

Poli 213: Experimental Methods in Political Science

Tuesday 2-5 PM
Location: El Capitan
Professor Alex Theodoridis
Email: atheodoridis@ucmerced.edu
Office: SSM 247B
Office Hours: By appointment

Suggested Books

Rosenbaum. 2012. *Design of Observational Studies*.

Mutz. 2011. *Population-Based Survey Experiments*. Princeton, NY: Princeton University Press

Cambridge Handbook of Experimental Political Science. New York: Cambridge University Press.

Rubin. *Matched Sampling for Causal Effects*. New York: Cambridge University Press.

Gerber and Green. *Field Experiments: Design, Analysis & Interpretation*. W.W. Norton.

Dunning. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Cambridge.

We will read a great deal from these, and they are books I believe you ought to own, not just for this class, but as you pursue your careers as scholars. Many of the readings will come from other sources: journals, unpublished manuscripts, and other books. This syllabus lists more reading that you can reasonably do each week. That is partly so that it can be used as a guide for you as you seek to explore topics in greater depth than we can in this course. I will typically indicate which readings you **MUST** do.

Course Format

The class will include a mixture of lecture, discussion, and an occasional guest speaker. It is critical that you come to class prepared to discuss readings. This course requires your active participation. Even when I do “lecture,” my style will often rely on the Socratic method, which involves asking lots of questions. So, be prepared to be involved during every class session.

Intended Student Learning Outcomes (SLOs):

At the end of this course students should be able to

1. Be able to understand and apply the scientific method to the study of politics (PLO 3 and PLO 5)

2. Fluently consume and critique basic political science literature on with respect to theory and research design (PLO 3 and PLO 4)
3. Be able to design research with strong causal inference, identify threats to causal inference, and suggest solutions to those threats (PLO 3)

General Program Learning Outcomes (PLOs) for Political Science:

1. A comprehensive graduate-level understanding of processes, theories, and empirical regularities in the student's major area of emphasis (Political Institutions and Political Economy or Political Cognition and Behavior).
2. A graduate-level understanding of processes, theories, and empirical regularities in the student's minor area of emphasis (Political Institutions and Political Economy or Political Cognition and Behavior).
3. Competency with contemporary social science methods used to conduct rigorous research on political phenomena.
4. Effective scientific communication skills, especially the ability to convey complex concepts and information in a clear and concise manner.
5. The ability to initiate and conduct independent research that makes an original contribution to political science knowledge of a quality that can be published in a peer reviewed outlet.
6. Proficiency in the skills needed to participate in the intellectual and organizational aspects of the profession of political science.

This course will teach you how to design, carry out, and write up original experimental research.

We will focus on:

- Theory and Methods.
- Experimental Literature.
- Nuts and Bolts of Causal Work.

Assignments

Homework Assignments-30%

We will have a variety of homework assignments. Homework will be assigned in class and will be due at the beginning of class the following week. Late homework will not be accepted. If you do not turn in an assignment on time, you will receive a zero on that homework.

Class Participation – 20%

Everyone in the class will be responsible for a number of different class presentations.

It is important that you all do the readings each week. Even though there will be one or more people presenting them I am likely to ask questions of any and all of you during the discussion.

Final Experimental Paper-50% -- More info to come...

Note: Homework and Paper should be in LaTeX.

Outline of the Semester (This WILL Change!)

Causal Inference: A missing data problem

Sekhon and Hidalgo. “Causality” <http://sekhon.berkeley.edu/papers/causality.pdf>

Paul W. Holland. “Statistics and Causal Inference” *Journal of the American Statistical Association*, Vol. 81, No. 396 (Dec., 1986), pp. 945-960

Sekhon. “The Neyman-Rubin Model of Causal Inference and Estimation via Matching Methods” *The Oxford Handbook of Political Methodology*, Janet Box-Steffensmeier, Henry Brady, and David Collier, eds. <http://sekhon.berkeley.edu/papers/SekhonOxfordHandbook.pdf>

Shadish, Cook and Campbell. Chapter 11, “Generalized Causal Inference: A Grounded Theory.”

Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia (eds.). 2011. “Experimentation in Political Science” (Chapter 1) and “Experiments: An Introduction to Core Concepts” (Chapter 2). In James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia (eds.), *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.

