

POIR 610: Introduction to Research Design

Professor Nick Weller

Course location and time: THH 111; Tuesday, 2-5pm

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Office Hours: Tuesday, 11am to 12noon; Thursday, 1:30-3:30pm or by appointment

Course Description

This is a course on research design. The course will cover how to design compelling research, the focus of which is on causal inference. We will cover the design of true experiments and contrast them to many other different approaches to research. Discussing threats to the internal validity of true experiments will allow us to focus in on the same threats internal validity in observational studies. We will cover extensively the design of observational research where the researcher controls neither the assignment of cases into groups nor the administration of the treatment being studied. We will examine both quantitative and qualitative approaches to social science research. Our examples will be drawn from throughout the social sciences (psychology, political science, economics, education research, etc). The reading load for the class is extensive. The goal each week is to provide an overview of the methodological issue being addressed and also some examples of the issue.

Please bring questions or issues raised in other classes to this class and we will discuss them here, too. The discussion of research methods should not be confined to just this class. The issues we will discuss in this class permeate all of your other classes and we will endeavor to merge the material in this class with the material in your other classes.

This is NOT a statistics or econometrics class. We will discuss those to some extent, but it will not be our focus. Likewise, this class provides only the introduction to many of the key approaches to experimental and observational research. To gain greater ability with such tools will require taking additional coursework and investing time outside of class, as well.

Required Books

Trochim, William and James P. Donnelly. 2007. *The Research Methods Knowledge Base, 3rd Edition*. Cincinnati, OH, Atomic Dog Publishing.

King, Keohane and Verba. 1994. *Designing Social Inquiry*.

I will also post additional course readings on the Course's BlackBoard Web Page or distribute them via email. You should always check Blackboard a few days before class to see if there are new readings in the folder for that week.

Course Format

The course will be a mixture of lecture and discussion. We will often start with lecture overview and then we will move into a discussion of the material after that. Depending on the topic the exact balance of discussion and lecture will vary. I will expect all of you to participate actively through multiple mechanisms – asking questions, presenting readings, discussing your research

projects, etc. Even when days are primarily about lecture I want participation – ask questions if you don't understand; challenge the reading; explore the topics by asking questions. Not only will you each individually do better if you participate actively, but the class will benefit as well.

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. The phone number for DSP is 213-740-0776. If you need assistance with the process, please contact me at the phone number or e-mail address above.

Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A:

<http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

Assignments

Homework Assignments-50%

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 participation. Each student must do at least one presentation during the semester. During the presentation your task will be to put the readings into the context of the class and that week's topic (i.e. synthesize) and then to provide a discussion of the material. The discussion can include critique, related questions.

You should attempt to first understand what the author is attempting to do on its own terms, and then evaluate how well the author did it. To put it another way, the focus in this class will not be to discuss authors' theories (although we can/will do that), but rather to take their theory for granted and evaluate the quality of the research.

Final Paper-30% -- Take one of the empirical readings from your other classes (or that you find on your own). Provide a brief description of the author's main argument and theory. Then discuss the author's research design. You should address at least the following topics: constructs, measures, data collection, and research design. Your paper should highlight the strengths and

weaknesses of the author's work. After providing a critique of the paper/book you should discuss how you could improve on the research. More information will be provided about the paper.

Schedule of Topics

Week 1: The Scientific Method; Goals of Empirical Research (no class on 8/27, this starts 9/3)

1. Trochim and Donnelly, Chapter 1
2. Curd, Martin and J.A. Cover. 1998. *Philosophy of Science: The Central Issues*. New York: W.W. Norton.
 - a. Achinstein, "Explanation v. Prediction: Which Carries more Weight?" in Curd and Cover.
 - b. Snyder, "Is Evidence Historical?" in Curd and Cover.
 - c. Lakatos, "Science and Psuedoscience" in Curd and Cover
3. Friedman, Milton, 1953. The Methodology of Positive Economics, in Friedman, *Essays in Positive Economics*. Chicago, IL: University of Chicago Press.
4. Cartwright, Nancy. 1980. "The Truth Doesn't Explain Much" *American Philosophical Quarterly*
5. Przeworski, Adam. 2005. "Is the Science of Comparative Politics Possible?" (note: is there anything about this unique to *comparative* politics? If so, what?)
6. Falletti and Lynch. Context and Causal Mechanisms in Political Analysis
7. Noel, Hans. 2010. "Ten Things Political Science Knows That You Don't"

