout the course, most of which are optional.*

Barabási, A.L., 2016. *Network science*. Cambridge University Press.

Scott, J., 2012. *Social network analysis*. Sage.

There are two required books:

Sunstein, C.R., 2009. *Going to extremes: How like minds unite and divide*. Oxford University Press.

Rainie, H. and Wellman, B., 2012. *Networked: The new social operating system*, Cambridge, MA: Mit Press

### Class participation:

Class discussion is a core part of this class. You are expected to come into each class knowing the thesis and the basic methodology of each reading; and having opinions about those readings that you should articulate. You should participate in every class. I will on occasion “soft” cold call, asking for a brief summary of a given reading.

### Assignments:

You are required to write 6 short (no more than 2 pages) thought pieces plus a review of a social network literature.

*Thought pieces:* The objective of a thought piece is to come up with some conceptual application of one or more of the readings from the week. The idea here is to extrapolate from the readings to something new. I am flexible as to what qualifies, but the point is to write something interesting inspired by that week's readings. Thought pieces are due at noon the day before the class. They will not be accepted after that. Note that there are no readings the last week of the term, and thus you cannot hand in a thought piece that week-- so plan accordingly.

*Literature review:* The literatures using social network ideas have exploded in the last decade. This course can only provide an overview, plus a slightly deeper introduction to a few of these specific literatures. There are literatures on economic development and social networks; political parties as networks; social movements and networks; and so on. You will be required to identify a literature in social networks, write a critical summary of that literature, and present an overview of that summary. The literature review (~20 single spaced pages) will be due April 20, and there will be various intermediate products due during the term.

#### Grading:

Grades will be derived 40% from class participation, 30% the thought pieces, and 30% the literature review.

## **READINGS**

### **January 10**

#### **Networks as capital**

Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94:S95-S120.

Lin, N., 1999. Building a network theory of social capital. *Connections*, 22(1), pp.28-51.  
[http://www.insna.org/PDF/Connections/v22/1999\\_I-1-4.pdf](http://www.insna.org/PDF/Connections/v22/1999_I-1-4.pdf)

Adler, P.S. and Kwon, S.W., 2002. Social capital: Prospects for a new concept. *Academy of management review*, 27(1), pp.17-40.

Smith, S.S., 2005. "Don't put my name on it": Social Capital Activation and Job-Finding Assistance among the Black Urban Poor, *American Journal of Sociology*, 111(1), pp.1-57.

Optional:

Nahapiet, J. and Ghoshal, S., 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 23(2), pp.242-266.

## January 17

### Structural holes, embeddedness and triad closure

Granovetter, M., 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, pp.481-510.

R. Burt. 1995. *Structural Holes: The Social Structure of Competition*. Belknap Press. 8-49.

M. Granovetter. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78: 1360-80.

Uzzi, B., 1997. Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, pp.35-67.

Burt, R.S. (2004). Structural holes and good ideas. *American Journal of Sociology*, 110(2):349-399.

Optional:

Chapter 3: Strong and Weak Ties

<http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book-ch03.pdf>

P. DiMaggio and H. Louch. 1998. "Socially Embedded Consumer Transactions: For What Kinds of Purchases Do People Most Often Use Networks?" *American Sociological Review* 63: 619-637.

## January 24

<b>Due in class:</b> brief description of literature to be reviewed.
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## **Centrality**

S. Borgatti. 1994. "A Quorum of Graph Theoretic Concepts." *Connections* 17(1): 47-49.

K.S. Cook, R.M. Emerson, and M.R. Gillmore. 1983. "The Distribution of Power in Exchange Networks: Theory and Experimental Results" *American Journal of Sociology* 89: 275-305.

Freeman, L.C., 1978. Centrality in social networks conceptual clarification. *Social networks*, 1(3), pp.215-239.

Bavelas, A., 1950. Communication patterns in task-oriented groups. *Journal of the acoustical society of America*.

Guetzkow, H. and Simon, H.A., 1955. The impact of certain communication nets upon organization and performance in task-oriented groups. *Management science*, 1(3-4), pp.233-250.

