

Political Science 500  
Political Research Design and Data Analysis

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University of Washington

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Office Hours: Wednesdays, 1:30-2:30; Fridays, 10:00-11:00; and by appointment

This course will survey the main elements of research design in the social sciences. After setting the table by considering the nature of the scientific enterprise in political science, we'll examine the main ways political scientists try to establish causal relationships among variables. We'll briefly investigate experimental research, which can be useful for studying certain questions in political science, but we'll spend most of our time on methods for gathering and analyzing observational data. "Data" will be defined broadly to include both quantitative and qualitative sources of information. Over several weeks we will examine the main ways that political scientists attempt to discover causal relationships using observational data.

One can learn research design by reading about different approaches and applying them to actual problems that interest political scientists. Political scientists have written a great deal about how to conduct research and rule out various threats to valid inferences, and we will benefit from reading, discussing, and thinking about some of the insights our predecessors have left us. Another way students can learn research design is by beginning an actual research project and working through the problems that emerge—such as what hypotheses to test, how the proposed research contributes to a body of knowledge, how to collect evidence to test the hypotheses, and how to rule out alternative explanations for the phenomenon in question. We will take this approach, too, and students will be required to develop a research design to investigate a question of their choosing.

Besides covering the basics of research design, the course has a secondary goal of introducing students to the professional aspect of political science. You might think of this element of the class as a guide to "how to succeed in graduate school." To that end, the course will encourage students to begin thinking about their professional development and the mechanics of finding advisers, forming committees, applying for grants, and submitting articles for publication.

### **Grading**

Grades will be based upon two writing assignments, a research proposal, and class participation. There will also be two short and ungraded assignments.

First Paper	:	20%
Second Paper:		20%
Research Proposal:		40%
Class Participation:		20%

## Required Texts

Van Evera, Stephen, *Guide to Methods for Students of Political Science* (Ithaca, NY: Cornell University Press, 1997).

Angrist, Joshua, and Jorn-Steffan Pischke. 2014. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton: Princeton University Press.

## Course Schedule

Note: I have listed the readings in the order in which I recommend that you complete them.

**October 3. The political and the science in political science.** What qualifies as “political”? What does it mean to study politics scientifically? Do the natural sciences serve as good models for the social sciences—and if so, *which* natural science(s)?

*Readings:*

Hay, Colin. 2000. *Political Analysis: A Critical Introduction* (Hampshire, UK: Palgrave), Chapter 2.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press, pp. 3-12.

Almond, Gabriel, with Stephen J. Genco. 1977. “Clouds, Clocks, and the Study of Politics.” *World Politics* 29:489-522.

Pigliucci, Massimo. 2010. *Nonsense on Stilts: How to Tell Science from Bunk* (Chicago: University of Chicago Press), Introduction and Chapter 1.

Desch, Michael. 2015. “Technique Trumps Relevance: The Professionalization of Political Science and the Marginalization of Security Studies.” *Perspectives on Politics* 13:377-93.

Cal Newport, “Some Thoughts on Grad School”

**October 10. Theories and hypotheses.** The meanings of theory in social science. Specific and general explanations. What makes a theory useful? Tradeoffs in theory-building. Translating intuitions and hunches into hypotheses.

*Readings:*

Van Evera, Stephen. 1997. *Guide to Methods for Students of Political Science* (Ithaca, NY: Cornell University Press), Introduction and Chapter 1.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press, pp. 12-33.

Lave, Charles, and James March. 1975. *Introduction to Models in the Social Sciences* (New York: Harper & Row, Chapters 1-3.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion* (New York: Cambridge University Press), Chapter 3.

Olson, Mancur. 1965. *The Logic of Collective Action* (Cambridge, MA: Harvard University Press, Chapter 1.

Useem, Bert. 1997. “Choosing a Dissertation Topic,” *PS: Political Science & Politics* 30:213-16.

**October 14. Due date for a short description of the subject of your research proposal.**

**October 17. Causality and causal inference.** What are the various meanings of causation, and which one(s) are most useful for political scientists? How can we design research so that we can make inferences about causal processes? What evidence would indicate that a proposed causal mechanism is, in fact, the actual mechanism at work?

*Readings:*

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Chapter 3.

Rogowski, Ronald, "How Inference in the Social (but not the Physical) Sciences Neglects Theoretical Anomaly," in Brady and Collier, *Rethinking Social Inquiry*, 2<sup>nd</sup> ed., 89-97.

