

“Social Interactions”

Course Requirements

Course requirements: There are two requirements.

First, each student must identify two papers from the reading list and write 5-7 page explications of each. I would like one completed by September 7 and one completed by September 22. The purpose of this requirement is for you to dig into the details of the papers so that you understand them thoroughly enough to teach to other graduate students as well as to integrate into your own original research. You may choose to review papers that are not on the reading list as long as they are germane to the course material, but I will need to approve the choices.

Second, in lieu of a final exam, I will ask you to write a 10 page critical review of a prominent paper which I will choose. In this critical review, I want you to go beyond explication to an assessment of strengths and weaknesses, with proposals on how to address the latter. You will have two weeks for this.

Syllabus

The following syllabus is of course far too long to cover in class. I mark some with * to indicate priority. The list is designed to provide a gateway into the larger literatures as well as to identify papers that are of particular importance to read. Please note that the fact that a paper is listed does not necessarily mean that I regard it as good piece of research. Some of the articles are in fact listed because their prominence is incommensurate with their quality. That said, you should also be skeptical of any criticisms I make!

Much of the material I cover is synthesized in

Blume, L. W. Brock, S. Durlauf, and Y. Ioannides, (2011), "Identification of Social Interactions," in *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds. Amsterdam: North Holland.

and

Durlauf, S., (2004), "Neighborhood Effects," in J. V. Henderson and J.-F. Thisse, eds., *Handbook of Regional and Urban Economics 4*, Amsterdam: North Holland.

1. Theory of Social Interactions

i. Complementarity

Athey, S., (2002), "Monotone Comparative Statics under Uncertainty," *Quarterly Journal of Economics*, 117, 1, 187-223.

Athey, S., (2004), "Single Cross Properties and the Existence of Pure Strategy Equilibria in Games of Incomplete Information," *Econometrica*, 69, 4, 861-889.

Athey, S. and S. Stern, (1998), "An Empirical Framework for Testing Theories About Complementarity in Organizational Design," *NBER Working Paper no. 6600*.

*Cooper, R. and A. John, (1988), "Coordinating Coordination Failures in Keynesian Models," *Quarterly Journal of Economics*, 103, 3, 441-463.

Milgrom, P. and J. Roberts, (1990), "Rationalizability, Learning and Equilibrium in Games with Strategic Complementarities," *Econometrica*, 58, 6, 1255-1277.

Milgrom, P. and C. Shannon, (1994), "Monotone Comparative Statics," *Econometrica*, 62, 1, 157-180.

*Amir, R., (2004), "Supermodularity and Complementarity in Economics: An Elementary Survey," *Southern Economic Journal* 71: 636-660.

ii. Interacting Systems

Akerlof, G., (1997), "Social Distance and Social Decisions," *Econometrica*, 65, 5, 1005-1027.

Allen, B., (1982), "Some Stochastic Processes Exhibiting Externalities Among Adopters," *International Economic Review*, 23, 3, 595-608.

Becker G., (1974), "A Theory of Social Interactions," *Journal of Political Economy*, 82, 6, 1063-93.

Bisin, A., O. Ozgur, and U. Horst, (2006), "Rational Expectations Equilibria of Economies with Local Interactions," *Journal of Economic Theory*, 127, 1, 74-116.

*Blume, L, (1993), "The Statistical Mechanics of Strategic Interaction," *Games and Economic Behavior*, 5, 3, 387-424.

*Brock, W. and S. Durlauf, (2001), "Discrete Choice with Social Interactions," *Review of Economic Studies*, 68, 2, 235-260.

Brock, W. and S. Durlauf (2002), "A Multinomial Choice Model with Neighborhood Effects," *American Economic Review*, 92, 2, 298-303.

Cabrales, A., A. Calvó-Armengol and Y. Zenou, (2011), "Social Interactions and Spillovers," *Games and Economic Behavior*, 72, 2, 339-360.

Conlisk, J., (1976), "Interactive Markov Chains," *Journal of Mathematical Sociology*, 4, 2, 157-185.

Föllmer, H., (1974), "Random Economies with Many Interacting Agents," *Journal of Mathematical Economics*, 1, 1, 41-62.

Griffeath, D., (1976), "Introduction to Random Fields," in Kemeny, J., J. Snell and A. Knapp, *Denumerable Markov Chains*, New York: Springer-Verlag.

Horst, U. and J. Scheinkman, (2006), "Equilibria in Systems of Social Interactions," *Journal of Economic Theory*, 130, 1, 44-77.

Ioannides, Y., (2006), "Topologies of Social Interactions," *Economic Theory*, 28, 3, 559-584.

McKelvey, R. and T. Palfrey, (1995), "Quantal Response Equilibria for Normal Form Games," *Games and Economic Behavior*, 10, 1, 6-38.

Morris, S., (2000), "Contagion," *Review of Economic Studies*, 67, 1, 57-78.

Ozgur, O., (2011), "Local Interactions," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Spitzer, F., (1971), "Markov Random Fields and Gibbs Ensembles," *American Mathematical Monthly*, 78, 2, 142-154.

iii. Group Formation and Matching

*Becker, G., (1973), "A Theory of Marriage, Part I," *Journal of Political Economy*, 81, 4, 813-846.

*Bénabou, R., (1996), "Equity and Efficiency in Human Capital Investment: The Local Connection," *Review of Economic Studies*, 63, 2, 237-264.

Cotrell, R. and G. Loury, (2004), "Distribution of Ability and Earnings in a Hierarchical Job Assignment Model" *Journal of Political Economy*, 112, 6, 1322-1364.

Dagsvik, J., (2000), "Aggregation in Matching Markets," *International Economic Review*, 41, 1, 27-57.

*Durlauf S., (1996), "A Theory of Persistent Income Inequality," *Journal of Economic Growth*, 1, 1, 75-93.

Durlauf, S. and A. Seshadri, (2003), "Is Assortative Matching Efficient?," *Economic Theory*, 21, 2-3, 475-493.

Fernandez, R. and J. Gali, (1999), "To Each According to...? Markets, Tournaments, and the Matching Problem with Borrowing Constraints," *Review of Economic Studies*, 66, 4, 799-824.

Fernandez, R. and R. Rogerson, (1996), "Income Distribution, Communities, and the Quality of Public Education," *Quarterly Journal of Economics*, 111, 1, 135-164.

Fernandez, R. and R. Rogerson, (1997), "Keeping People Out: Income Distribution, Zoning, and the Quality of Public Education," *International Economic Review*, 38, 1, 23-42.

Frankel, D., (1998), "A Pecuniary Reason for Income Mixing," *Journal of Urban Economics*, 44, 1, 158-169.

Gall, T., P. Legros, and A. Newman, (2015), "College Diversity and Investment Incentives," Working Paper, Boston University.

Granovetter, M. and R. Soong, (1988), "Threshold Models of Segregation: Chinese Restaurants, Residential Segregation, and the Spiral of Silence," *Sociological Methodology*, 18, 69-104.

Ioannides, Y., (2008), "Full Solution of an Endogenous Sorting Model with Contextual and Income Effects," Working Paper, Tufts University.

Ioannides, Y., (2016), "Endogenous Social Networks and Inequality in an Intergenerational Setting," Working Paper, Tufts University.

Kremer, M. and E. Maskin, (1996), "Wage Inequality and Segregation by Skill," *NBER Working Paper no. 5718*.

LeGros, P. and A. Newman (2002), "Monotone Matching in Perfect and Imperfect Worlds," *Review of Economic Studies*, 69, 4, 925-42.

LeGros, P. and A. Newman (2007), "Beauty Is a Beast, Frog Is a Prince: Assortative Matching with Nontransferabilities," *Econometrica*, 75, 4, 1073-1102.

