### **BRUCE I. SACERDOTE**

current address:

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#### education

1992-1997

# HARVARD UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES DEPARTMENT OF ECONOMICS CAMBRIDGE, MA

Awarded Ph.D. in Economics, June 1997. Jacob K. Javits Fellow. National Science Foundation grant to fund thesis research. Specializing in econometrics, causal inference, and applied microeconomics.

#### 1986-1990 DARTMOUTH COLLEGE

HANOVER, NH

B.A. in Economics with High Honors, June 1990. *Class Salutatorian*, summa cum laude, Phi Beta Kappa, Rufus Choate Scholar (top 5% of class). National Merit Scholar. Thesis: <u>Vertical Integration in the Boating Industry</u>.

fields of research Child and youth outcomes, education, law and economics, and causal inference.

# papers and publications

"Why Do College Going Interventions Work?" with Scott Carrell. We compare and contrast results from a set of interventions designed to get more high school seniors to apply to, enroll in and persist in college. We find that in person mentoring is more effective than providing information or incentives. Forthcoming *American Economic Journal Applied*, 2017.

""Geographic Dispersion of Economic Shocks: Evidence from the Fracking Revolution" with James Feyrer and Erin Mansur. We analyze direct impacts and spillovers on wages and employment from the explosion of oil and gas drilling activity brought on by the hydrofracturing revolution. Forthcoming *American Economic Review*, 2017.

"Aggregation Reversals, with Edward Glaeser in Glenn Weyl ed. *After the Flood: How the Great Recession Changed Economic Thought*, University of Chicago Press: Chicago, IL 2017.

"From Natural Variation to Optimal Policy? The Importance of Endogenous Peer Group Formation," with Scott E. Carrell and James E. West. We run an experiment at the US Air Force Academy in which we intended to help the lowest achieving students by assigning them to squadrons with high achieving students. Assignments were optimized using reduced form results from past research. The experiment yielded the exact opposite result intended in that we harmed the students we intended to help. We show that this perverse result stems from a change in social structure induced by the experiment and not anticipated using the observational data. NBER Working Paper No. 16865. *Econometrica* 81.3 (2013): 855-882.

"Experimental and Quasi Experimental Analysis of Peer Effects," I summarize the main findings from natural and explicit experiments in peer effects. I contrast findings across numerous settings and different types of outcomes. I discuss the potential of peer effects experiments to inform policy. *Annual Reviews of Economics*, 6: 2014 11.1-11.20.

"How Much Would US Style Fiscal Integration Buffer European Unemployment and Income Shocks?," We examine transfers across US States and how these respond to shocks. We then calibrate what similar fiscal integration in Europe would look like. *American Economic Review Papers and Proceedings*, Volume 103, Number 3, May 2013, pp. 125-128(4).

Sacerdote, Bruce. ""Social Networks and the Identification of Peer Effects Comment". *Journal of Business & Economic Statistics* (0735-0015), 31 (3), p. 275.

"Katrina's Children: Evidence on the Structure of Peer Effects," with Scott Imberman and Adriana Kugler. We examine the degree to which the arrival of hurricane evacuees affects the test scores, attendance and discipline of "native" students in the receiving schools. *American Economic Review*, Vol. 102 No. 5 (August 2012) pp. 2048-82.

"When the Saints Come Marching In: Effects of Katrina Evacuees on Schools, Student Performance and Crime." I ask how Katrina and Rita evacuees were affected by forced moves from their original school system. I show that all effects on academic outcomes are strongly negative in the short run. However in the longer run evacuees from New Orleans show improved test scores and increased rates of college going. *American Economic Journal*, January 2012, Vol 4, No. 1, Pages 109-135..

"Peer Effects in Education: How Might They Work, How Big Are They and How Much Do We Know Thus Far?" in Erik Hanushek & Stephen Machin & Ludger Woessmann (ed.), 2011. *Handbook of the Economics of Education*, Elsevier, edition 1, volume 3, number 3.