## **January 31**

### **Influence and diffusion in networks**

Festinger, L., 1954. A theory of social comparison processes. *Human relations*, 7(2), pp.117-140.

Christakis, N.A. and Fowler, J.H. (2007). The Spread of Obesity in a Large Social Network over 32 Years *New England Journal of Medicine*, 357:370-379.

Nickerson, D.W. (2008). Is voting contagious? Evidence from two field experiments. *American Political Science Review*, 102(1):49-57.

E. M. Rogers. 2003. "Diffusion Networks" in *Networks in the Knowledge Economy*, (Rob Cross, ed.).

### **Optional:**

E. Cohen-Cole and J. M. Fletcher (2008). Detecting implausible social network effects in acne, height, and headaches: longitudinal analysis *British Medical Journal*, 337.

Fowler, J.H. and Christakis, N.A. (2008). Estimating peer effects on health in social networks: A response to Cohen-Cole and Fletcher; and Trogdon, Nonnemaker, and Paisstar *Journal of Health Economics* 27(5):1400-140.

Lazarsfeld, P.F., Berelson, B. and Gaudet, H., 1968. The people's choice: how the voter makes up his mind in a presidential campaign.

Sacerdote, B. (2001). Peer Effects with Random Assignment: Results for Dartmouth Roommates. *Quarterly Journal of Economics* 116(2):681-704.

Cohen-Cole, E. and Fletcher, J.M. (2008). Is obesity contagious? Social networks vs. environmental factors in the obesity epidemic *Journal of Health Economics* 27(5):1382-1387

Sinclair, B. and Rogowski, J., Causal Inference in Political Networks. In *The Oxford Handbook of Political Networks*.

David Merritt Johns, Everything is contagious, *Slate*, April 8, 2010.

[http://www.slate.com/articles/health\\_and\\_science/science/features/2010/everything\\_is\\_contagious/doubts\\_about\\_the\\_social\\_plague\\_stir\\_in\\_the\\_human\\_superorganism.html](http://www.slate.com/articles/health_and_science/science/features/2010/everything_is_contagious/doubts_about_the_social_plague_stir_in_the_human_superorganism.html)

## February 7

<b>Due in class:</b> brief description of literature to be reviewed.
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## Small worlds

S. Milgram. 1967. "The Small World Problem." *Psychology Today*, 2:60-67.

D. Watts and S. Strogatz. 1998. "Collective dynamics of 'small-world' networks." *Nature* 393: 440-42.

Dodds, P.S., Muhamad, R., and Watts, D.J. (2003). An experimental study of search in a global social networks. *Science*, 301:827-829.

Grannis, R. (2010). Six Degrees of "Who Cares"? *American Journal of Sociology*, 115(4):991-1017. <http://www.sscnet.ucla.edu/soc/faculty/grannis/SixDegreesofWhoCares.pdf>

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

Gladwell, M. (1999). Six degrees of Lois Weisberg. *The New Yorker*  
<http://www.gladwell.com/pdf/weisberg.pdf>

Play with [http://oracleofbacon.org/star\\_links.html](http://oracleofbacon.org/star_links.html).

Optional:

Watts, D.J. (1999). Networks, dynamics, and the small world phenomenon. *American Journal of Sociology*, 105(2):493-527.

Kleinberg, J. (2000). Navigation in a small world. *Nature*, 406:845.

Watts, D.J., Dodds, P.S., and Newman, M.E.J. (2002). Identity and search in social networks. *Science*, 296:1302-1305.

Mark Twain. Two little tales, <http://www.bibliomania.com/0/5/54/242/15691/1/frameset.html>

Centola, D. (2010). The Spread of Behavior in an Online Social Network Experiment. *Science*, 329(5996):1194-1197.

Granovetter, M. (2003). Ignorance, knowledge, and outcomes in a small world. *Science*, 301:773-774.