Loury, G., (1977), "A Dynamic Theory of Racial Income Differences," in *Women, Minorities, and Employment Discrimination*, P. Wallace and A. Lamond, eds., Lexington, Massachusetts: Lexington Books.

McCann R., and M. Trokhimtchouk, (2010), "Optimal Partition of a Large Labor Force into Working Pairs," *Economic Theory*, 42, 2, 375-395.

McCann, R. J., Shi, X., Siow, A., & Wolthoff, R. (2015). Becker meets ricardo: Multisector matching with communication and cognitive skills. *Journal of Law, Economics, and Organization*, ewv002.

Nechyba, T., (1997), "Existence of Equilibrium and Stratification in Local and Hierarchical Tiebout Economies with Property Taxes and Voting," *Economic Theory*. 10, 2, 277-304.

Nesheim, L., (2002), "Equilibrium Sorting of Heterogeneous Consumers Across Locations: Theory and Implications," *Centre for Microdata Methods and Practice Working paper no. CWP08/02*.

*Prat, A., (2002), "Should a Team be Homogeneous?," *European Economic Review*, 46, 7, 1187-1207.

Pycia, M. (2012). Stability and preference alignment in matching and coalition formation. *Econometrica*, 80(1), 323-362.

*Sattinger, M., (1993), "Assignment Models of the Distribution of Earnings," *Journal of Economic Literature*, 31, 2, 831-880.

Streufert, P., (2000), "The Effect of Underclass Isolation on School Choice," *Journal of Public Economic Theory*, 2, 4, 461-482.

iv. Networks

Bala, and S. Goyal, (2003), "A Noncooperative Model of Network Formation," *Econometrica*, 68, 5, 1181-1229.

Ballester, C., A. Calvó-Armengol, and Yves Zenou, (2006). "Who's Who in Networks. Wanted: The Key Player," *Econometrica*, 74, 5, 1403-1417.

Barthelemy, M., (2011), "Spatial Networks," *Physics Reports*, 499, 1-101.

Currarini, S., P. Pin and M. Jackson, (2011), "An Economic Model of Friendship: Homophily, Minorities, and Segregation," *Econometrica*, 77, 4, 1003-1045.

Galeotti, A. and S. Goyal, (2010), "The Law of the Few," *American Economic Review*, 100, 4, 1468-1492.

Galeotti, A., S. Goyal, M. Jackson, and F. Vega-Fernando, (2010), "Network Games," *Review of Economic Studies*, 77, 1, 218-244.

Golub, B. and M. Jackson, (2012), "How Homophily Affects the Speed of Learning and Best-Response Dynamics," *Quarterly Journal of Economics* 127, 3, 1287-338.

Halme, P. and J. Saramaki, (2012), "Temporal Networks," *Physics Reports* 519, 97-125.

Jackson, M., (2008), *Social and Economic Networks*, Princeton: Princeton University Press.

Jackson, M., (2010), "Social Networks in Economics," *Handbook of Social Economics*. J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Jackson, M. and B. Rogers, (2007), "Meeting Strangers and Friends of Friends: How Random are Social Networks?," *American Economic Review*, 97, 3, 890-915.

Jackson, M. and A. Wolinsky, (1996), "A Strategic Model of Social and Economic Networks," *Journal of Economic Theory*, 71, 44-74.

Newman, M., (2003), "The Structure and Function of Complex Networks," *SIAM Review*, 45, 2, 167-256.

2. Econometrics of Social Interactions

i. Statistics of Interactions-Based Systems

Chatterjee, S., (2007), "Estimation in Spin Glasses: A First Step," *Annals of Statistics*, 35, 5, 1931-1946.

Pickard, D., (1976), "Asymptotic Inference for an Ising Lattice," *Journal of Applied Probability*, 13, 3, 486-497.

Pickard, D., (1977), "Asymptotic Inference for an Ising lattice II," *Annals of Applied Probability*, 9, 3, 476-501.

Pickard, D., (1979), "Asymptotic Inference for an Ising lattice III. Non-Zero Field and Ferromagnetic States," *Journal of Applied Probability*, 16, 1, 12-24.

ii. Econometric Social Interactions Models: Identification and Estimation

Angrist, J., (2014), "The Perils of Peer Effects," *Labour Economics*, 30(C), 98-108.

Aradillas-Lopez, A., (2011), "Nonparametric Probability Bounds for Nash Equilibrium Actions in a Simultaneous Discrete Game," *Quantitative Economics*, 2(2), 135-171.

Aradillas-Lopez, A., (2010), "Semiparametric Estimation of a Simultaneous Game with Incomplete Information," *Journal of Econometrics*, 157, 2, 409-431.

Arcidiacono, P., G. Foster, N. Goodpaster, and J. Kinsler, (2011), "Estimating Spillovers using Panel Data, with an Application to the Classroom," *Quantitative Economics*, 3(3), 421-470.

Baird, S., A. Bohren, C. McIntosh, and B. Ozler, (2012), "Designing Experiments to Measure Spillover and Threshold Effects," *IZA Discussion Paper* no. 6681.

Bajari, P., H. Hong, and S. Ryan, (2009), "Identification and Estimation of a Discrete Game of Complete Information," *Econometrica*, 78, 5, 1529-1568.

Bayer, P. and S. Ross, (2010), "Identifying Individual and Group Effects in the Presence of Sorting: A Neighborhood Effects Application," Working Paper, Duke University.

*Blume, L., W. Brock, S. Durlauf, and R. Jayaraman, (2015), "Linear Social Interactions Models," *Journal of Political Economy*, 123(2), 444-496.

*Brock, W. and S. Durlauf, (2007), "Identification of Binary Choice Models with Social Interactions," *Journal of Econometrics*, 140, 1, 52-75.

Cohen-Cole, E., (2006), "Multiple Groups Identification in the Linear-in-Means Model" *Economics Letters* 92, 2, 157-162.

Conley, T. and G. Topa, (2007), "Estimating Dynamic Local Interactions Models," *Journal of Econometrics*, 140, 1, 282-303.

Davezies L, X. d'Haultfoeuille and D. Foughre, (2009), "Identification of Peer Effects Using Group Size Variation," *Econometrics Journal*, 12, 397-413.

*De Paula, A., (2009), "Inference in a Synchronization Game with Social Interactions," *Journal of Econometrics*, 148, 1, 56-71.

De Paula, A., (2013), "Econometric Analysis of Games with Multiple Equilibria," *Annual Review of Economics*, 5, 107-131.

De Paual, A., I. Rasul and P. Souza, (2018), "Recovering Social Networks from Panel Data: Identification, Simulations, and an Application." Cenmap Working Paper CWP17/18.

De Paula, A. and X. Tang, (2012), "Inference of Signs of Interaction Effects in Simultaneous Games with Incomplete Information," *Econometrica*, 80, 1, 143-172.

Glaeser, E., B. Sacerdote, and J. Scheinkman, (2003), "The Social Multiplier," *Journal of the European Economic Association*, 1, 2-3, 345-353.

*Graham, B., (2008), "Identifying Social Interactions through Conditional Variance Restrictions," *Econometrica*, 76, 3, 643-660.

Graham, B. and J. Hahn, (2005), "Identification and Estimation of the Linear in Means Model of Social Interactions," *Economic Letters*, 88, 1-6.

Heckman, J., (1978), "Dummy Endogenous Variables in a Simultaneous Equation System," *Econometrica*, 46, 931-959.

Hirano, K., and J. Hahn, (2010), "Design of Randomized Experiments to Measure Social Interaction Effects," *Economics Letters*, 106, 1, 51-53.

Hsieh, C. and Lee, L.-f. (2016), "A Social Interactions Model with Endogenous Friendship Formation and Selectivity," *Journal of Applied Econometrics*, 21, 2, 301-319.

