

POL SCI 5001: THE DESIGN AND ANALYSIS OF FIELD EXPERIMENTS IN  
POLITICAL SCIENCE

Spring 2018

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Class: Wednesdays, 2- 4 pm ; Room: Seigle 205

Office Hours: Wednesday, 4:30- 6:00 pm (or by appointment).

**Course Description:** This course will cover the design, implementation, and analysis of field experiments. In the past two decades, there has been a growing interest among policy makers for evidence-based prescriptions on what governance institutions work, when, and why. In developing countries, donor agencies, who invest heavily in civil society organizations, bureaucratic reforms, and building institutional capacity at the national and local levels, also demand answers on which programs are effective in promoting political legitimacy, accountability, and responsiveness to citizens' needs. Such demands for strong evidentiary basis for policy have also provided unprecedented opportunities for collaboration between scholars and policy makers to design and implement programs in a manner (i.e., using field experiments) that helps to provide insights on the origin, functions, and impact of institutions, addressing important questions of social scientific interest. When carefully executed, field experiments provide evidence of the *causal effect(s)* of an intervention. The course will explore the core concepts and principles of field experiments, addressing threats (i.e., noncompliance, attrition, and spillover effects) to generating valid causal effects from experiments, and the limitations in the use of experiments in answering major political science questions.

**Learning Goals:**

1. Learn about important design concerns for experiments, and how to address them by design
2. Know the important debates about experimental designs, including prominent critiques
3. Know about key tools for implementing experiments and how to use several of them
4. Write a design of an experiment that you might implement during graduate school

**Prerequisites:** This course assumes knowledge of multiple regression and a statistical software (e.g., R and Stata)

**Questions and announcements:** In addition to precepts and office hours, please use the “Piazza Discussion Board” at [piazza.com](https://piazza.com) when asking questions about lectures, problem sets, and other course materials. This allows all students to benefit from the discussion and to help each other understand the materials. Because there will not be a TA for the class, I encourage you all to participate in discussions and answering questions that are posted. To join the course Piazza site, click on “Student Get Started” from the Piazza homepage. After specifying Washington University in St. Louis as your school, search for “L32 POL SCI 5001.” Click on the link and use your WashU email to subscribe.

**Course Requirement**

1. Problem sets (40%): Approximately three problems sets will be assigned throughout the semester. Problem sets are only accepted in LaTeX. I also encourage you to use `Rmarkdown`, which allow you to embed your R code and its output within a document using a straightforward syntax in a plain-text format. The resulting documents can be produced in the form of HTML, PDF, or even Word. `Rmarkdown` is also embed in `RStudio`. See <http://rmarkdown.rstudio.com/> for a quick start. Collaboration is allowed but each person have to submit his or her own assignment. Problem sets submitted after deadline will not be accepted. You will have a week for each assignment. Deadlines for problem set submissions are as follows:
  - (a) Problem set 1: February 7 by 11 : 55 pm
  - (b) Problem set 2: March 12 by 11 : 55 pm
  - (c) Problem set 3: April 1 by 11 : 55 pm

2. One Referee report (20%)[due: January, 31]: A 3-4 page review of an experimental study. The report should begin with a single paragraph summary. You should develop 3-4 main points in detail and conclude with minor points. You should write this as though you are addressing the author directly and expecting them to respond. In this exercise, it is important to give constructive and realistic feedback in addition to identifying problems. See [here](#) for a guide. These papers have been chosen to demonstrate what some graduate students have accomplished (and so can YOU!). Please review one of these 5 papers:
  - (a) Raffer, Pia. 2017. [Does Political Oversight of the Bureaucracy Increase Accountability? Field Experimental Evidence from an Electoral Autocracy](#)
  - (b) Young, Laura. 2017. [The psychology of political risk in autocracy](#)
  - (c) Gulzar, Saad and Muhammad Yasir Khan. 2017. [Politicians: Experimental Evidence on Candidacy and Performance](#)
  - (d) Brierley, Sarah, Eric Kramon, and George Ofori. 2018. The (Short-Term) Moderating Effect of Debates on Political Attitudes: Evidence from a Field Experiment in Ghana
3. Final Project (Due: May 9)(40%): Design and “implement” an experiment: You will get an opportunity to present your proposal to the class. The presentations will take place on April 25. See FEDAI 13.1 and [here](#) for guidance. I will provide specific timeline to help you achieve this goal.