Noah Friedkin (1983). Horizons of Observability and Limits of Informal Control in Organizations, *Social Forces* 1983.  
<http://www.soc.ucsb.edu/faculty/friedkin/Reprints/SFHorizon.PDF>

**February 14**

**The origin of networks and homophily**

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.

Monge, P.R. and Contractor, N.S., 2001. Emergence of communication networks. *The new handbook of organizational communication: Advances in theory, research, and methods*, pp.440-502.

Schelling, T.C., 1971. Dynamic models of segregation. *Journal of mathematical sociology*, 1(2), pp.143-186.

Kossinets, G. and Watts, D.J. (2009). Origins of Homophily in an Evolving Social Network. *American Journal of Sociology*, 115(2)405-450.

Feld, S.L. (1981) The focused organization of social ties. *American Journal of Sociology*, 86(5):1015-1035.

Mutz, D.C. and Mondak, J.J., 2006. The Workplace as a Context for Cross-Cutting Political Discourse. *Journal of Politics*, 68(1), pp.140-155.

Feld, S.L., 1997. Structural embeddedness and stability of interpersonal relations. *Social Networks*, 19(1), pp.91-95.

Optional:

Easley and Kleinberg, Chapter 4: Networks in their surrounding contexts  
<http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book-ch04.pdf>

Centola, D., 2011. An experimental study of homophily in the adoption of health behavior. *Science*, 334(6060), pp.1269-1272.

Wimmer, A. and Lewis, K., 2010. Beyond and below racial homophily: Erg models of a friendship network documented on facebook1. *American Journal of Sociology*, 116(2), pp.583-642.

## **February 21**

### **Diversity and networks**

Page, S., *The Difference*: Chapt 1. <http://press.princeton.edu/chapters/s8353.pdf>

Mutz, D.C., 2002. Cross-cutting social networks: Testing democratic theory in practice. *American Political Science Review*, 96(01), pp.111-126.

Huckfeldt, R., Mendez, J.M. and Osborn, T., 2004. Disagreement, ambivalence, and engagement: The political consequences of heterogeneous networks. *Political Psychology*, 25(1), pp.65-95.

Bakshy, E., Messing, S. and Adamic, L.A., 2015. Exposure to ideologically diverse news and opinion on Facebook. *Science*, 348(6239), pp.1130-1132.

Klar, S., 2014. Partisanship in a social setting. *American journal of political science*, 58(3), pp.687-704.

Optional:

Ibarra, H., 1995. Race, opportunity, and diversity of social circles in managerial networks. *Academy of Management journal*, 38(3), pp.673-703.

## **February 28**

### **Group polarization**

Sunstein, *Going to extremes*: all.

Bishop, B., 2009. *The big sort: Why the clustering of like-minded America is tearing us apart*. Houghton Mifflin Harcourt. Chapter 1, available at <http://www.thebigsort.com/home.php>.

Adamic, L.A. and Glance, N., 2005, August. The political blogosphere and the 2004 US election: divided they blog. In *Proceedings of the 3rd international workshop on Link discovery* (pp. 36-43). ACM.

## **March 14**

### **The networked society**

R. Putnam. 1995. "Bowling alone: America's declining social capital." *Journal of Democracy* 6(1): 65-78.

Baldassarri, D. and Diani, M. (2007). The integrative power of civic networks. *American Journal of Sociology*, 113(3):735-780.



Marsden, P.V. (1987). Core Discussion Networks of Americans. *American Sociological Review* 52(1):122-131.

## **March 21**

### **The digital society**

McPherson, M., Smith-Lovin, L., and Brashears, M.E. (2006). Social Isolation in America: Changes in Core Discussion Networks over Two Decades. *American Sociological Review*, 71(3):353-375

Fischer, C.S., 2009. The 2004 GSS finding of shrunken social networks: An artifact?. *American Sociological Review*, 74(4), pp.657-669.

[http://www.soc.duke.edu/~jmoody77/s884/Reading/Fischer\\_ASRcomment.pdf](http://www.soc.duke.edu/~jmoody77/s884/Reading/Fischer_ASRcomment.pdf)

Hampton, K.N., Sessions, L.F. and Her, E.J., 2011. Core networks, social isolation, and new media: How Internet and mobile phone use is related to network size and diversity. *Information, Communication & Society*, 14(1), pp.130-155.