Kooreman, P. and A. Soetevent, (2007), "A Discrete-Choice Model with Social Interactions: with an Application to High School Teen Behavior," *Journal of Applied Econometrics*, 22, 3, 599-624.

Krauth, B., (2006), "Simulation-Based Estimation of Peer Effects," *Journal of Econometrics* 133, 1, 243-271.

Lee, L.-f., (2007), "Identification and Estimation of Econometric Models with Group Interactions, Contextual Factors and Fixed Effects," *Journal of Econometrics*, 140, 2, 333-374.

Lee, L.-f., X. Liu, and X. Lin, (2010), "Specification and Estimation of Social Interaction Models with Network Structures." *Econometrics Journal*, 13, 2, 145-176.

Lee, L.-f., J. Li and X. Lin, (2014), "Binary Choice Models with Social Network under Heterogeneous Rational Expectations," *Review of Economics and Statistics*,

Li, J. and L.-f. Lee, (2009), "Binary Choice under Social Interactions: an Empirical Study with and without Subjective Data on Expectations," *Journal of Applied Econometrics*, 24, 2, 257-281.

Liu, X. and L.-f. Lee, (2010), "GMM Estimation of Social Interactions Models with Centrality," *Journal of Econometrics*, 159, 1, 99-115.

*Manski, C., (1993), "Identification of Endogenous Social Effects: The Reflection Problem," *Review of Economic Studies*, 60, 531-542.

Masten, M., (2015), "Random Coefficients on Endogenous Variables in Simultaneous Equations Models," mimeo, Duke University.

Shalizi, C. and A. Thomas, (2012), "Homophily and Contagion Are Generically Confounded in Observational Social Network Studies," *Sociological Methods & Research*, 40, 2, 211-239.

Tamer, E., (2003), "Incomplete Simultaneous Discrete Response Model with Multiple Equilibria," *Review of Economic Studies*, 70, 147-165.

Tao, J., & Lee, L. F. (2014). "A social interaction model with an Extreme Order Statistic," *The Econometrics Journal*, 17(3), 197-240.

Weinberg B., (2007), "Social Interactions with Endogenous Associations," *NBER Working Paper no. 13038*

iii. Matching/Sorting

Eeckhout, J. and P. Kircher, (2011), "Identifying Sorting-In Theory," *Review of Economic Studies*, 78, 2, 872-906.

Fox, J., (2010), "Estimating Matching Games with Transfers," *Quantitative Economics*, 1, 2, 203-254.

Graham, B., (2011), "Econometric Methods for the Analysis of Assignment Problems in the Presence of Complementarity and Social Spillovers." In *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: Elsevier.

*Graham, G., G. Imbens, and G. Ridder, (2014), "Complementarity and Aggregate Implications of Assortative Matching: A Nonparametric Analysis," *Quantitative Economics* 5,1, 29-66.

Lopes de Melo, R. (2015), "Firm Wage Differentials and Labor Market Sorting: Reconciling Theory and Evidence," Working Paper, University of Chicago,

*Siow, A. (2009), "Testing Becker's Theory of Positive Assortative Matching," Working Paper, University of Toronto.

Mendez, R., G. van den Berg, and M. Lindeboom, (2010), "An Empirical Assessment of Matching in the Labor Market," *Labour Economics*, 17. 6. 919-929.

iv. Treatment Effect Approaches

Lazatti, N., (2015), "Treatment Response with Social Interactions: Partial Identification via Monotone Comparative Statics." *Quantitative Economics*, 6(1), 49-83.

Manski, C., (2013), "Identification of Treatment Response with Social Interactions," *Econometrics Journal*, 16, S1-S23.

Sobel, M., (2006), "What Do Randomized Studies of Housing Mobility Demonstrate? Causal Inference in the Face of Interference." *Journal of the American Statistical Association* 101, 1398-1407.

v. Networks

Badev, A., (2013), "Discrete Games in Endogenous Networks: Theory and Policy," mimeo, Federal Reserve Board.

Boucher, V., (2015), "Structural Homophily," *International Economic Review*, 56, 1, 235-264.

Boucher, V. and I. Mourifié, (2017), "My Friend Far, Far Away: A Random Field Approach to Exponential Random Graph Models," *Econometrics Journal* 20, 3: S14-S46.

*Bramoullé, Y., H. Djebbari and B. Fortin, (2009), "Identification of Peer Effects through Social Networks," *Journal of Econometrics*, 150, 41-55.

Breza, E., A. Chandrasekhar, T. McCormick, and M. Pan, 2018, "Using Aggregated Relational Data to Feasibly Identify Network Structure Without Network Data," Mimeo, Stanford University.

Chandrasekhar, A. and M. Jackson, (2018), "A Network Model Based on Subgraphs," Mimeo, Stanford University.

Chandrasekhar, A. and R. Lewis, (2016), "The Econometrics of Sampled Networks," Mimeo, Stanford University.

Christakis, N., J. Fowler, G. Imbens, and K. Kalyanaraman, (2010), "An Empirical Model for Strategic Network Formation," *NBER Working Paper no. 16039*.

De Paula, A., S. Richards-Shubik, and E. Tamer, (2018), Identifying Preferences in Networks with Bounded Degree, *Econometrica*, 86, 1: 263-288.

Frank, O. and D. Strauss, (1986), "Markov Graphs," *Journal of the American Statistical Association*, 81, 832–842.

Goldsmith-Pinkham, P. and G. Imbens, (2013), "Social Networks and the Identification of Peer Effects," *Journal of Business and Economic Statistics*, 3, 3, 253-264.

Goldenberg, A., A. Zhang, S. Fienberg, and E. Airoldi, (2010), "A Survey of Statistical Network Models," *Foundations and Trends in Machine Learning*, 2, 2, 129-233.

Graham, B., (2015), "Methods of Identification in Social Networks," *Annual Review of Economics* 7: 465-485.

Graham, B. (2017), "An Econometric Model of Network Formation with Degree Heterogeneity," *Econometrica* 85: 1033-1063.

Graham, B., (2018), "Identifying and Estimating Neighborhood Effects," *Journal of Economic Literature* 56: 450-500.

Handcock, M. and K. Gile, (2010), "Modeling Social Networks from Sampled Data," *Annals of Applied Statistics*, 4, 5-25.

Handcock, M., D. Hunter, and S. Goodreau, (2008), "Goodness of Fit of Social Network Models," *Journal of the American Statistical Association*, 103, 1, 248-258.

Handcock, M., T. Snijders, P. Pattison and G. Robins, (2006), "New Specifications for Exponential Random Graph Models," *Sociological Methodology*, 36, 99-153.

Hsieh, C.-S. and L.-F. Lee, (2012), "A Structural Modeling Approach for Network Formation and Social Interactions-with Applications to Students' Friendship Choices and Selectivity on Activities," mimeo, Ohio State University.

Kim, J., (2013), "A Structural Model of Multigraph Formation: Favor Exchange and Social Networks in Villages," mimeo, Cornell University.

Mele, A., (2015), "A Structural Model of Segregation in Social Networks," Working Paper, Johns Hopkins University.

Miyauchi, Y., (2014): "Structural Estimation of a Pairwise Stable Network with Nonnegative Externality," mimeo, MIT.

Pattison, P., and G. Robins, (2002), "Neighbourhood-Based Models for Social Networks," *Sociological Methodology*, 32, 301-337.

Pattison, P. and S. Wasserman, (1999), "Logit Models and Logistic Regressions for Social Networks: II. Multivariate Relations," *British Journal of Mathematical and Statistical Psychology*, 52, 2, 169-194.