## Books

### Primary texts \*

- \*\* Gerber, Alan S. and Donald P. Green. 2012. “Field Experiments: Design, Analysis, and Interpretation (FEDAI)”
- \*\* Glennerster, Rachel and Kuduzi Takavarasha. 2013. “Running Randomized Evaluations: A Practical Guide (RRE)”
- \*\* Teele, Dawn, ed. 2014. “Field Experiments and Their Critics” Yale UP

\*Check availability [here](#) or on Amazon

### Secondary texts

- \* Thompson, Steven K. 2012. “Sampling” Wiley. Third ed.
- \* Paul J Gertler, Sebastian Martinez, Patrick Premand, Laura B. Rawlings, and Christel M J Vermeersch. 2016. “Impact Evaluation in Practice” World Bank Group [[Link](#)]
- \* Angrist, Joshua D. and Jörn-Steffen Pischke. 2015. “Mastering Metrics: The Path from Cause to Effect”
- † Deaton, Angus. 1997. “[The Analysis of Household Surveys.](#)” Baltimore: John Hopkins University Press for the World Bank

### Useful links

- [Evidence in Governance and Politics \(EGAP\)](#)
- [Research 4 Impact](#)
- [Berkeley Initiative for Transparency in the Social Sciences](#)

## Class schedule

*Legend:* \*\*: Required; \*Skim; †: optional (mainly for your own reference)

*Note:* The technical readings often cover the same topic, but use different language and examples to explain the main concepts for each week. It is often helpful to see concepts explained in different ways. *You should read both.*

Lecture 1 (January 17, 2018.): Why Experiments

- \*\* Humphreys, Macartan and Jeremy M. Weinstein. 2009. [Field Experiments and the Political Economy of Development](#)
- \*\* Grose, Christian R. 2014. [Field Experimental Work on Political Institutions](#)
- \* Ashworth, Scott. 2012. [Electoral Accountability: Recent Theoretical and Empirical Work](#)
- \* Dal Bó Ernesto and Frederico, Finan. 2016. [At the intersection: A review of institutions in economic development](#)
- † World Bank. 2016. [Making Politics work for development: Harnessing Transparency and Citizen Engagement](#)

Lecture 2 (January 24, 2018.): Why Experiments: Unbiased Estimates of Program/Intervention Effect

- \*\* Gerber and Green. Chapters 1 and 2
- \*\* Agrist and Pischke. Chapters 1
- \* Esther Duflo, Rachel Glennerster, Michael Kremer, Chapter 61. “Using Randomization in Development Economics Research: A Toolkit, In: T. Paul Schultz and John A. Strauss, eds, *Handbook on Development Economics*. Elsevier, 2007, Volume 4, Pages 3895-3962.
- † Leamer, Edward E. 1983. “Let’s Take the Con Out of Econometrics” *American Economic Review* Vol. 73 (1)
- † Angrist, Joshua D. and Jörn-Steffen Pischke. 2010. “The Credibility Revolution in Empirical Economics: How Better Research Design is taking the Con out of Econometrics” *Journal of Econometric Perspectives*. Vol. 24 (2) pp.3-30.

Lecture 3 (January 31, 2018.): Designing experiments: Sampling distribution, statistical inference, and hypothesis testing

- \*\* *FEDAI ch. 3*
- \* Bruhn, Miriam and Miriam McKenzie. 2009. [In Pursuit of Balance: Randomization in Practice in Development Field Experiment](#)

Lecture 4 (February 7, 2018.): Uses and abuses of covariates in experimental design and analysis