Gerber, Alan S. and Donald P. Green. 2012. “Causal Inference and Experimentation.” Chapter 2 (pp. 21-50) in *Field Experiments*. New York: W. W. Norton & Company.

Imai, Kosuke, Gary King, and Elizabeth A. Stuart. 2008. “Misunderstandings between Experimentalists and Observationalists about Causal Inference.” *Journal of the Royal Statistical Society*, 171: 481-502.

Campbell, Donald T. and Julian C. Stanley. 1963. *Experimental and Quasi-experimental Designs for Research*. Chicago: Rand McNally. Pages 5-27, 31-34. Skim pages 34-57, 64-71.

Collection on Campbell vs. Rubin on Causality in *Psychological Methods* (2010):

Maxwell, Scott E. 2010. “Introduction to the Special Section on Campbell’s and Rubin’s Conceptualizations of Causality.” *Psychological Methods*, 15: 1-2.

Shadish, William R. 2010. “Campbell and Rubin: A Primer and Comparison of Their Approaches to Causal Inference in Field Settings.” *Psychological Methods*, 15: 3-17.

Rubin, Donald B. 2010. “Reflections Stimulated by the Comments of Shadish (2010) and West and Thoemmes (2010).” *Psychological Methods*, 15: 38-46.

The Experimental Benchmark

Green, Donald P. and Alan S. Gerber. 2002. Reclaiming the Experimental Tradition in Political Science. In *Political Science: State of the Discipline*, ed. by Ira Katznelson and Helen V. Milner. New York: W. W. Norton. Pp.805-32.

Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia. 2006. "The Growth and Development of Experimental Research in Political Science." *American Political Science Review* 100:627-35.

McDermott. 2002. "Experimental Methodology in Political Science." *Political Analysis*.

Hill, Russell A. and Robert A. Barton. 2005. "Red enhances human performance in contests: Signals biologically attributed to red coloration in males may operate in the arena of combat sports." *Nature*. 435: 293.

Rowe, Candy, Harris, Julie M. and Roberts, S. Craig. 2005. "Sporting contests: Seeing red? Putting sportswear in context." *Nature*. 437.

Rosenbaum excerpts.

Kirk, Roger E. 2009. "Experimental Design." In Roger E. Millsap and Alberto Maydeu-Olivares (eds.), *SAGE Handbook of Quantitative Methods in Psychology*. Thousand Oaks, CA: Sage.

Shadish, William R., Thomas D. Cook, and Donald T. Campbell. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston: Houghton-Mifflin. Chapter 3: "Construct Validity and External Validity." Chapter 11: "Generalized Causal Inference: A Grounded Theory."

Morton, Rebecca B. and Kenneth C. Williams. 2010. *Experimental Political Science and the Study of Causality: From Nature to the Lab*. New York: Cambridge University Press. Chapter 11: "History of Codes of Ethics and Human Subjects Research," only pages 412-422.

Imai, Kosuke, Luke Keele, Dustin Tingley, and Teppei Yamamoto. 2011. "Unpacking the Black Box of Causality: Learning about Causal Mechanisms from Experimental and Observational Studies." *American Political Science Review*, Vol. 105, No. 4 (November), pp. 765-789.

Experimental Paradigms:

Survey Experiments

Mutz, Diana C. 2011. *Population-Based Survey Experiments*. Princeton, NY: Princeton University Press.

Gaines, Brian J., James H. Kuklinski, and Paul J. Quirk. 2007. "The Logic of the Survey Experiment Reexamined." *Political Analysis*, 15: 1-20.

Druckman, James N. and Thomas Leeper. 2011. "Learning More from Political Communication Experiments: The Importance of Pretreatment Effects." *American Journal of Political Science*.

Transue, John E., Lee, Daniel J. and John H. Aldrich. 2009 "Treatment Spillover Effects across Survey Experiments." *Political Analysis*. 17: 143-161.

Sniderman and Grob. 1996. "Innovations in Experimental Design in Attitude Surveys." *Annual Review of Sociology*.

Theodoridis. "The Political World through Red and Blue Colored Glasses"

Henderson and Theodoridis. "Seeing Spots"

Nicholson. "Polarizing Cues". *American Journal of Political Science*.