Robins, G., P. Pattison and S. Wasserman, (1999), "Logit Models and Logistic Regressions for Social Networks, III. Valued Relations," *Psychometrika*, 64, 3, 371-394.

Robins, G., Snijders, T., Wang, P., Handcock, M., and Pattison, P. (2007). "Recent developments in Exponential Random Graph (p^*) Models for Social Networks," *Social Networks*, 29, 2, 192-215.

Sheng, S., (2014), "Identification and Estimation of Network Formation Games," mimeo, University of California—Los Angeles.

Snijders, T., (2001), "The Statistical Evaluation of Social Network Dynamics," *Sociological Methodology*, 31, 361-395.

Song, K., (2014), "Econometric Inference on Large Bayesian Games with Heterogeneous Beliefs," mimeo, University of British Columbia.

Wasserman, S. and P. Pattison, (1996), "Logit Models and Logistic Regressions for Social Networks: I. An Introduction to Markov Graphs and p^* ," *Psychometrika*, 61, 3, 401-425.

3. Applications

i. Crime

Bayer, P., R. Hjalmarsen, and D. Pozen, (2009), "Building Criminal Capital Behind Bars: Peer Effects in Juvenile Corrections," *Quarterly Journal of Economics* 124, 1, 105-147.

Ballester, C., A. Calvó-Armengol, and Y. Zenou, (2010), "Delinquent Networks," *Journal of the European Economic Association*, 8, 1, 34-61.

Dell, M., (2015), "Trafficking Networks and the Mexican Drug War," *American Economic Review*, 105, 6, 1738-1779.

Glaeser, E., B. Sacerdote, and J. Scheinkman, (1996), "Crime and Social Interactions," *Quarterly Journal of Economics*, 111, 2, 507-548.

Kling, J., J. Ludwig, and L. Katz, (2005), "Neighborhood Effects on Crime for Female and Male Youth: Evidence From a Randomized Housing Voucher Experiment," *Quarterly Journal of Economics*, 120, 1, 87-130.

Lederman, D., N. Loayza, and A. Menendez, "Violent Crime: Does Social Capital Matter?," *Economic Development and Cultural Change*, 50, 509–539.

Lin, X., (2014), "Peer Effects in Adolescents' Delinquent Behaviors: Evidence from a Binary Choice Network Model," *Regional Science and Urban Economics*, 46, 73-92.

Ludwig, J., G. Duncan, and P. Hirschfield, (2001), "Urban Poverty and Juvenile Crime: Evidence from a Randomized Housing-Mobility Experiment," *Quarterly Journal of Economics*, 116, 2, 655-680.

Mastrobuoni, G., and Patacchini, E., (2012), "Organized Crime Networks: an Application of Network Analysis Techniques to the American Mafia," *Review of Network Economics*, 11, 3, 1446-9022.

Morenoff, J., R. Sampson, and S. Raudenbush, (2001), "Neighborhood Inequality, Collective Efficacy, and the Spatial Dynamics of Urban Violence," *Criminology*, 39, 3, 517-560.

Patacchini, E., and Zenou, Y., (2012), "Juvenile Delinquency and Conformism," *Journal of Law, Economics, and Organization*, 28, 1, 1-31.

Sirakaya, S. (2006), "Recidivism and Social Interactions," *Journal of the American Statistical Association*, 101, 475, 863-877.

ii. Education

Angelucci, M., G. de Giorgi, M. Rangel, and I. Rasul, (2010), "Family Networks and School Enrollment: Evidence from a Randomized Social Experiment," *Journal of Public Economics*, 94, 197-221.

Angrist, J. and K. Lang, (2004), "Does School Integration Generate Peer Effects? Evidence from Boston's Metco Program," *American Economic Review*, 94, 1613-1634.

Argys, L. and D. Rees, (2008), "Searching for Peer Group Effects: A Test of the Contagion Hypothesis," *Review of Economics and Statistics*, 90, 3, 442-458.

Bursztyn, L., E. Florian, Ederer; B. Ferman and N. Yuchtman, (2014), "Understanding Mechanisms Underlying Peer Effects," *Econometrica* 82: 1273–1301.

Burstyn, L. and R. Jensen, (2015), "How Does Peer Pressure Affect Educational Investments?," *Quarterly Journal of Economics* 130: 1329-1367.

Bénabou, R., (1996), "Heterogeneity, Stratification and Growth: Macroeconomic Implications of Community Structure and School Finance," *American Economic Review*, 86, 3, 584-609.

Bursztyn, L. and R. Jensen, (2014), "How Does Peer Pressure Affect Educational Investments?" *NBER Working Paper no. 20714*.

Calvo-Armengol, E. Patacchini, and Y. Zenou, (2009), "Peer Effects and Social Networks in Education," *Review of Economic Studies*, 76, 4, 1239-1267.

Carrell, S., R. Fullerton, and J. West, (2009), "Does Your Cohort Matter? Estimating Peer Effects in College Achievement," *Journal of Labor Economics*, 27, 3, 439-464.

Carrell, S., B. Sacerdote, and J. West, (2013), "From Natural Variation to Optimal Policy? The Lucas Critique Meets Peer Effects," *Econometrica*, 81, 3, 855-882.

Cipollone, P. and A. Rosolia, (2007), "Social Interactions in High School: Lessons from an Earthquake," *American Economic Review*, 97, 3, 948-965.

deGeorgi, G., M. Pellizzari, and S. Redaelli, (2010), "Identification of Social Interactions through Partially Overlapping Peer Groups," *American Economic Journal: Applied Economics*, 2, 2, 241-275.

Epple, D. and R. Romano, (2011), "Peer Effects in Education: Theory and Evidence," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: Elsevier.

Fruehwirth, J., (2012), "Identifying Peer Achievement Spillovers: Implications for Desegregation and the Achievement Gap," *Quantitative Economics* 4, 1, 85-124.

Fruehwirth, J., (2014), "Alternative Mechanisms of Peer Spillovers in the Classroom: Implications for Identification and Policy," Working Paper, Cambridge University.

Gaviria, A. and S. Raphael, (2001), "School Based Peer Effects and Juvenile Behavior," *Review of Economics and Statistics*, 83, 2, 257-268.

Hanushek, E., J. Kain, M. Markman and S. Rivkin, (2003), "Does Peer Ability Affect Student Achievement?," *Journal of Applied Econometrics*, 18, 5, 527-544.

Hoxby, C., (2000), "The Effects of Classroom Size on Student Achievement: New Evidence from Population Variation," *Quarterly Journal of Economics*, 115, 4, 1239-1285.

Hoxby, C., (2000), "Peer Effects in the Classroom: Learning from Gender and Race Variation," *NBER Working Paper no. 7867*.

Hoxby, C., "All School Finance Equalizations Are Not Created Equal," (2001), *Quarterly Journal of Economics*, 116, 4, 1189-1231.

Lam, C., (2012), Estimating Various Kinds of Peer Effects on Academic Performance, mimeo, University of Chicago."

Lavy, V., D. Paserman, and A. Schlosser, (2012), "Inside the Black of Box of Ability Peer Effects: Evidence from Variation in Low Achievers in the Classroom," *Economic Journal*, 122, 559, 208-237.

Lavy, V. and E. Sand, (2012), "The Friends Factor: How Students' Social Networks Affect Their Academic Achievement and Well-Being?," *NBER Working Paper no. 18430*.

Lavy, V., O. Silva, and F. Weinhardt, (2012), "The Good, the Bad and the Average: Evidence on the Scale and Nature of Ability Peer Effects in Schools," *Journal of Labor Economics*, 30, 2, 367-414.

Lin, X., (2010), "Identifying Peer Effects in Student Achievement by Spatial Autoregressive Models with Group Unobservables," *Journal of Labor Economics*, 28, 4, 825-860.