- \*\* FEDAI ch. 4
- \* Montgomery, J, Brendan Nyhan, and Michelle Torres. 2016. [How conditioning on post-treatment variables can ruin your experiment and what to do about it](#)
- \* Freedman, David. 2008. [On regression adjustments to experimental data. \*Advances in Applied Mathematics\*](#).
- \* Lin, Winston. 2013. [Agnostic Notes on Regression Adjustments to Experimental Data: Reexamining Freedman’s Critique. \*Annals of Applied Statistics\*](#).
- \* Imai, Kosuke. 2005. [Do Get-Out-the-Vote Calls Reduce Turnout? The Importance of Statistical Methods for Field Experiments](#)

Lecture 5 (February 14, 2018.): Reading/Assignment week

Lecture 6 (February 21, 2018.) (Discussion): Criticism and New Direction

- \*\* Gerber, Alan S. 2014. “The Illusion of Learning from Observational Research” in Teele, Dawn L. (ed.)’s *Field Experiments and Their Critics: Essays on the uses and abuses of experimental research in social science*

- \*\* Stokes, Susan C. 2014. “A Defense of Observational Research” in Teele, Dawn L. (ed.)’s *Field Experiments and Their Critics: Essays on the uses and abuses of experimental research in social science*
- \*\* Imai, Kosuke, Gary King, and Elizabeth A. Stuart. 2014. “Misunderstanding Between Experimental and Observationalist About Causal Inference” in Teele, Dawn L. (ed.)’s *Field Experiments and Their Critics: Essays on the uses and abuses of experimental research in social science*
- \* Shapiro, Ian. 2014. “Methods are Like People: If You Focus Only on What They Can’t Do, You Will Always Be Disappointed” in Teele, Dawn L. (ed.)’s *Field Experiments and Their Critics: Essays on the uses and abuses of experimental research in social science*
- \* Bates R. 2006. Banerjee’s approach might teach us more about impact but at the expense of larger matters. *Boston Rev. Books* July/Aug. 31(4). Available [Here](#)

Lecture 7 (February 28, 2017): Dealing with Noncompliance

- \*\* *FEDAI ch. 5 & 6*

Lecture 8 (March 8, 2017.): Attrition and Bounding

- \*\* *FEDAI ch. 7*
- \* Lee, David S. 2009. [Training, Wages, and Sample Selection: Estimating Sharp Bounds on Treatment Effects](#)

Lecture 9 (March 21, 2018.): Exploiting interference between experimental units (spillover) by Design

- \*\* *FEDAI ch. 8*
- \*\* *Asunka, J., Brierley, S., Golden, M., Kramon, E., & Ofosu, G. (2017). Electoral Fraud or Violence: The Effect of Observers on Party Manipulation Strategies. British Journal of Political Science, 1-23*
- \*\* Sinclair, Betsy, Margaret McConnell and Donald P. Green. 2012. [Detecting Spillover Effects: Design and Analysis of Multilevel Experiments. American Journal of Political Science, Vol. 56, No. 4 \(October 2012\), pp. 1055-1069](#)
- \* Chen, Jiehua, Macartan Humphreys, Vijay Modi. 2010. [Technology Diffusion and Social Networks: Evidence from a Field Experiment in Uganda](#). Working paper.
- \* Miguel, Edward and Michael Kremer. 2004. [Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities](#)

Lecture 10 (March 28, 2018): Heterogeneous treatment effects

- \*\* *FEDAI ch. 9*
- \* de Mel, Suresh, David McKenzie and Christopher Woodruff. 2009. [Are Women More Credit Constrained? Experimental Evidence on Gender and Microenterprise Returns](#)
- \* Baldwin, Kate. 2013. [Why Vote with the Chief? Political Connections and Public Goods Provision in Zambia](#)

Lecture 11 (April 4, 2018.): Qualitative Work, Implementation, and Survey Experiments

- \*\* *RRE ch. 3*
- \*\* Paluck Elizabeth Levy. 2010. [The Promising Integration of Qualitative Methods and Field Experiments](#)
- \*\* Kitzinger, Jenny. 1995. [Qualitative research. Introducing focus groups. British Medical Journal, 311 \(7000\), 299-302.](#)

Proposal writing and funding

- \*\* *FEDAI ch.13*
- \*\* McKenzie, David. 2012. [Tips for writing Impact Evaluation Grant Proposals](#)