Bennett, Andrew, "Process Tracing and Causal Inference," in Brady and Collier, *Rethinking Social Inquiry*, 2<sup>nd</sup> ed., 207-20.

Brady, Henry E., "Data-Set Observations versus Causal-Process Observations: The 2000 U.S. Presidential Election," in Brady and Collier, *Rethinking Social Inquiry*, 2<sup>nd</sup> ed., 237-42.

Guetzkow, Joshua, Michèle Lamont, and Grégoire Mallard. 2004. "What Is Originality in the Humanities and the Social Sciences?" *American Sociological Review* 69: 190-212.

Skim the current academic jobs listings of the American Political Science Association.

**October 24. Concepts, indicators, and measurement.** The difference between a concept and an indicator. The importance of explicitly connecting an indicator to the concept it stands for. Reliability and validity. Levels of measurement.

*Readings:*

Shively, W. Phillips. 2009. *The Craft of Political Research*, 7<sup>th</sup> ed. Chapters 4 and 5.

Blalock, Herbert M. 1982. *Conceptualization and Measurement in the Social Sciences*. Chapter 1.

Coppedge, Michael, et al. 2011. "Conceptualizing and Measuring Democracy: A New Approach," *Perspectives on Politics* 9:247-67.

Gladwell, Malcolm. 2001. "Examined Life: What Stanley Kaplan Taught us about the SAT." *The New Yorker* (December 17).

Kelsky, Karen, "Graduate School Is a Means to a Job," *Chronicle of Higher Education* (March 27, 2012).

**October 28. First paper due.**

**October 31. Experimental design.** The differences between internal validity and external validity. The kinds of questions for which experiments are the best methodology in political science.

*Readings:*

Frankfort-Nachmias, Chava, and David Nachmias. 2008. *Research Methods in the Social Sciences*, 7<sup>th</sup> ed. Chapters 5 and 6.

Druckman, James N., et al. 2006. "The Growth and Development of Experimental Research in Political Science," *American Political Science Review* 100:627-35.

Angrist, Joshua, and Jorn-Steffan Pischke. 2014. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton: Princeton University Press, Introduction and chapter 1 (skip the Appendix at the end of the chapter).

- Morton, Rebecca, and Kenneth Williams. 2010. *Experimental Political Science and the Study of Causality: From Nature to the Lab* (Cambridge: Cambridge University Press), ch. 7.
- Wuffle, A. 2015. "Uncle Wuffle's Reflections on Political Science Methodology," *PS: Political Science & Politics* 48:176-82.
- Julie Miller Vick and Jennifer S. Furlong, "Your First Year in a Ph.D. Program," *The Chronicle of Higher Education* (Nov. 23, 2013), A26.

**November 7. Statistical Analysis with Non-Experimental Methods.** How to address the limitations of non-experimental methods for making causal inferences. What it means to control for a variable statistically. The difference between correlation and causation.

*Readings:*

- Frankfort-Nachmias, Chava, and David Nachmias. 2008. *Research Methods in the Social Sciences*, 7<sup>th</sup> ed. Chapter 17.
- Jackman, Robert. 1985. "Cross-National Statistical Research and the Study of Comparative Politics." *American Journal of Political Science* 29:161-82.
- Dunning, Thad. 2008. "Improving Causal Inference: Strengths and Limitations of Natural Experiments," *Political Research Quarterly* 61:282-93.
- Angrist, Joshua, and Jorn-Steffan Pischke. 2014. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton: Princeton University Press, chapters 2, 4-5 (skip the Appendices at the end of the chapters).
- Rich, Timothy S. 2013. "Publishing as a Graduate Student: A Quick and (Hopefully) Painless Guide to Establishing Yourself as a Scholar," *PS: Political Science & Politics* 46:376-79.
- Sword, Helen, "Inoculating Against Jargonitis," *The Chronicle Review* (June 3, 2012).

**November 14. The Uses and Abuses of Statistical Analysis.** The kinds of questions suitable for quantitative, large-N studies. How to exercise appropriate judgment and discretion when conducting statistical analyses. Major pitfalls to avoid.