Neidell, M. and J. Waldfogel, (2010), "Cognitive and Non-Cognitive Peer Effects in Early Education," *Review of Economics and Statistics*, 92, 3, 562-576.

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

Sacerdote, B., (2011), "Peer Effects in Education: How Might They Work, How Big Are They, and How Much Do We Know Thus Far?," *Handbook of the Economics of Education*, volume 3, E. Hanushek, S. Machin, and L. Woessmann, eds., Amsterdam: Elsevier.

Stinebricker, R. and T. R. Stinebricker, (2006), "What Can Be Learned About Peer Effects Using College Roommates? Evidence from New Survey Data and

Students from Disadvantaged Backgrounds,” *Journal of Public Economics*, 90, 1435-1454.

iii. Neighborhoods

Aliprantis, D., (2014). “Assessing the Evidence on Neighborhood Effects from Moving to Opportunity,” mimeo, Federal Reserve Bank of Cleveland..

Aliprantis, D. and F. Richter, (2014), “Evidence of Neighborhood Effects from MTO: LATES of Neighborhood Quality,” mimeo, Federal Reserve Bank of Cleveland.

Aliprantis, D. and D. Carroll, (2018), “Neighborhood Dynamics and the Distribution of Opportunity,” *Quantitative Economics* 9 1: 247–303.

Bayer, P., R. McMillan, A. Murphy, and C. Timmins, (2016) “A Dynamic Model of Demand for Houses and Neighborhoods,” *Econometrica* 84: 893-942.

Bayer, P, R. MacMillan, and C. Timmins, (2007), “A Unified Framework for Measuring Preferences for Schools and Neighborhoods,” *Journal of Political Economy*, 115. 588-638.

Bayer, P., R. McMillan, A. Murphy, and C. Timmins, (2016), “A Dynamic Model of Demand for Houses and Neighborhoods,” *Econometrica* 84: 893-942.

Bayer, P., S. Ross and G. Topa, (2008), “Place of Work and Place of Residence: Informal Hiring Networks and Labor Market Outcomes,” *Journal of Political Economy*, 116, 1150-1196.

Bruch, E. and R. Mare, (2012), “Methodological Issues in the Analysis of Residential Preferences, Residential Mobility, and Neighborhood Change,” *Sociological Methodology* 42, 103-154.

Chetty, R., N. Hendren, and L. Katz. 2016. “The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment, *American Economic Review*, 106, 4, 855-902.

Chetty, R. and N. Hendren. 2016. The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects. *NBER Working Paper* no. 23001.

Chetty, R. and N. Hendren. 2016. The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates.” *NBER Working Paper* no. 23002.

Chetty, R., Hendren, N., Kline, P. and Saez, E. 2014. Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States. *Quarterly Journal of Economics*, 129, 4, 1553-1623.

Clampert-Lundquist, S., and D. Massey, (2008), "Neighborhood Effects on Economic Self-Sufficiency: A Reconsideration of the Moving to Opportunity Experiment," *American Journal of Sociology*, 114, 1, 107-143.

Conley T. and G. Topa, (2002), Socio-Economic Distance and Spatial Patterns in Unemployment," *Journal of Applied Econometrics*, 17, 4, 303-27.

Crane, J., (1991), "The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out and Teenage Childbearing," *American Journal of Sociology*, 96, 5, 1226-1259.

Epple, D. and H. Sieg, (1999), "Estimating Equilibrium Models of Local Jurisdictions," *Journal of Political Economy*, 107, 4, 645-681.

Fogli, A. and V. Guerrieri, (2018), "The End of the American Dream? Inequality and Segregation in US Cities," mimeo.

Graham, B., (2016), "Identifying and Estimating Neighborhood Effects," mimeo, UC Berkeley.

Harding, D., (2003), "Counterfactual Models of Neighborhood Effects: The Effect of Neighborhood Poverty on Dropping Out and Teenage Pregnancy," *American Journal of Sociology*, 109, 3, 676-719.

Ioannides, Y., (2002), "Residential Neighborhood Effects," *Regional Science and Urban Economics*, 32, 2, 145-165.

Ioannides, Y. and J. Zabel, (2008), "Interactions, Neighborhood Selection and Housing Demand," *Journal of Urban Economics*, 63, 1, 229-252.

Ioannides, Y., (2011), "Neighborhood Effects and Housing," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Jencks, C. and S. Mayer, (1990), "The Social Consequences of Growing Up in a Poor Neighborhood," in *Inner-City Poverty in the United States*, L. Lynn and M. McCreary, eds., Washington D.C.: National Academy Press.

Katz, L., J. Kling, and J. Liebman, (2007), "Experimental Analysis of Neighborhood Effects," *Econometrica*, 75, 1, 83-119.

Ludwig, J., J. Lieberman, J. Kling, G. Duncan, L. Katz, R. Kessler, and L. Sanbonmatsu, (2008), "What Can We Learn about Neighborhood Effects from the Moving to Opportunity Experiment?," *American Journal of Sociology*, 114, 1, 144-188.

Oreopoulos P., (2003), "The Long-Run Consequences of Living in a Poor Neighborhood," *Quarterly Journal of Economics*, 118, 4, 1533-1575

Pinto, R., (2015), "Selection Bias in a Controlled Experiment: The Case of Moving to Opportunity," mimeo, University of California—Los Angeles.

Raudenbush, S. and R. Sampson, (1999), "'Ecometrics': Towards a Science of Assessing Ecological Settings, with an Application in the Systematic Social Observation of Neighborhoods," *Sociological Methodology*, 29, 1-41.

Reardon, S. and K. Bischoff, (2011), "Income Inequality and Income Segregation," *American Journal of Sociology*, 116, 4, 1092-1153.

Rosenbaum, J., (1995), "Changing the Geography of Opportunity by Expanding Residential Choice: Lessons from the Gautreaux Program," *Housing Policy Debate*, 6, 1, 231-269.

Sampson, R., (2008), "Moving to Inequality: Neighborhood Effects and Experiments Meet Social Structure," *American Journal of Sociology*, 114, 1, 189-231.

Sampson, R., J. Morenoff, and Earls, F., (1999), "Beyond Social Capital: Collective Efficacy for Children," *American Sociological Review*, 64, 633-660.

Sharkey, P. and F. Elwert, (2011), "The Legacy of Disadvantage: Multigenerational Effects on Cognitive Ability," *American Journal of Sociology*, 116, 6, 1934-1981.

Solon, G., M. Page and G. Duncan, (2000), "Correlations Between Neighboring Children and in Their Subsequent Educational Attainment," *Review of Economics and Statistics*, 82, 3, 393-392.

Topa, G., (2001), "Social Interactions, Local Spillovers, and Unemployment," *Review of Economic Studies*, 68, 2, 261-295.

Topa, G. and Y. Zenou, (2015), "Neighborhood and Network Effects," *Handbook of Regional and Urban Economics*, G. Duranton, J. V. Henderson, and W. Strange, eds., Amsterdam: North Holland.

Tsekeris, T., and N. Geroliminis, (2013), "City Size, Network Structure and Traffic Congestion," *Journal of Urban Economics*, 76, 1-14.

Wodtke, G., F. Elwert, and D. Harding, (2016), "Neighborhood Effect Heterogeneity by Family Income and Developmental Period," *American Journal of Sociology*, 121, 1168-222.

Wodtke, G., D. Harding, and F. Elwert, (2011), "Neighborhood Effects in Temporal Perspective: The Impact of Long-Term Exposure to Concentrated Disadvantage on High School Graduation," *American Sociological Review*, 75, 6, 713-736.

iv. Social Norms/Identity/Culture

Ainsworth-Darnell, J. and D. Downey, (1998), "Assessing the Oppositional Culture Explanation for Racial/Ethnic Differences in School Performance," *American Sociological Review*, 63, 4, 536-553

Akerlof, G. and R. Kranton, (2000), "Economics and Identity," *Quarterly Journal of Economics*, 115, 3, 715-753.