Week 2: Measurement and Sampling

1. Trochim and Donnelly, Chapters 2, 3, and 5.
2. Adcock, Robert, David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review* 95:3 (September) 529-46.
3. Gleditsch, Kristian, and Michael Ward. 1997. "Double Take: A Re-examination of Democracy and Autocracy in Modern Politics." *Journal of Conflict Resolution* 41:361-83.
4. Munck, Gerardo L. and Jay Verkuilen. 2002. "Conceptualizaing and Measuring Democracy: Evaluating Alternative Indices." *Comparative Political Studies*. Vol. 35, No. 1. P. 5-34.
5. Przeworski also, Adam, et. al. 2000. *Democracy and Development*. New York: Cambridge University Press. Chapter 1, pp. 13-77.
6. Measuring Legislator Ideology: Poole and Rosenthal

Recommended:

1. Plumper, Thomas and Eric Neumayer. 2010. "The Level of Democracy during Interregnum Periods: Recoding the polity2 Score." *Political Analysis*.
2. Conceptualizing and Measuring Democracy: A New Approach, available here: <http://people.bu.edu/jgerring/documents/MeasuringDemocracy.pdf>

Homework #1 due Week 4. Analyze the data provided on World Governance Indicators (<http://info.worldbank.org/governance/wgi/index.asp>) and assess its validity and reliability. You

should download the data from the above webpage and examine what is produced. I will provide more information in Week 2 of the course.

Week 3: Causality and Causal Effects

1. Trochim and Donnelly, Chapter 3.
2. Shadish, Cook and Campbell. Chapter 1, "Experiments and Generalized Causal Inference"
3. Imbens and Rubin, Chapter 1
4. Cartwright, "Causality, Invariance and Policy"
5. Winship and Morgan. 1999.
6. Glynn and Gerring. 2013. Strategies of Research Design with Confounding: A Graphical Description

Week 4: Design, Validity, and Disconfirmation

1. Trochim and Donnelly, Chapter 7
2. Shadish, Cook and Campbell. Chapters 2, 3 and 11
3. Taubes, Gary. "Do We Really Know What Makes Us Healthy?" *New York Times*
4. Ioannidis, John. 2005. "Why Most Published Research Findings Are False."
5. Oster, Emily. 2013. "Take Back Your Pregnancy."
6. Rubin, Donald B. 2008. "For Objective Causal Inference, Design Trumps Analysis." *Annals of Applied Statistics* 2:3, 808-40.

Week 5: Experimental Design and Experiments

1. Shadish, Cook and Campbell Chapter 8 and 10
2. 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: 627-635.
3. Morton/Williams Chapters 3, 4 and 7
4. Sinderman, Paul. "Chapter 8: The Logic and Design of the Survey Experiment: An Autobiography of a Methodological Innovation" from *Cambridge Handbook of Experiments*
5. Gaines, Kuklinski, and Quirk. 2006. "The Logic of the Survey Experiment Reexamined." *Political Analysis*

Week 6: More Experiments

1. Gerber and Green, 2000. The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment. *APSR*. Vol 94, No. 3.
2. Nickerson, David. 2010. "Is Voting Contagious? Evidence from Two Field Experiments". *American Political Science Review* 102 (1) 49-57.
3. Miguel, Edward and Michael Kremer. 2004. Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities. *Econometrica* 72: 159-217.
4. Olken, Benjamin A. 2010. "Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia". *American Political Science Review* 104 (2), 243-267.

5. Boudreau et al. 2010. "Making Talk Cheap (and Problems Easy): How Institutions Can Facilitate Consensus." *Journal of Empirical Legal Studies*
6. Tomz, Michael. 2007. Domestic Audience Costs in International Relations: An Experimental Approach. *International Organization* 61:821-840.
7. Levendusky, M. S., & Horowitz M. (2012). [When Backing Down Is the Right Decision: Partisanship, New Information and Audience Costs](#). *Journal of Politics*. 74(2), 323-338.
8. Levendusky and
9. Watch YouTube video of Nancy Cartwright, "What Can Economists Know":
http://www.youtube.com/watch?v=fuvXWnTl6_s

Homework #2: Experimental design paper. Pick a question that interests you in social science. Describe the basic theory and hypothesis. Be specific about the different groups and the treatment, and explain how you manipulate the treatment. Provide a clear description of the treatment and how it matches the theory/hypothesis from which you started.