"Nature And Nurture Effects On Children's Outcomes: What Have We Learned From Studies Of Twins And Adoptees?" in *Handbook of Social Economics*, eds. Jess Benhabib, Matthew Jackson and Alberto Bisin. 2010, Amsterdam: North Holland

"Colonialism and Modern Income -- Islands As Natural Experiments" with James Feyrer. We collect a new database of island histories. We use variation from wind patterns and distance from historical trade routes to instrument for the timing and intensity of European involvement, settlement and colonization. We find large positive effects of colonialism on modern incomes and explore various possible explanations. *Review of Economics and Statistics* May 2009, Vol. 91, No. 2, Pages 245-262.

"Will The Stork Return To Europe? Understanding Fertility Within Developed Nations" with James Feyrer and Ariel Dora Stern. We ask why fertility is lower in parts of Europe than in the US and Canada. The patterns across countries are partially explained by widely divergent expectations of men's childcare responsibilities interacted with increased opportunities for women in the labor force. We discuss possible mechanisms that could lead to a reversal in the downward trend in fertility within Europe. We also note the very rapid convergence in fertility rates in the rest of the world towards OECD levels of fertility. *Journal of Economics Perspectives*, Vol. 22, No. 3, Summer 2008.

"Education and Religion," with Edward Glaeser. Examines the relationship between education, religious attendance, and religious beliefs. *Journal of Human Capital*. 2008 vol. 2(2), pages 188-215

"How Large Are The Effects From Changes In Family Environment? A Study of Korean American Adoptees" This project gathers one of the largest sets of data on adopted children and their educational and labor market outcomes. I examine the treatment effects from being assigned to different types of family environment in infancy. *The Quarterly Journal of Economics, Vol. 121, No. 1: 119-158 Feb 2007.* 

"Peer Effects In Education: How Might They Work, How Big Are They And How Much Do We Know Thus Far?" *Handbook of Economics of Education.* (Amsterdam: North Holland) 2010.

"Nature And Nurture Effects On Children's Outcomes: What Have We Learned From Studies Of Twins And Adoptees?" I summarize the nature and nurture literature with particular emphasis on recent contributions by economists and arguments. Like existing work by economists and biologists, I argue that explicit nature nurture decompositions are difficult to interpret and I suggest other approaches. forthcoming in the *Handbook of Social Economics* (Amsterdam: North Holland) 2011.

"Did the Rust Belt Become Shiny? A Study of Cities and Counties that Lost Steel and Auto Jobs in the 1980s" with James Feyrer and Ariel Dora Stern. We look at steel and auto industry shocks on the 1980s in the U.S. and the U.K. and ask how quickly and via what mechanisms cities adjusted to the job losses. *Brookings Wharton Papers on Urban Affairs*: 2007.

"How Do Friendships Form?" with David Marmaros. This paper uses email volumes among a large sample of college students to examine the determinants of social interaction between any two people in the sample. *The Quarterly Journal of Economics*, Vol. 121, No. 1: 79-119. Feb 2006.

"Slavery and the Intergenerational Transmission of Human Capital." This paper examines educational outcomes for children, grandchildren and great grandchildren of former slaves. The project uses data created by matching individuals in the 1880 and 1920 censuses. *The Review of Economics and Statistics*, Vol. 87, Issue 2 - May, 2005.

"Work and Leisure in the United States and Europe: Why So Different?" with Alberto Alesina and Edward Glaeser. Uses a variety of micro and macro data to explain the cross-Atlantic differences in usual hours worked, vacation days and holidays. *NBER Macro Annual* 2005.

"Peer Effects With Random Assignment: Results for Dartmouth Roommates." *Quarterly Journal of Economics*, Vol. 116 (2001). This paper uses the random assignment of freshman dorms and roommates to test several hypotheses regarding the nature of peer effects.

"The Nature and Nurture of Economic Outcomes." *American Economic Review Papers and Proceedings*, Vol. 92 (May 2002). This paper uses three data sets of adopted children to examine the relative influence of biology versus family environment. I find that adoptive parents' education and income has a large impact on child's college attendance, marital status, and earnings.