*Readings:*

- Abelson, Robert. 1995. *Statistics as Principled Argument*, pp. 1-16, 54-57, 170-180.
- Ioannidis, John P. A. 2005. "Why Most Published Research Findings Are False," *PLoS Medicine* (August 30).
- Kerr, Norbert L. 1998. HARKing: Hypothesizing After the Results Are Known," *Personality and Social Psychology Review* 2:196-217.
- Yong, Ed. 2015. "How Reliable Are Psychology Studies?" *The Atlantic* (August 27).
- Micah Altman. 2009. "Funding, Funding," *PS: Political Science & Politics* 42:521-26.
- Weeks, Gregory. 2006. "Facing Failure: The Use (and Abuse) of Rejection in Political Science," *PS: Political Science & Politics* 39:879-82.
- Weitsman, Patricia A. 2009. "The Book Award Reward," *PS: Political Science & Politics* 42:155-59.

**November 21. Cases, observations, and data collection.** Comparison as a means of making inferences. Case selection and causal inference. Different criteria for choosing the cases to investigate. Methods of data collection.

*Readings:*

- Van Evera, Stephen. 1997. *Guide to Methods for Students of Political Science*, chapter 2.

- Collier, David. 1993. "The Comparative Method." In Ada W. Finifter, ed., *Political Science: The State of the Discipline II*. Washington, D.C.: The American Political Science Association, pp. 105-20.
- Brady, Henry E., David Collier, and Jason Seawright, "Refocusing the Discussion of Methodology," in Brady and Collier, *Rethinking Social Inquiry*, 2<sup>nd</sup> ed., 15-31.
- Frankfort-Nachmias, Chava, and David Nachmias. 2008. *Research Methods in the Social Sciences*, 7<sup>th</sup> ed., chapter 13.
- "Symposium: Interview Methods in Political Science." 2002. Articles by Beth Leech, Laura Woliver, Jeffrey Berry, and Sharon Rivera et al., *PS: Political Science & Politics* 35.
- Earl Babbie, *The Practice of Social Research*, chapters 3 and 9.
- Przeworski, Adam, and Frank Salomon, "On the Art of Writing Proposals."

**November 28. Historical analysis.** The insights from studying processes that unfold over time. Positive feedback and path dependence. Timing and sequencing in politics. Counterfactual reasoning. How political scientists can use historical records.

*Readings:*

- Pierson, Paul. 2000. "Increasing Returns, Path Dependence, and the Study of Politics," *American Political Science Review* 94:251-67.
- Tetlock, Philip E., and Geoffrey Parker. 2006. "Counterfactual Thought Experiments." In Philip E. Tetlock, Ned Lebow, and Geoffrey Parker, eds., *Unmaking the West: "What-If?" Scenarios that Rewrite World History*, chapter 1.
- Lustick, Ian S. 1996. "History, Historiography, and Political Science: Multiple Historical Records and the Problem of Selection Bias," *American Political Science Review* 90:605-18.
- Thies, Cameron G. 2002. "A Pragmatic Guide to Qualitative Historical Analysis in the Study of International Relations," *International Studies Perspectives* 3:351-72.
- Locke, Lawrence F., Waneen Wyrick Spirduso, and Stephen J. Silverstein. 2007. *Proposals that Work: A Guide for Planning Dissertations and Grant Proposals*, 5th ed. (Thousand Oaks, CA: Sage, chapter 1.

**December 2. Second paper due.**

**December 5. Research ethics.** Institutional review boards. The obligations scholars have to their research subjects and their readers.

*Readings:*

- Monogan III, James E. 2015. "Research Preregistration in Political Science: The Case, Counterarguments, and a Response to Critiques," *PS: Political Science & Politics* 48:425-29.
- Symposium on Openness in Political Science: Data Access and Research Transparency. 2014. Articles by Arthur Lupia and Colin Elman, Colin Elman and Diana Kapiszewski, Andrew Moravcsik, and Arthur Lupia and George Alter. *PS: Political Science & Politics* 48:19-59.
- University of Washington, Human Subjects Division, <http://www.washington.edu/research/hsd>
- Singal, Jesse, "The Case of the Amazing Gay-Marriage Data: How a Graduate Student Reluctantly Uncovered a Huge Scientific Fraud," *New York* (May 29, 2015).
- Jeremy Johnson, "Campaign Experiment Found to be in Violation of Montana Law," *Monkey*

Cage, *Washington Post* (May 13, 2015).  
Leon Neyfakh, "The Ethics of Ethnography," *Slate* (June 2015).  
Polsky, Andrew J. 2007. "Seeing Your Name in Print: Unpacking the Mysteries of the Review Process at Political Science Scholarly Journals," *PS: Political Science & Politics* 40:539-43.  
Stephan Hamberg, "Electoral Violence in New Democracies: The Institutional Foundations of Peaceful Transitions," proposal to the National Science Foundation

**December 13. Research proposal due.**