Week 7: Observational Research, I

1. Trochim and Donnelly, Chapter 10.
2. Shadish et al. chapter 5 & 6
3. Campbell and Stanley. 1968. "Analysis of Data on the Connecticut Speeding Crackdown as a Time-Series Quasi-Experiment," *Law and Society Review* 3, 1: 55-76.
4. Crosier, Scott. *John Snow: The London Cholera Epidemic of 1854*.
5. Acemoglu, Daron, Simon Johnson, and James Robinson. 2001. The Colonial Origins of Comparative Development. *American Economic Review* 91: 1369-1401.
6. Dunning, Thad. 2007. "Improving Causal Inference: Strengths and Limitations of Natural Experiments." *Political Research Quarterly*
7. Sekhon, Jas and Rocio Titunik. 2012. "When Natural Experiments are Neither Natural nor Experiments."
8. Angrist, Joshua, Guido Imbens and Donald Rubin. 1996 "Identification of Causal Effects Using Instrumental Variables." *Journal of the American Statistical Association*.

Week 8: Observational Research II: Regression Discontinuity, Matching, and IVs

1. Shadish et al. Chapter 7
2. Daniel E. Ho, Kosuke Imai, Gary King and Elizabeth A. Stuart. 2007. "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference. *Political Analysis* 15: 199-236.
3. Kevin Arceneaux, Alan S. Gerber, Donald P. Green, "A Cautionary Note on the Use of Matching to Estimate Causal Effects: An Empirical Example Comparing Matching Estimates to an Experimental Benchmark", *Sociological Methods and Research* **39** (2010): 256--282
4. Lee, David S. 2008. "Randomized experiments from non-random selection in U.S. House elections," *Journal of Econometrics*.
5. Caughey and Sekhon discussion of Lee
<http://sekhon.berkeley.edu/papers/CaugheySekhonRD.pdf>
6. [Snyder rejoinder](#)

7. Abadie et al. 2007 “Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program”
8. http://www.mitpressjournals.org/doi/pdf/10.1162/REST_a_00324

Week 9: Observational Research, III

1. Den Hartog, Christopher and Nathan W. Monroe. 2005. “The Value of Majority Status: The Effect of Jeffords’s Switch on Asset Prices of Republican and Democratic Firms.” *Legislative Studies Quarterly*.
2. Posner, Daniel N. 2004. “The Political Salience of Cultural Difference: Why Chewas and Tumbukas Are Allies in Zambia and Adversaries in Malawi.” *American Political Science Review* 98, 4 (November): 529-545.
3. Pelham, Brett. Matthew C. Mirenberg, and John T. Jones. 2002. Why Susie Sells Seashells by the Seashore: Implicit Egotism and Major Life Decisions.” *Journal of Personality and Social Psychology*. Vol. 82. No. 4
4. King, Gary and Langche Zeng. The Dangers of Extreme Counterfactuals: <http://gking.harvard.edu/files/counterft.pdf>
5. Philips, Justin and Jeffrey Lax. 2009. “Public Opinion and Policy Responsiveness: Gay Rights in the States.” *American Political Science Review*. 103(3): 367-385
6. Angrist, Joshua D. and Alan B. Krueger. 1991. “Does Compulsory School Attendance Affect Schooling and Earnings.” *Quarterly Journal of Economics*. 106 (4) p. 979-1014
7. Cutler, et al. 2013. “Physician Beliefs and Patient Preferences: A New Look at Regional Variation in Spending”
8. Holland, Paul. 2003. Causation and Race.

Homework #3 (due Week 11): Take an existing theory of politics. Derive a testable hypothesis from it. Design an observational study to test this hypothesis. You need to define your constructs and measures. Explain to me how your design allows me to reach an inference about the causal effect of the treatment/explanatory variable.

Week 10: Observational research with small(er)-N

1. King, Keohane and Verba. pp: 75-114
2. Freedman, David. “Statistical Models for Causation.” *Evaluation Review*
3. Slantchev, Branislav L., Anna Alexandrova, and Erik Gartzke. 2005. Probabilistic Causality, Selection Bias, and the Logic of the Democratic Peace. *American Political Science Review* 99, 3: 459-462.
4. Bennett, Chapter 10 on Process Tracing in RSI
5. Collier, Brady and Seawright, Chapter 9 in RSI
6. Collier, David, and James Mahoney. 1996. “Insights and pitfalls: Selection bias in Qualitative Research.” *World Politics* 49.

