

PPD 706: Research Design

Fall 2021
Mondays, 2 pm
Online

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Office hours: M 1-2 pm or by appointment

The course will introduce students to the fundamentals of research design in the social sciences. We start by examining how to formulate research questions within a “research cycle” (the sequence of steps undertaken in research). We then examine the concept of causality and what it means for relationships to be causal in nature. We then spend some time talking about how concepts can be measured, how data can be acquired/collected, and how a systematic analysis can be conducted (using regression). We then move into the study of specific research designs, starting with randomized experiments and then several quasi-experimental designs that use observational data: instrumental variables (IVs), difference-in-differences (DiD), and regression discontinuity designs (RDDs). We conclude by discussing the benefits of doing multi-method (quantitative and qualitative) research and how case studies can be integrated with quasi-experimental designs.

Prerequisites

There are no formal prerequisites for this class, although it is restricted to first-year PhD students. A statistical background is helpful, but not required. The concepts are meant to be primarily intuitive. All students should be able to follow the reading (again, on an intuitive level) and contribute to class discussion. The readings will involve foundations (using books designed as texts) and (increasingly as we move along in the semester) applications of common research designs in the social sciences.

Course Requirements

- (1) You must come to class prepared, which means that you have done *all* of the week’s readings in advance. You are also expected to participate in class discussion. Participation is what makes a seminar a useful learning experience – you learn as much from the in-class discussion as you do from the readings themselves. Moreover, given that this is your chosen vocation, you should take an active role in fostering your own professional development.
- (2) While I will spend some time (informally) lecturing, my main role each week will be to moderate, provide background context, and steer the discussion in various directions. This is a seminar; thus, each student will be expected to contribute to in-class discussion.
- (3) The course grade will be a function of class participation (20%), a set of four short papers/exercises (40%), and a final paper (40%). The timing and specifics for the final paper will

be discussed in more detail in class. But you will write an initial research design (a pre-analysis plan). You will propose a clear research question, synthesize the relevant literature, and outline a theory and at least two falsifiable hypotheses. You will then identify a means – an experiment or quasi-experiment and data-collection plan – to test your hypotheses. Ideally, you would pursue this project in subsequent classes, resulting in a paper that could – with some revisions – be sent out for publication consideration to a journal.

Learning Objectives

The major objective of this course is to introduce you to the process of conducting original, doctoral-level research. “Research design” – how research is put together from start to finish – is a crucial learning objective for any would-be academic. In the course of the semester, students will learn that a range of decisions (by the researcher) have to be made along the way, based on a range of assumptions, all of which can be critiqued. In pursuing such an assessment, students will learn – among other things – that no research is perfect or immune to criticism, even those studies done by the very best scholars. This realization should offer students encouragement and (hopefully) make it easier for them to do their own research.

Course Materials

We will be reading some or all of the following books:

- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. (PDF will be made available.)
- Cirone, Alexandra. 2017-2018. *Math and Statistics Pre-Arrival Module*. (PDF will be provided.)
- Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Cambridge: Cambridge University Press.
- Huntington-Klein, Nick. 2021. *The Effect: An Introduction to Research Design and Causality*. (PDF will be made available. Also see: <https://theeffectbook.net>)
- Kellstedt, Paul M., and Guy D. Whitten. 2018. *The Fundamentals of Political Science Research*, 3rd edition. Cambridge: Cambridge University Press. (Available online at CUP webpage.)
- King, Gary, Robert O. Keohane, and Sidney Verba. 2021. *Designing Social Inquiry: Scientific Inference in Qualitative Research*, New Edition. Princeton: Princeton University Press. (Note that the 1994 edition is fine to use.)
- Okasha, Samir. 2016. *Philosophy of Science: A Very Short Introduction*, Second Edition. Oxford: Oxford University Press.
- Seawright, Jason. 2016. *Multi-Method Social Science: Combining Qualitative and Quantitative Tools*. Cambridge: Cambridge University Press. (Available online at CUP webpage.)

Most of the journal articles assigned are available electronically, usually at JSTOR or the journal’s webpage (for more recent publications). For those articles that are not available electronically, I will provide copies, which will be sent to you roughly a week before such readings are covered in class.

In addition, here are a few supplementary books to consider, if you find this material interesting:

Brady, Henry E., and David Collier, eds. 2010. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*, Second Edition. Lanham, MD: Rowman & Littlefield. A series of essays that provide a critical review of King, Keohane, and Verba (hereafter, KKV).

Gerring, John. 2012. *Social Science Methodology: A Unified Framework*. Cambridge: Cambridge University Press. A book that is strong on topics covered through Week 7 of this class.