Akerlof, G. and R. Kranton, (2002), "Identity and Schooling: Some Lessons for the Economics of Education," *Journal of Economic Literature*, 40, 4, 1167-1201.

Austen-Smith, D. and R. Fryer, (2005), "An Economic Analysis of Acting White," *Quarterly Journal of Economics* 120, 551-583.

Benjamin, D., J. Choi, and A. Strickland, (2010), "Social Identity and Preferences," *American Economic Review*, 100, 4, 1913-1928.

Battu, H., and Y. Zenou (2010), "Oppositional Identities and Employment for Ethnic Minorities. Evidence from England," *Economic Journal*, 120, 542, F52-F71.

Bertrand, M., E. Luttmer, and S. Mullainathan, (2000), "Network Effects and Welfare Cultures," *Quarterly Journal of Economics*, 115, 3, 1019-1055.

Bisin, A., E. Patacchini, T. Verdier and Y. Zenou, (2010), "'Bend it like Beckham': Identity, Assimilation and Peers," *NBER Working Paper no.* 16405.

Bisin, A., E. Patacchini, T. Verdier, and Y. Zenou, (2011), "Formation and Persistence of Oppositional Identities," *European Economic Review*, 54, 8, 1046-1071.

Burke, M. and H. P. Young, (2011), "Social Norms," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Dahl, G., A. Kostol, and M. Mogstad, (2015), "Family Welfare Cultures," *Quarterly Journal of Economics*, 129, 1711-1752.

Downey, D. B., J. W. Ainsworth, and Z. Qian, (2009), "Rethinking The Attitude-Achievement Paradox Among Blacks," *Sociology of Education*, 82,1, 1-19.

Fang, H. and G. Loury, (2005), "Dysfunctional Identities Can Be Rational," *American Economic Review* 95, 2, 104-111.

Fang, H. and G. Loury, (2005), "Toward an Economic Theory of Dysfunctional Identity," *The Social Economics of Poverty: On Identity, Communities, Groups and Networks*, Christopher Barrett, ed., London: Routledge.

Fryer, R. and P. Torelli, (2010), "An Empirical Analysis of Acting White," *Journal of Public Economics*, 94, 5-6, 380-396.

Major, B. and L. O'Brien, (2005), "The Social Psychology of Stigma," *Annual Review of Psychology*, 31, 393-421.

Mickelson, R., (1990), "The Attitude-Achievement Paradox Among Black Adolescents," *Sociology of Education*, 63, 1, 44-61.

Tyson, K., W. Darity, and D. Castellino, (2005), "It's Not "a Black Thing:" Understanding the Burden of Acting White and Other Dilemmas of High Achievement," *American Sociological Review*, 70, 4, 582-605.

v. Marriage and Fertility

Blossfeld, H.-P., (2009), "Educational Assortative Marriage in Comparative Perspective," *Annual Review of Sociology*, 35, 513-530.

Choo, E. and A. Siow, (2006), "Who Marries Whom and Why," *Journal of Political Economy*, 114, 1, 175-201.

Ciliberto, F., A. Miller, H. Nielsen, and M. Simonsen, (2012) "Playing the Fertility Game at Work: An Equilibrium Model of Peer Effects," mimeo, University of Virginia.

Drewianka S., (2003), "Estimating Social Effects in Matching Markets: Externalities in Spousal Search," *Review of Economics and Statistics*, 85, 2, 408-23

Ermisch, J., M. Francesconi, and T. Siedler, (2006), "Intergenerational Mobility and Marital Sorting," *Economic Journal* 116, 513, 659-679.

Fernandez, R. and R. Rogerson, (2001), "Sorting and Long Run Inequality," *Quarterly Journal of Economics*, 116, 4, 1305-1341.

Kalmijn, M., (1994), "Assortative Mating by Cultural and Occupational Status," *American Journal of Sociology*, 100, 2, 422-452.

Kalmijn, M. and P. Van Tubergen, (2010), "A Comparative Perspective on Intermarriage: Explaining Differences Among National-Origin Groups in the United States," *Demography* 47, 2, 459-479.

Kremer, M., (1997), "How Much Does Sorting Increase Inequality?," *Quarterly Journal of Economics*, 112, 1, 115-139.

Kuziemko, I., (2011). "Is Having Babies Contagious? Fertility Peer Effects Among Siblings," mimeo, Columbia University.

Manski, C. and J. Mayshar, (2003), "Private Incentives and Social Interactions: Fertility Puzzles in Israel," *Journal of the European Economic Association* 1: 181-211.

Mogstad, K., C. Propper, and K. Salvanes, (2011), "Is Teenage Motherhood Contagious? Evidence from a Natural Experiment", *CEPR Discussion Paper no. DP8505*.

Montgomery, M. and J. Casterline, (1996), "Social Learning, Social Influence, and New Models of Fertility," *Population and Development Review* 22, 151-175.

Mourifie, I. and A. Siow, (2014), "Cohabitation Versus Marriage: Marriage Matching with Peer Effects," mimeo, University of Toronto.

South, S. and E. Baumer, (2000), "Deciphering Community and Race effects on Adolescent Premarital Childbearing." *Social Forces* 78, 4, 1379–1408.

vi. Technology Adoption

Bandiera, O. and I. Rasul, (2006), "Social Networks and Technology Adoption in Northern Mozambique," *Economic Journal*, 116, 869-092.

Brock, W. and S. Durlauf, (2010), "Social Interactions and Technology Adoption," *Journal of the European Economic Association*, 8, 232-251.

Conley, T. and C. Udry, (2010), "Learning About a New Technology: Pineapple in Ghana," *American Economic Review*, 100, 1, 35-69.

Golub, B., and M. Jackson, (2010), "Using Selection Bias to Explain the Observed Structure of Internet Diffusions," *Proceedings of the National Academy of Sciences* 107, 24, 10833-10836.

Goolsbee, A. and P. Klenow, (2002), "Evidence on Learning and Network Externalities in the Diffusion of Home Computers," *Journal of Law and Economics*, 45, 317-343.

Goyal, S., (2011), Learning in Networks," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Jackson, M. and L. Yariv, (2011), "Diffusion, Strategic Interaction and Social Structure," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds. Amsterdam: North Holland.

Lopez-Pintado, D. and M. Jackson, (2011), "Diffusion in Networks with Heterogeneous Agents and Homophily, Working Paper, Stanford University.

Munshi, K., (2004), "Social Learning in a Heterogeneous Population: Technology Diffusion in the Indian Green Revolution," *Journal of Development Economics*, 73, 185-213.

Skinner, J. and D. Staiger, (2007), "Technology Adoption from Hybrid Corn to Beta Blockers," *Hard-to-Measure Goods and Services: Essays in Honor of Zvi Griliches*, E. and C. Hulten, eds., Chicago: University of Chicago Press.

Strang, D. and N. Tuma, (1993), "Spatial and Temporal Heterogeneity in Diffusion," *American Journal of Sociology*, 99, 3, 614-639.

Young, H. P., (2009), "Innovation Diffusion in Heterogeneous Populations: Contagion, Social Influence, and Social Learning," *American Economic Review*, 99, 5 1899-1924.

vii. Health/Risky Behaviors

Black, S., P. Devereux, and K. Salvanes, (2010), "Under Pressure? The Effect of Peers on Outcomes of Young Adults," *NBER Working Paper no. 16004*.

Burke, M. and F. Heiland, (2007), "Social Dynamics of Obesity," *Economic Inquiry*, 45, 3, 571-591.