Barberá, P., Wang, N., Bonneau, R., Jost, J.T., Nagler, J., Tucker, J. and González-Bailón, S., 2015. The critical periphery in the growth of social protests. *PloS one*, 10(11), p.e0143611.

Ellison, N.B., Steinfield, C. and Lampe, C., 2007. The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer Mediated Communication*, 12(4), pp.1143-1168.

Baym, N., Zhang, Y. B., & Lin, M.-C. (2004). Social Interactions Across Media: Interpersonal Communication on the Internet, Telephone and Face-to-Face. *New Media & Society*, 6(3), 299-318.

boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), article 11.

<http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>

Optional: Special issue of the *Journal of Computer Mediated Communication*:

<http://jcmc.indiana.edu/vol13/issue1/index.html>

## **March 28**

Due in class: Preliminary version of literature review

Rainie, H. and Wellman, B., 2012. *Networked: The new social operating system*, Cambridge, MA: Mit Press.

**April 4**

### **Studying the digital breadcrumbs**

Eagle, N., Pentland, A.S. and Lazer, D., 2009. Inferring friendship network structure by using mobile phone data. *Proceedings of the national academy of sciences*, 106(36), pp.15274-15278.

Bakshy, E., Hofman, J.M., Mason, W.A., Watts, D.J. 2011. Everyone's an Influencer: Quantifying Influence on Twitter, *Fourth International Conference on Web Search and Data Mining*.

Onnela, J.P., Saramäki, J., Hyvönen, J., Szabó, G., Lazer, D., Kaski, K., Kertész, J. and Barabási, A.L., 2007. Structure and tie strengths in mobile communication networks. *Proceedings of the National Academy of Sciences*, 104(18), pp.7332-7336.

Lazer, D., Issues of Construct Validity and Reliability in Massive, Passive Data Collections, Social Science Research Council, 2015.

<http://citiespapers.ssrc.org/issues-of-construct-validity-and-reliability-in-massive-passive-data-collections/>

**April 11**

Presentation of literature reviews.

### **Swarms and lemmings**

Chapter 22: Markets and Information

<http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book-ch22.pdf>

Salganik, M.J., Dodds, P.S., and Watts, D.J. (2006). Experimental study of inequality and unpredictability in an artificial cultural market. *Science*, 311:854-856.

Hedstrom, P. (2006). Experimental macro sociology: Predicting the next best seller. *Science*, 311:786-787.

Salganik, M.J., and Watts, D.J. (2008). Leading the herd astray: Experimental study of self-fulfilling prophecies in an artificial cultural market. *Social Psychology Quarterly*, 71:338-355.

Lazer, D. and Friedman, A., 2007. The network structure of exploration and exploitation. *Administrative Science Quarterly*, 52(4), pp.667-694.

Mason, W. and Watts, D.J., 2012. Collaborative learning in networks. *Proceedings of the National Academy of Sciences*, 109(3), pp.764-769.

Optional:

Chapter 16: Information Cascades

<http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book-ch16.pdf>

Chapter 19: Cascading Behavior in Networks

<http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book-ch19.pdf>

Bikhchandani, S. Hirshleifer, D. and Welch, O. (1998). Learning from the behavior of others: Conformity, fads, and informational cascades. *Journal of Economic Perspectives*, 12(3):151-170.

Sunstein, C.R., 2006. *Infotopia: How many minds produce knowledge*. Oxford University Press.

Stasser, G., & Titus, W. (2003). Hidden profiles: A brief history. *Psychological Inquiry*, 14, 3&4, 304-313.

Galton, F. 1907. Vox Populi. *Nature*.

<http://galton.org/essays/1900-1911/galton-1907-vox-populi.pdf>

[Look at intrade.com and other futures markets]

**April 18**

Presentation of literature reviews.
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