Streb, Matthew J., Barbara Burrell, Brian Frederick, and Michael A. Genovese. 2008. "Social Desirability Effects and Support for a Female American President." *Public Opinion Quarterly* 72: 76-89.

Conjoint Studies

Hainmueller, Hopkins and Yamamoto. "Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments" *Political Analysis*.

Hainmueller and Hopkins. Forthcoming. "The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes toward Immigrants" *American Journal of Political Science*.

Lab Experiments

Iyengar, Shanto. 2011. "Laboratory Experiments in Political Science" (Chapter 9). In James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia (eds.). 2011. *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.

Camerer, Colin F. and Ernst Fehr. 2004. "Measuring Social Norms and Preferences Using Experimental Games: A Guide for Social Scientists." In Joseph Henrich, Robert Boyd, Samuel Bowles, Colin Camerer, Ernst Fehr, and Herbert Gintis (eds.), *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford University Press, pp. 55-95.

Chen, Yan and Sherry Xin Li. 2009. "Group Identity and Social Preferences." *American Economic Review* 2009, 99:431-457.

Grossman, Guy. 2011. "Lab-in-the-field Experiments." *The Experimental Political Scientist*, 2: 13-19.

Dickson, Eric S. 2011. "Economics vs. Psychology Experiments: Stylization, Incentives, and Deception" (Chapter 5). In James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia (eds.), *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.

Falk, Armin and James J. Heckman. 2009. "Lab Experiments Are a Major Source of Knowledge in the Social Sciences." *Science*, 326: 535-538.

Carlsmith, J. Merrill, Phoebe C. Ellsworth, and Elliot Aronson. 1976. *Methods of Research in Social Psychology*. Reading, MA: Addison-Wesley. Introduction. Chapter 2: "Some Problems with Experiments in Social Psychology." Chapter 5: "The Independent Variable."

McMillan, James H. 2007. "Randomized Field Trials and Internal Validity: Not So Fast My Friend." *Practical Assessment, Research & Evaluation*, vol. 12, no. 15.

Levitt, Steven D. and John A. List. 2007. What Do Laboratory Experiments Measuring Social Preferences Reveal About the Real World? *Journal of Economic Perspectives*, 21: 153-174.

Field Experiments

Gerber, Alan S. 2011. "Field Experiments in Political Science." In Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia (eds.), *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.

Harrison, Glenn W. and John A. List. "Field Experiments." *Journal of Economic Literature*, 42: 1009-1055.

Edward Miguel and Michael Kremer. 2004. "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities." *Econometrica* 72:159-217.

Gerber and Green, 2000. The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment. *APSR*. Vol 94, No. 3.

Miguel et al. 2008. "National Cultures and Soccer Violence"

Wantchekon, Leonard. 2003. "Clientelism and Voting Behavior: Evidence from a Field Experiment in Benin." *World Politics*

Humphreys, Macartan and Jeremy M. Weinstein. 2009. "Field Experiments and the Political Economy of Development." *Annual Review of Political Science*, 12: 367-378.

Nickerson, David W. 2008. "Is Voting Contagious? Evidence from Two Field Experiments." *American Political Science Review*, 102: 49-57.

Paluck, Elizabeth Levy and Donald P. Green. 2009. "Deference, Dissent, and Dispute Resolution: An Experimental Intervention Using Mass Media to Change Norms and Behavior in Rwanda." *American Political Science Review*, 103: 622-644.

Adida, Claire L., David D. Laitin, and Marie-Anne Valfort. 2010. "Identifying Barriers to Muslim Integration in France." *Proceedings of the National Academy of Sciences*.

Butler, Daniel M. and David W. Nickerson. 2011. "Can Learning Constituency Opinion Affect How Legislators Vote? Results from a Field Experiment." *Quarterly Journal of Political Science*, 6: 55-83.

Green, Donald P. 2013. "Breaking Empirical Deadlocks in the Study of Partisanship: An Overview of Experimental Research Strategies." *Politics and Governance* 1: 6-15.