Burke, M., G. Fournier, and K. Prasad, (2007), "The Diffusion of a Medical Innovation: Is Success in the Stars?," *Southern Economic Journal*, 73, 3, 588-603.

Card, D. and L. Giuliano, (2011), "Peer Effects and Multiple Equilibria in the Risky Behavior of Friends," *NBER Working Paper no. 17088*.

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

Christakis, N. and J. Fowler, (2008), "Estimating Peer Effects on Health in Social Networks: A Response to Cohen-Cole and Fletcher; and Trogdon, Nonnemaker, and Pais," *Journal of Health Economics*, 27, 5, 1400-1405.

Cohen-Cole, E. and J. Fletcher, (2008), "Is Obesity Contagious? Social Networks vs. Environmental Factors in the Obesity Epidemic," *Journal of Health Economics*, 27, 5, 1382-1387.

Cutler, D. and E. Glaeser, (2010), "Social Interactions and Smoking," in *Research Findings in the Economics of Aging*, D. Wise, ed., Chicago: University of Chicago Press.

Lyons, R., (2011), "The Spread of Evidence-Poor Medicine via Flawed Social-Network Analysis," *Statistics, Politics and Policy*, 2, 1.

Nakajima R., (2007), "Measuring Peer Effects on Youth Smoking Behaviour," *Review of Economic Studies* 74, 897-935.

Richards-Shubik, S., (2010), "Peer Effects in Sexual Initiation: Separating Social Norms and Partner Supply," Working Paper, Carnegie-Mellon University.

Trogdon, J., J. Nonnemaker, and J. Pais, (2008), "Peer Effects in Adolescent Overweight," *Journal of Health Economics*, 27, 5, 1388-1399.

viii. Workplaces

Agrawal, A., J. McHale, and A. Oettle, (2014), "Why Stars Matter," NBER Working Paper no. 20012.

Bandiera, O., I. Barankay, and I. Rasul, (2009), "Social Connections and Incentives: Evidence from Personnel Data," *Econometrica*, 77, 1047-1094.

Bandiera, O., I. Barankay, and I. Rasul, (2010), "Social Incentives in the Workplace," *Review of Economic Studies*, 77, 427-449.

Cingano, F., and A. Rosolia (2012), "People I Know: Job Search and Social Networks," *Journal of Labor Economics*, 30, 2, 291-332.

Guryan, J., K. Kroft, and M. Notowidigdo, (2007), "Peer Effects in the Workplace: Evidence from Random Groupings in Professional Golf Tournaments." *American Economic Journal: Applied Economics*, 1, 4, 34-68.

Mas, A. and E. Moretti, (2009), "Peers at Work," *American Economic Review*, 99, 1, 112-145.

Pan, J. (2015). "Gender segregation in occupations: The role of tipping and social interactions." *Journal of Labor Economics*, 33(2), 365-408.

Schmutte, I. (2015), "Job Referral Networks and the Determination of Earnings in Local Labor Markets," *Journal of Labor Economics*, 33, 1, 1-32.

Waldinger, F. (2012), "Peer Effects in Science: Evidence from the Dismissal of Scientists in Nazi Germany," *Review of Economic Studies*, 79, 2, 838-861.

Waldinger, F., (2013), "Bombs, Brains, and Science: The Role of Human and Physical Capital for the Creation of Scientific Knowledge," mimeo, University of Warwick.

4. Intergroup Social Interactions: Black-White Inequality

i. Discrimination

Abrams, M. Bertrand, and S. Mullainathan, (2012), "Do Judges Vary in Their Treatment of Race?" *Journal of Legal Studies*, 41, 2, 347-383.

Altonji, J. and R. Blank, (1999), "Race and Gender in the Labor Market," *Handbook of Labor Economics* vol. 3, O. Ashenfelter and D. Card, eds. Amsterdam: North Holland.

Altonji, J. and C. Pierret, (2001), "Employer Learning and Statistical Discrimination," *Quarterly Journal of Economics*, 116, 1, 1313-1350.

Anwar, S. and H. Fang, (2006), "An Alternative Test of Racial Prejudice in Motor Vehicle Searches: Theory and Evidence," *American Economic Review*, 96, 1, 127-151.

Anwar, S. and H. Fang, (2011), "Testing for the Role of Prejudice in Emergency Departments Using Bounceback Rates," *The BE Journal of Economic Analysis & Policy*, 12(3).

Ayres, I., (2005), "Three Tests for Measuring Unjustified Disparate Impacts in Organ Transplantation: The Problem of "Included Variable" Bias," *Perspectives in Biology and Medicine*, 48, 1, S68-S87.

Bertrand, M. and S. Mullainathan, (2004), "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination," *American Economic Review*, 94, 4, 991-1013.

Bohnholz, R. and J. Heckman, (2005), "Measuring the Disparate Impacts and Extending Disparate Impact Doctrine to Organ Transplantation," *Perspectives in Biology and Medicine*, 48, 1, S95-S122.

Blume, L., (2006), "The Dynamics of Statistical Discrimination," *Economic Journal*, 116, 515, F480-F498.

Brock, W., (2006), "Profiling Problems with Partially Identified Structure," *Economic Journal*, 116, 515, F427-F440.

Brock, W., J. Cooley, S. Durlauf, and S. Navarro, (2012), "Observational Implications of Taste-Based Discrimination in Racial Profiling," *Journal of Econometrics*, 186, 1, 66-78.

Cain, G., (1986), "The Economics of Labor Market Discrimination: A Survey." *Handbook of Labor Economics* vol. 1, O. Ashenfelter and R. Layard, eds. Amsterdam: North Holland.

Cavounidis, C., & Lang, K. (2015). "Discrimination and Worker Evaluation," *NBER Working Paper* no. w21612.

Charles, K. and J. Guryan, (2008), "Prejudice and Wages: An Empirical Assessment of Becker's The Economics of Discrimination," *Journal of Political Economy*, 116, 5, 773-809.

Charles, K. and J. Guryan, (2011), "Studying Discrimination: Fundamental Challenges and Recent Progress," *Annual Review of Economics*, 3, 479-511

Charles, K., J. Guryan, and J. Pan, (2009), "Sexism and Women's Labor Market Outcomes," Working Paper, University of Chicago.

Collins, W. and R. Margo, (2006), "Historical Perspectives on Racial Differences in Schooling in the United States," *Handbook of the Economics of Education* vol. 1., E. Hanushek and F. Welch, eds., Amsterdam: North Holland.

Donohue, J. and J. Heckman, (1991), "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks," *Journal of Economic Literature*, 29, 4, 1603-1643.

Durlauf, S., (2006), "Assessing Racial Profiling," *Economic Journal*, 116, 515, F402-F426.

Fang, H. and A. Moro, (2011), "Theories of Statistical Discrimination and Affirmative Action: A Survey," *Handbook of Social Economics*, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Fryer, R. (2011), "Racial Inequality in the 21st Century: The Declining Significance of Discrimination," *Handbook of Labor Economics*, vol. 4, O. Ashenfelter and D. Card, eds., Amsterdam: North Holland.

Fryer, R., (2011), "The Importance of Segregation, Discrimination, Peer Dynamics, and Identity in Explaining Trends in the Racial Achievement Gap," *Handbook of Social Economics*, vol. 1, J. Benhabib, A. Bisin, and M. Jackson, eds., Amsterdam: North Holland.

Fryer, R. and S. Levitt, (2004), "The Causes and Consequences of Distinctively Black Names," *Quarterly Journal of Economics*, 119, 3, 767-805.

Gayle, G.-L., L. Golan and R. Miller, (2008), "Are There Glass Ceilings for Female Executives?," Working Paper, Carnegie Mellon University.