Gertler, Paul J., Sebastian Martinez, Patrick Premand, Laura B. Rawlings, and Christel M. J. Vermeersch. 2016. *Impact Evaluation in Practice*, 2nd Edition. This is a good, practical guide to causality and the various research designs we'll be covering in class (Weeks 10-13). Freely available: <https://openknowledge.worldbank.org/handle/10986/25030>

Below is a week-by-week list of required reading assignments. I reserve the right to change some readings if I find better ones. If I do, I will alert you at least a week in advance.

Week 1 (August 23): Course Overview and Discussion of the Syllabus

Week 2 (August 27): Philosophy of Science

Okasha, *Philosophy of Science*. All.

Popper, Karl. 1963. "Science as Falsification." In *Conjectures and Refutations*. London: Routledge, pp. 33-39.

Naughton, John. 2012. "Thomas Kuhn: The Man Who Changed the Way the World Looked at Science." *The Guardian*, August 18.

Week 3 (September 6): NO CLASS – Labor Day

Week 4 (September 13): Designing Research & Research Questions

KKV, *Designing Social Inquiry*, Chapters 1 & 2.

Huntington-Klein, *The Effect*, Intro and Chapters 1 & 2.

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 1.

Kellstedt and Whitten, *The Fundamentals of Political Science Research*, Chapters 1 & 2

Cirone, *Pre-Arrival Module*, Module 1.

Week 5 (September 20): Causality & Causal Inference, Part I

KKV, *Designing Social Inquiry*, Chapter 3.

Huntington-Klein, *The Effect*, Intro and Chapters 3 & 4.

EBDM and Fowler, *Thinking Clearly with Data*, Chapters 2 & 3.

Cirone, *Pre-Arrival Module*, Module 2.

Gerring, John. 2012. "Mere Description." *British Journal of Political Science* 42: 721-46.

Week 6 (September 27): Causality & Causal Inference, Part II

KKV, *Designing Social Inquiry*, Chapter 4.

Huntington-Klein, *The Effect*, Chapters 5-11.

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 4.

Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get." *Political Analysis* 2: 131-52.

Week 7 (October 4): Measurement

KKV, *Designing Social Inquiry*, Chapter 5

Kellstedt and Whitten, *The Fundamentals of Political Science Research*, Chapter 5

Coppedge, Michael, John Gerring, David Altman, Michael Bernhard, Steven Fish, Allen Hicken, Matthew Kroenig, Staffan I Lindberg, Kelly McMann, and Pamela Paxton. 2011. "Conceptualizing and Measuring Democracy: A New Approach." *Perspectives on Politics* 9: 247-67.

Adcock, Robert and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review* 95: 529-46.

Bonica, Adam. 2014. "Mapping the Ideological Marketplace." *American Journal of Political Science* 58: 367-86.

Jenkins, Jeffery A., and Nathan W. Monroe. 2016. "On Measuring Legislative Agenda-Setting Power." *American Journal of Political Science* 60: 158-74.

Week 8 (October 11): Data Collection

KKV, *Designing Social Inquiry*, Chapter 6.

Branch, Jordan. 2016. "Geographical Information Systems (GIS) in International Relations." *International Organization* 70: 845-69.

Grimmer, Justin, and Brandon M. Stewart. 2013. "Text as Data: The Promise and Pitfalls of Automatic Content Analysis for Political Texts." *Political Analysis* 21: 267-97.

Grimmer, Justin. 2015. "We Are All Social Scientists Now: How Big Data, Machine Learning, and Causal Inference Work Together." *PS: Political Science & Politics* 48: 80-83.

Cirone, Alexandra, and Arthur Spirling. 2021. "Turning History in Data: Data Collection, Measurement, and Inference in HPE." *Journal of Historical Political Economy* 1: 127-54.

Safra, Lou, Coralie Chevallier, Julie Grezes, and Nicholas Baumard. 2020. "Tracking Historical Changes in Trustworthiness Using Machine Learning of Analyses of Facial Cues in Paintings." *Nature Communications* 11.
<https://www.nature.com/articles/s41467-020-18566-7>

Cirone, Alexandra. 2020. "Do You Trust This Post?" Broadstreet.
<https://broadstreet.blog/2020/12/07/do-you-trust-this-post/>

Week 9 (October 18): Regression (and Its Limitations)

EBDM and Fowler, *Thinking Clearly with Data*, Chapters 5-10

Huntington-Klein, *The Effect*, Chapter 13.