Gerber, Alan S., Gregory A. Huber, and Ebonya Washington. 2010. "Party Affiliation, Partisanship, and Political Beliefs: A Field Experiment." *American Political Science Review*, 104: 720-744.

Natural Experiments

Dunning, Thad. 2007. "Improving Causal Inference: Strengths and Limitations of Natural Experiments." *Political Research Quarterly*

Dunning Book

Ansolabehere, Snyder, and Stewart (2000): "Old Voters, New Voters, and the Personal Vote: Using Redistricting to Measure the Incumbency Advantage," *AJPS* 44:1, 17-34.

Sekhon and Titiunik. "When Natural Experiments Are Neither Natural Nor Experiments." *American Political Science Review*, 106 (1): 35-57. 2012.

Lenz and Ladd: “Exploiting a Rare Shift in Communication Flows: Media Effects in the 1997 British Election”

Brady, Henry E and McNulty, John E. “Turning Out to Vote: The Costs of Finding and Getting to the Polling Place” *American Political Science Review*. 105 (1): 115-134

Technical Topics

Power Calculations

Pre-Analysis Plans and Reporting

Humphreys, Macartan and Sanchez de la Sierra, Raul and van der Windt, Peter. 2013. “Fishing, Commitment, and Communication: A Proposal for Comprehensive Nonbinding Research Registration” *Political Analysis*. 21 (1). 1-20.

Monogan, James E. 2013. “A Case for Registering Studies of Political Outcomes: An Application in the 2010 House Elections” *Political Analysis* 21 (1): 21-37.

Gerber et al. 2014. “Reporting Guidelines for Experimental Research: A Report from the Experimental Research Section Standards Committee” *Journal of Experimental Political Science*. 1. 81-98.

Sample Weights

Rivers. “Sample Matching”

Miratrix, Sekhon and Theodoridis. “Why You Should (Usually) Post-Stratify on Sample Weights in Survey Experiments”

Bootstrap

Permutation Analysis

Mediators

Tingley, Dustin, Teppei Yamamoto, Kentaro Hirose, Luke Keele, and Kosuke Imai. Forthcoming. “mediation: R Package for Causal Mediation Analysis.” *Journal of Statistical Software*.

Imai, Kosuke, Luke Keele, and Teppei Yamamoto. (2010). “Identification, Inference, and Sensitivity Analysis for Causal Mediation Effects.” *Statistical Science*, Vol. 25, No. 1 (February), pp. 51-71.

Imai, Kosuke, Luke Keele, and Dustin Tingley. (2010). "A General Approach to Causal Mediation Analysis." *Psychological Methods*, Vol. 15, No. 4 (December), pp. 309-334.

Imai, Kosuke, Dustin Tingley, and Teppei Yamamoto. (2013). "Experimental Designs for Identifying Causal Mechanisms." (with discussions) *Journal of the Royal Statistical Society, Series A (Statistics in Society)*, Vol. 173, No. 1 (January), pp. 5-51.

Imai, Kosuke and Teppei Yamamoto. (2013). "Identification and Sensitivity Analysis for Multiple Causal Mechanisms: Revisiting Evidence from Framing Experiments." *Political Analysis*, Vol. 21, No. 2 (Spring), pp. 141-171. (lead article)

Causality with Observational Data

Rosenbaum excerpts.

Matching:

Rubin book.

Diamond and Sekhon. "Genetic Matching for Estimating Causal Effects: A General Multivariate Matching Method for Achieving Balance in Observational Studies." *Review of Economics and Statistics*, 95(3): 932-945. 2013.

Sekhon. 2011. "Multivariate and Propensity Score Matching Software with Automated Balance Optimization: The Matching package for R" *Journal of Statistical Software*, 42(7): 1-52.

Sekhon. 2009. "Opiates for the Matches." *Annual Review of Political Science*, 12: 487-508.

Regression-Discontinuity Design:

Lee, David S. 2008. "Randomized experiments from non-random selection in U.S. House elections," *Journal of Econometrics*.

Caughey and Sekhon. "Elections and the Regression-Discontinuity Design: Lessons from Close U.S. House Races, 1942-2008." *Political Analysis*, 19 (4): 385-408. 2011.