Heckman, J., (1998), "Detecting Discrimination," *Journal of Economic Perspectives* 12, 2, 101-116.

Heckman, J. and P. Siegelman, (1993), 'The Urban Institute Audit Studies: Their Methods and Findings' in *Clear and Convincing Evidence*, M. Fix and R. Struyk, eds. Washington D.C.: Urban Institute Press.

Knowles, J., N. Persico, and P. Todd, (2001), "Racial Bias in Motor Vehicle Searches: Theory and Evidence," *Journal of Political Economy*, 109, 1, 203-229.

Levin, B. and H. Robbins, (1983), "Urn Models for Regression Analysis, with Applications to Employment Discrimination Studies," *Law and Contemporary Problems*, 46, 247-267.

Levine, R., A. Levkov, and Y. Rubinstein, (2011), "Racial Discrimination and Competition," CEP Discussion Paper No. 1069.

Loury, G., (2002), *The Anatomy of Racial Inequality*, Cambridge: Harvard University Press.

Loury, G. (2003), "Racial Stigma: Towards a New Paradigm for Discrimination Theory," *American Economic Review Papers and Proceedings*, 93, 2, 334-37, 2003.

Manski, C., (2006), "Search Profiling With Partial Knowledge of Deterrence," *Economic Journal*, 116, 515, F385-F401.

Moro, A. and P. Norman, (2003), Empirical Implications of Statistical Discrimination on the Returns to Measures of Skill," *Annales d'Économie et de Statistique* 71-72, 399-417.

Myrdal, G., (1995), *An American Dilemma: The Negro Problem and Modern Democracy volumes 1 and 2*, New York: Transactions Press. (reprint of revised version of book published in 1944).

Pager, D., (2003), "The Mark of a Criminal Record," *American Journal of Sociology*, 108, 5, 937-975.

Pager, D. and H. Shepherd, (2008), "The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets," *Annual Review of Sociology*, 34, 181-209.

Persico, N., (2009), "Racial Profiling? Detecting Bias Using Statistical Evidence," *Annual Reviews in Economics*, 1, 229-254.

Quillian, L., (2006), "New Approaches to Understanding Racial Prejudice and Discrimination," *Annual Review of Sociology*, 32, 299-328.

Wozniak, A. (2015). "Discrimination and the effects of drug testing on black employment." *Review of Economics and Statistics*, 97(3), 548-566.

ii. Segregation

Aliprantis, D., D. Carroll, and E. Young, (2018), "What Explains Neighborhood Sorting by Income and Race?," Working Paper.

Bog, M., (2007), "Is Segregation Robust?," Working Paper, Stockholm School of Economics.

Boustan, L. P. (2013). "Racial residential segregation in American cities," *NBER Working Paper* No. w19045.

Bruch, E. and R. Mare, (2006), "Neighborhood Choice and Neighborhood Change," *American Journal of Sociology*, 112, 3, 667-709.

Bruch, E. and R. Mare, (2009), "Preferences and Pathways to Segregation: Reply to Van de Riet, Siegel, and Macy," *American Journal of Sociology* 114, 4, 1181-1198.

Caetano, G. and V. Maheshri, (2017), "School Segregation and the Identification of Tipping Behavior," *Journal of Public Economics* 148: 115-135.

Card, D., A. Mas, and J. Rothstein, (2008), "Tipping and the Dynamics of Segregation," *Quarterly Journal of Economics*, 123, 1, 177-218.

Card, D., A. Mas, and J. Rothstein, (2008), "Are Mixed Neighborhoods Always Unstable? Two-Sided and One Sided Tipping," *NBER Working Paper* no. 14470.

Crowder, L., S. South, (2008), "Spatial Dynamics of White Flight: The Effects of Local and Extralocal Racial Conditions on Neighborhood Out-Migration," *American Sociological Review*, 73, 5, 792-812.

Cutler, D. and E. Glaeser, (1997), "Are Ghettos Good or Bad?," *Quarterly Journal of Economics*, 112, 3, 827-872.

Cutler, D., E. Glaeser, and J. Vigdor, (1999), "The Rise and Decline of the American Ghetto," *Journal of Political Economy*, 107, 3, 455-506.

Dokumaci, E. and W. Sandholm, (2007), "Schelling Redux: An Evolutionary Dynamic Model of Residential Segregation," Working Paper, University of Wisconsin.

Fagiolo, G., M. Valente, and N. Vriend, (2007), "Segregation in Networks," *Journal of Economic Behavior and Organization*, 64, 316-336.

Granovetter, M. and R. Soong, (1988), "Threshold Models of Diversity: Chinese Restaurants, Residential Segregation, and the Spiral of Science," *Sociological Methodology*, 18, 69-104.

Grauwin, S., F. Goffette-Nagot, and P. Jensen, (2012), "Dynamic Models of Residential Segregation: An Analytical Solution," *Journal of Public Economics*, 96, 124-141.

Hinrichs, P. (2015). "An Empirical Analysis of Racial Segregation in Higher Education," *NBER Working Paper* no. 21831.

Logan, T., and J. Parman, (2015). "The National Rise in Residential Segregation," 77, 1, 127-170.

Massey, D., (2004), "Segregation and Stratification: A Biosocial Perspective," *Du Bois Review*, 1, 1, 7-25.

Massey, D. and N. Denton, (1988), "The Dimensions of Residential Segregation," *Social Forces*, 67, 2, 281-315.

Massey, D. and N. Denton, (1993), *American Apartheid*, Cambridge: Harvard University Press.

Massey, D. and M. Fischer, (1999), "Does Rising Income Bring Integration? New Results for Blacks, Hispanics, and Asians in 1990," *Social Science Research*, 28, 3, 316-326.

Massey, D. and M. Fischer, (2003), "The Geography of Inequality in the United States, 1950-2000 (with commentary)," *Brookings-Wharton Papers on Urban Affairs*, 1-40.

Mobius, M., (2007), "The Formation of Ghettos as a Local Interaction Phenomenon," Working Paper, Harvard University.

Mobius, M. and T. Rosenblatt, (2002), "The Process of Ghetto Formation: Evidence from Chicago," Working Paper, Harvard University.

Pancs, R. and N. Vriend, (2007), "Schelling's Spatial Proximity Model of Segregation Revisited," *Journal of Public Economics*, 91, 1-2, 1-24.

Quillian, L., (2012), "Segregation and Poverty Concentration: The Role of Three Segregations," *American Sociological Review*, 77, 3, 354-379.

Sethi, R. and R. Somanathan, (2004), "Inequality and Segregation," *Journal of Political Economy*, 112, 6, 1296-1321.

Schelling, T., (1971), "Dynamic Models of Segregation," *Journal of Mathematical Sociology*, 1, 2, 143-186.

Van de Rijt, A., D. Siegel, and M. Macy, (2009), "Neighborhood Chance and Neighborhood Change: A Comment on Bruch and Mare," *American Journal of Sociology* 114, 4, 1166-1180.

Young, H. P., (1998), *Individual Strategy and Social Structure*, Princeton: Princeton University Press, chapter 1.

Zeng, Z. and Y. Xie, (2008), "A Preference-Opportunity-Choice Framework with Applications to Intergroup Friendship," *American Journal of Sociology*, 114, 3, 614-648.

Zhang, J., (2004), "Residential Segregation in an All-Integrationist World," *Journal of Economic Behavior and Organization*, 54, 533-550.

Zhang, J., (2004), "A Dynamic Model of Residential Segregation," *Journal of Mathematical Sociology*, 28, 140-170.

Zhang, J., (2011), "Tipping and Residential Segregation: A Unified Schelling Model," *Journal of Regional Science*, 51, 1, 167-193.