"The Causal Effect of Income on Labor Supply: Evidence From the Lottery Winner Survey." with Don Rubin and Guido Imbens. *American Economic Review*, Vol. 91, No. 4, September 2001. The Massachusetts State Lottery is viewed as a natural experiment in which some people are randomly assigned income (the "treatment" group) and others are not (the "control" group). In this paper we look specifically at the effect of the additional income on labor supply, savings and the consumption of housing and cars.

"Peer Effects in Occupational Choice for Dartmouth Students," with David Marmaros. *European Economic Review*, Vol. 46 (May 2002). The paper examines the degree to which fraternity members or randomly assigned roommates influence job choice.

"The Social Consequences of Housing," with Edward Glaeser. *Journal of Housing Economics*, Vol. 9, (2000). This paper examines the influence of architecture and space on social interactions with friends and neighbors, crime, and political participation.

"Why Is There More Crime in Cities," with Edward Glaeser. *Journal of Political Economy*, Vol. 107, No. 6, December 1999. Crime rates are much higher in large cities than in either small cities or rural areas. This paper examines the connection between cities and crime using data from the National Crime Victimization Survey, the National Longitudinal Survey of Youth, and the FBI's Uniform Crime Reports. Higher crime rates can be partially explained by the

higher monetary benefits of crime committed in cities and the lower probabilities of recognition or arrest rate in cities.

"Crime and Social Interactions," with Edward Glaeser and José Scheinkman, *Quarterly Journal of Economics*, Vol. 111, No 2, May 1996. There is high variation in crime rates across space. This paper presents a model in which social interactions across individuals create enough covariance to explain the high variance in crime rates across cities.

"Why Doesn't The U.S. Have a European Style Welfare State?" with Alberto Alesina and Edward Glaeser. *Brookings Papers on Economic Activity* 2:2001. The paper tries to explain why the U.S. has lower levels of welfare spending relative to Europe and tests a variety of economic, political, and social theories.

"The Economic Approach to Social Capital," with Edward Glaeser and David Laibson. *The Economic Journal*, Vol. 112, November 2002. Examines the individual's decision to invest in social capital. Our proxy for social capital is the level of memberhip and participation in social organizations.

"The Social Multiplier," with Edward Glaeser and José Scheinkman. *Journal of the European Economic Association*, Vol. 1(2-3) May-June 2003. Develops and implements a methodology for measuring the magnitude of social interactions by comparing aggregate elasticities to individual elasticities. (NBER Working Paper 9153).

"Vengeance, Deterrence, and Incapacitation," with Edward Glaeser. *The Journal of Legal Studies*, Vol 32 (2), June 2003. This paper examines the prison sentences given to murderers in thirty-three urban counties. Details of the crimes, the offenders, the victims, and county demographics are used to explore which murderers are given heavier sentences and how this relates to the needs for deterrence and incapacitation and the taste for punishment (NBER Working Paper 7676).

"Response to Fines and Probabilities in a Natural Experiment," with Avner Bar-Ilan. *Journal of Law and Economics*, Vol 47 (1) (April 2004). This paper uses data from a series of experiments using cameras and shifts in fines to deter people from running red lights.

"Fixing Broken Experiments Using the Propensity Score,". Forthcoming in Andrew Gelman and Xiao-Li eds. *Missing Data and Bayesian Methods in Practice*, New York: Wiley (2004).

## Working papers

"The Determinants of Children's Outcomes: Evidence from Random Geographic Movement of Military Families," with Laura Kawano, Mike Stevens, and William Skimmyhorn. We examine the impacts of moving and of place characteristics on children's long run outcomes including college attendance, graduation, earnings and location.

"Are Public Colleges the Answer to America's Graduation Deficit?," with Chris Avery, Jessica Howell and Matea Pender. We use College Board data to conduct a simulation in which we calculate changes in graduation rates if we move undermatched low income students into their best match among in-state public colleges.