Green, Donald P., Terence Y. Leong, Holger L. Kern, Alan S. Gerber, and Christopher W. Larimer. 2009. Testing the Accuracy of Regression Discontinuity Analysis Using Experimental Benchmarks. *Political Analysis* 17(4): 400-417.

Eggers and Hainmueller: "The Value of Political Power: Estimating Returns to Office in Post-War British Politics"

For background on Regression Discontinuity Design see:

Thistlethwaite and Campbell (1960): "Regression-Discontinuity Analysis: An alternative to the ex post facto experiment"

Hahn, Todd, and van der Klaauw (2001): “Identification and Estimation of Treatment Effects with a Regression-Discontinuity Design”

Imbens, Guido W. and Thomas Lemieux. 2008. “Regression Discontinuity Designs: A Guide to Practice.” *Journal of Econometrics*, 142: 615–635.

Cook, Thomas D. 2008. “‘Waiting for Life to Arrive’: A History of the Regression-Discontinuity Design in Psychology, Statistics and Economics.” *Journal of Econometrics*, 142: 636–654.

Lerman, Amy E. 2009. “The People Prisons Make: Effects of Incarceration on Criminal Psychology.” In Steven Raphael and Michael Stoll (eds.), *Do Prisons Make Us Safer? The Benefits and Costs of the Prison Boom*. New York: Russell Sage.

Gerber, Alan S., Daniel P. Kessler, and Marc Meredith. 2011. “The Persuasive Effects of Direct Mail: A Regression Discontinuity Approach.” *Journal of Politics*, 73: 144-155.

Instrumental Variables:

Sovey, Allison J., and Donald P. Green. 2011. “Instrumental Variables Estimation in Political Science: A Readers’ Guide.” *American Journal of Political Science* 55:188-200.

IV Handout

Gomez, Brad T., Thomas G. Hansford, and George A. Krause. 2007. “The Republicans Should Pray for Rain: Weather, Turnout, and Voting in U.S. Presidential Elections.” *Journal of Politics* 69 (3): 649–663.

Hansford, Thomas G., and Brad T. Gomez. 2010. “Estimating the Electoral Effects of Turnout.” *American Political Science Review* 104 (2): 268–288.

Henderson and Brooks. “Rain and Representation: The Effect of Margin of Victory on Incumbent Legislative Behavior”

Practical Sources on Amazon Mechanical Turk

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling. 2011. “Amazon’s Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?” *Perspectives on Psychological Science*, 6: 3-5.

Mason, Winter and Siddarth Suri. 2010. “Conducting Behavioral Research on Amazon’s Mechanical Turk.” *Behavior Research Methods*, 5: 1-23.

Paolacci, Gabriele, Jesse Chandler, and Panagiotis G. Ipeirotis. 2010. Running Experiments on Amazon Mechanical Turk.” *Judgment and Decision Making*, 5: 411-419

Horton, John J, David G Rand, and Richard J Zeckhauser. 2011. "The Online Laboratory: Conducting Experiments in a Real Labor Market." *Experimental Economics* 14: 399-425.

Kittur, Aniket, Ed H. Chi, and Bongwon Suh. 2008. “Crowdsourcing User Studies with Mechanical Turk.” Proceedings of the 2008 International Conference on Human Factors in Computing Systems, CHI 2008, Florence, Italy.

Downs, Julie S., Mandy B. Holbrook, Steve Sheng, and Lorrie Faith Cranor. 2010. Are Your Participants Gaming the System? Screening Mechanical Turk Workers. Proceedings of the 28th International Conference on Human Factors in Computing Systems, CHI 2010, Atlanta, GA.

Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.Com's Mechanical Turk." *Political Analysis* 20: 351-68.

MTurk Links:

<http://aws.amazon.com/mturk/>

<http://experimentalturk.wordpress.com/>

http://mturk.s3.amazonaws.com/videos/create_first_hit.swf

<http://www.playgraph.com/2011/tutorials/experiments-using-mechanical-turk-part-2>

Experiment-Related Links

NYU’s Center for Experimental Social Science (<http://cess.nyu.edu/>) annual conference on experiments in political science.

West Coast Experiments Conference: <http://ps-experiments.ucr.edu/>.

Time-Share Experiments in the Social Sciences (TESS): <http://www.tessexperiments.org/>.