Week 11: More on Observational research with small(er)-N

1. Trochim and Donnelly, Chapters 6, 8.
2. King, Keohane, and Verba, Chapter 6.
3. Henry E. Brady and David Collier, editors, 2004. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*. Lanham, MD: Rowman and Littlefield. Chapters 1 and 2.
4. Gerring, John. 2007. "Is There a (Viable) Crucial-Case Method?" *Comparative Political Studies*.
5. Weller and Barnes either SMR article or book manuscript
6. Geddes, Barbara. 1994. *Politician's Dilemma. Building State Capacity in Latin America*. Berkeley: UC Press. Chapters 1, 2, 5.
7. Fenno, Richard. 1977. "U.S. House Members in Their Constituencies: An Exploration," *American Political Science Review* 71, 3:883-917.

Week 12: Assorted Topics

1. Druckman and Kam. Forthcoming. "Students at Participants." in *Handbook of Experimental Political Science*.
2. Sears, David O. 1986. "College Sophomores in the Laboratory: Influences of a Narrow Data Base on Social Psychology's View of Human Nature." *Journal of Personality and Social Psychology* 51: 515-530.
3. WEIRD subjects, Henrich, Joseph.
4. Abbot, Andrew. 2001. *Time Matters*, Chapter 5 and 8
5. Pierson, Paul. 2002 "Big, Slow-Moving and Irreversible."

Week 13: More Assorted Topics

1. Ho, Daniel. 2005. "Why Affirmative Action Does Not Cause Black Students to Fail the Bar." *Yale Law Journal*
2. "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination"
<http://public.econ.duke.edu/~hf14/teaching/povertydisc/readings/bertrand-mullainathan2004.pdf>
3. Dunning, Thad from *Rethinking Social Inquiry*.
4. Rogowski from *Rethinking Social Inquiry*
5. Cartwright from RCTs to policy:
<http://personal.lse.ac.uk/cartwrig/PapersOnEvidence/LancetLongRoadfromRCT'stoEffectiveness.pdf>
6. Simonsohn, Uri. 2010. "Spurious? Name Similarity Effects (Implicit Egotism) in Marriage, Job and Moving Decisions."

Week 14: Flex your Design Muscles

1. Hyde, Susan. 2007. The Observer Effect in International Politics: Evidence from a Natural Experiment. *World Politics* 60:37-63

2. Putnam, Robert D.; Robert Leonardi; Raffaella Y. Nanetti; Franco Pavoncello. 1983. "Explaining Institutional Success: The Case of Italian Regional Government." *American Political Science Review* 77:1 (March) 55-74.
3. Kosuke Imai, Luke Keele, Dustin Tingley and Teppei Yamamoto "Unpacking the Black Box of Causality: Learning about Causal Mechanisms from Experimental and Observational Data", 2011, *American Political Science Review*, 105(4), pp. 765-789
4. Green, Donald P., Shang E. Ha, and John G. Bullock. 2010. Enough Already about "Black Box" Experiments: Studying Mediation Is More Difficult than Most Scholars Suppose. *Annals of the American Academy of Political and Social Science* 628 (March): 200-08.
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Week 15 (12/4): Discuss Final Papers and Catch Up

Final Papers due 12/12/12

Template for Weekly Presentations

Students will introduce topics each week. This entails critically summarizing the readings and leading the subsequent discussion. The opening presentations, no more than 10 minutes in length, are meant to develop seminar communication skills and to encourage participation by all members.

The presentations should NOT summarize the authors' main points. You may use a table like below to summarize very briefly what each author says, but you need to focus on synthesizing what the different authors say and how the applied research of a given author relates to important methodological issues.

Author Name	Dependent Variable Outcome(s) the author seeks to explain	Independent Variables Factors crucial to the explanation.
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Example:

Author	Dependent Variable	Independent Variables
Mancur Olson, <i>Logic of Collective Action.</i>	Variation in the formation of interest groups - some individuals with common interests form special interest groups, some don't.	Number of individuals Proportion of benefits going to each group member - Use of selective (private) incentives to induce membership

Note: DO NOT make the summaries longer than this and please consider putting multiple summaries on the same page

- Begin your presentation by introducing the topic. The heading in the syllabus is a good clue but try to go beyond it, indicating, for example, *why* the topic is important. For example, why is it relevant to discuss the measurement of different constructs and how does that fit with the rest of the course.
- Close your presentation with a set of **discussion questions** aimed at getting the discussion going. A visual can help here too. You might develop a set of questions on hotly debated topics. What are the different arguments among the readings? Where do they agree/disagree? Do you find either argument compelling? How would you attempt to resolve the debate?