"Did the Stimulus Stimulate? Real Time Estimates of the Effects of the American Recovery and Reinvestment Act" with James Feyrer. (NBER Working Paper No. 16759). We use state and county level variation to examine the impact of the American Recovery and Reinvestment Act on employment. A cross state analysis suggests that one additional job was created by each \$170,000 in stimulus spending. Time series analysis at the state level suggests a smaller response with a per job cost of about \$400,000.

"Does Having a Female Adviser Matter?" with Alan Durell and Heidi Williams.

"The Impacts of State Merit Based Tuition Aid" with Oded Gurantz, Laura Kawano, and Eric Bettinger. We examine long term outcomes for students who were on the margin of winning or not winning a Cal Grant from the State of California to finance college tuition. Outcomes include college attendance, college graduation, wages, marital status, and remaining within California.

## Current research

"The Impact of Text Nudges and Personal Help on FAFSA filing and College Retention," with Ben Castleman, Sara Goldrick-Rab, Lindsay Page. We are partnered with the US Department of Education to run a national level experiment to boost college retention through improved access to Federal Financial Aid.

"The Payoff from the New GI Bill" with Chris Avery, Andrew Barr, Laura Kawano and Bill Skimmyhorn. We are attempting to write a comprehensive paper on how the GI bill influences college going and future earnings for Army personnel and their dependents. We pay particular attention to the benefits from attending for-profit versus traditional colleges.

"Can We Help Community College Students Persist and Transfer to Four Year Institutions?" with Melissa Kearney. Community colleges are among the most cost effective institutions in the country. We have devised a series of information and coaching interventions intended to help community college students stay on track to earning their Associates and eventually their B.A. degree.

### academic experience

### July 2005present

### RICHARD S. BRADDOCK 1963 PROFESSOR, DARTMOUTH COLLEGE HANOVER, NH

Teach courses in Advanced Topics in Finance, Money and Banking. Research in applied microeconomics. Tenured as of July 2003. Full Professor as of July 2005. Assistant Professor from July 1998-June 2003.

### July 1999- RESEARCH ASSOCIATE, NBER

CAMBRIDGE, MA

present Member of Children's and Economics of Education Programs.

#### 1995-1997 LOTTERY WINNER SURVEY

CAMBRIDGE, MA

Initiated, coordinated and supervised large National Science Foundation project under direction of Don Rubin and Guido Imbens. Team surveyed several hundred people who played and won the Massachusetts State Lottery and several hundred people who played but did not win.

### 1993-1996 RESEARCH ASSISTANT

CAMBRIDGE, MA

Built four large databases centered around crime statistics. These data have been used for a number of papers including two of my own with Ed Glaeser.

# Grants and Awards

National Science Foundation grant #9986148 to study the determinants of punishment

National Science Foundation grant #9979260 to study peer effects among college roommates.

National Science Foundation grant #0317224 to study the effects of family environment on adoptees' income, education and health.

US Dept of Education (Institute for Education Science) grant # R305A080132 to design and implement a program to promote college going among high school seniors.

National Science Foundation grant # 1260928 to examine effects of a myriad of college going interventions on high school students' outcomes.

Smith Richardson grant to study the impacts of CalGrant on college going, graduation and earnings.

National Science Foundation grant #0317224 to study the effects of family environment on adoptees' income, education and health.

Quarterly Journal of Economics Excellence in Refereeing Award (2013, 2014, 2015, 2016), American Economic Review Excellence in Refereeing Award (2012).

## other information

Associate Editor for the Quarterly Journal of Economics

Have been a frequent referee for *Quarterly Journal of Economics*, the National Science Foundation, and *Review of Economics and Statistics*. Have also refereed for the *Economic Journal*, *American Economic Review*, *Review of Economic Studies*, *Journal of Political Economy*, *Rationality and Society*, The Spencer Foundation, and the *Journal of Law and Economics*.

My work has been quoted in Business Week, Forbes, Investors Business Daily, The Manchester Union Leader, the Washington Post, Investors Business Daily, The New York Times, the Wall Street Journal, *Freakonomics* and The New Yorker.