Andrew J. Healy, Neil Malhotra, and Cecilia Hyunjung Mo. 2010. "Irrelevant Events Affect Voters' Evaluations of Government Performance." *Proceedings in the National Academy of Sciences* 107: 12804-09.

Anthony Fowler and B. Pablo Montagnes. 2015. "College Football, Elections, and False-Positive Results in Observational Research." *Proceedings in the National Academy of Sciences* 112: 13800-04.

Hunt Allcott, Luca Braghieri, Sarah Eichmeyer, and Matthew Gentzkow. 2020. "The Welfare Effects of Social Media." *American Economic Review* 110: 629-76.

Week 10 (October 25): Randomized Experiments: The Gold Standard?

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 11

Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia. 2011. "Experiments: An Introduction to Core Concepts." In *Cambridge Handbook of Experimental Political Science*. Cambridge: Cambridge University Press.

Kellstedt and Whitten, *The Fundamentals of Political Science Research*, Chapter 4 (4.2)

Erikson, Robert S., and Laura Stoker. 2011. "Caught in the Draft: The Effects of Vietnam Draft Lottery Status on Political Attitudes." *American Political Science Review* 105: 221-37.

Chalfin, Aaron, Benjamin Hansen, Jason Lerner, and Lucie Parker. 2021. "Reducing Crime Through Environmental Design: Evidence from a Randomized Experiment of Street Lighting in New York City." *Journal of Quantitative Criminology*.

Grose, Christian, and Jordan Peterson. 2020. "Economic Interests Cause Election Officials to Liberalize Their Racial Attitudes." *Political Research Quarterly* 73: 511-25.

Sekhon, Jasjeet S., and Rocio Titiunik. 2012. "When Natural Experiments Are Neither Natural nor Experiments." *American Political Science Review* 106: 35-57.

Week 11 (November 1): Instrumental Variables

Review section in EBDM and Fowler, *Thinking Clearly with Data*, Chapter 11

Huntington-Klein, *The Effect*, Chapter 13.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences*, Chapter 4.

Acemoglu, Daron, James Robinson, and Simon Johnson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91: 1369-401.

Kern, Holger Lutz, and Jens Hainmueller. 2009. "Opium for the Masses: How Foreign Media Can Stabilize Authoritarian Regimes." *Political Analysis* 17: 377-99.

Gihleb, Rania, and Osea Ginutella. 2017. "Nuns and the Effects of Catholic Schools: Evidence from Vatican II." *Journal of Economic Behavior and Organization* 137: 191-213.

Dube, Oeindrila, and S. P. Harish. 2020. "Queens." *Journal of Political Economy* 128: 2579-652.

Week 12 (November 8): Difference-in-Differences

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 13

Huntington-Klein, *The Effect*, Chapter 18.

Card, David, and Alan B. Krueger. 1994. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review* 84: 772-93.

Miller, Grant. 2008. "Women's Suffrage, Political Responsiveness, and Child Survival in American History." *Quarterly Journal of Economics* 1287-1327.

Malesky, Edmund, Cuong Viet Nguyen, and Anh Tran. 2014. "The Impact of Recentralization on Public Services: A Difference-in-Differences Analysis of the Abolition of Elected Councils in Vietnam." *American Political Science Review* 108: 144-68.

Foos, Florian, and Daniel Bischof. 2021. "Tabloid media campaigns and public opinion: Quasi-experimental evidence on Euroscepticism in England." *American Political Science Review*. Forthcoming.

Week 13 (November 15): Regression Discontinuity

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 13

Huntington-Klein, *The Effect*, Chapter 20.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences*, Chapter 3.

Lemieux, Thomas, and Kevin Milligan. 2008. "Incentive Effects of Social Assistance: A Regression Discontinuity Approach." *Journal of Econometrics* 142: 807-28.

Davis, Lucas W. 2008. "The Effect of Driving Restrictions on Air Quality in Mexico City." *Journal of Public Economy* 116: 38-81.

Dell, Melissa. 2010. "The Persistent Effects of Peru's Mining *Mita*." *Econometrica* 78: 1863-1903.

Fraga, Bernard L., and Julie Lee Merseth. 2016. "Examining the Causal Impact of the Voting Rights Act Language Minority Provisions." *Journal of Race, Ethnicity and Politics* 1: 31-59.

Week 14 (November 22): Multiple Methods

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 17

Seawright, Jason. 2016. *Multi-Method Social Science*. All.

Week 15 (November 29): Open week

May include content, may offer a “breather” (in this spot or moved up somewhere in the syllabus) for overworked students! We’ll see.

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity | Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776
dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.