## Lecture 12 (Discussion)(April 11, 2018.): Ethics (Human Subjects), IRB, and Funding

- \*\* FEDAI, Appendix A
- \*\* McClendon, Gwyneth. 2012. [Ethics of Using Public officials as field experiment subjects](#). Newsletter of the APSA Experimental Section 3 (1): 13-20.
- \*\* Humphreys, Macartan. [Reflections on the Ethics of Social Experimentation](#). Journal of Globalization and Development 6(1): 87-112.
- \*\* Teele, Dawn. 2014. "Reflections on the Ethics of Field Experiments." in Teele, ed., Field Experiments and their Critics.
- \* Willis, Derek. 2015. [Professors' Research Project Stirs Political Outrage in Montana](#). New York Times.

## Lecture 13 (April 18, 2018.): Pre-analysis plans and research transparency

- \*\* Franco, Annie, Neil Malhotra, and Gabor Simonovits. 2014. [Publication bias in the social sciences: Unlocking the file drawer](#). *Science* 345(6203): 1502-1505.
- \*\* Humphreys, Macartan, Raul de la Sierra and Peter van der Windt. 2013. [Fishing, Commitment, and Communication: A Proposal for Comprehensive Nonbinding Research Registration](#). *Political Analysis* 21 (1): 1-20.
- \*\* Olken, Benjamin A. 2015. [Promises and Perils of Pre-Analysis Plans](#). *Journal of Economic Perspectives* 29(3): 61-80.
- \* Blair, Graeme, Jasper Cooper, Alexander Coppock, and Macartan Humphreys. 2016. [Declaring and Diagnosing Research Designs](#). Working paper.
- \* Green, Donald and Winston Lee. 2016. [Standard Operating Procedures](#). *Perspectives on Politics*.

## Lecture 14 (April 25, 2018.): Project Presentations

### Campus Resources

If you have any concerns about:

- Academic Writing: The Writing Center is a free service for all students, both graduate and undergraduate, currently enrolled at Washington University in St. Louis. They provide free one-on-one writing tutorials to all WashU students. They also offer a variety of writing workshops designed to help you become a better writer. You can schedule an appointment here: <https://writingcenter.wustl.edu/writing/schedule-an-appointment/>
- Disability resources: If you have a disability that requires an accommodation, please speak with instructor and consult the Disability Resource Center at Cornerstone (<http://cornerstone.wustl.edu/>). Cornerstone staff will determine appropriate accommodations and will work with your instructor to make sure these are available to you.
- Mental health: Life at university can be stressful. Remember that you are never alone. You can speak to a therapist or counselor through the Mental Health Services (MHS) at Washington University. MHS is committed to providing a safe, inclusive and affirming community of care for all students. You can find out about making a confidential appointment here: <https://shs.wustl.edu/MentalHealth/Pages/Making-an-Appointment.aspx>.
- Bias reporting: A bias incident is any discriminatory or hurtful act that appears to be or is perceived by the victim to be motivated by race, ethnicity, age, religion, national origin, sex, disability, gender identity or expression, sexual orientation, veteran status or socioeconomic status. To be considered an incident, the act is not required to be a crime under any federal, state or local statutes, nor does it have to violate university policy. The University has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of bias, prejudice or discrimination against a student can report their experiences to the University's Bias Report and Support System (BRSS) team. See: <https://brss.wustl.edu>

- Sexual Assault The University is committed to offering reasonable academic accommodations to students who are victims of sexual assault. Students are eligible for accommodation regardless of whether they seek criminal or disciplinary action. Depending on the specific nature of the allegation, such measures may include but are not limited to: implementation of a no-contact order, course/classroom assignment changes, and other academic support services and accommodations. If you need to request such accommodations, please direct your request to Kim Webb (kim webb@wustl.edu), Director of the Relationship and Sexual Violence Prevention Center. Ms. Webb is a confidential resource; however, requests for accommodations will be shared with the appropriate University administration and faculty. The University will maintain as confidential any accommodations or protective measures provided to an individual student so long as it does not impair the ability to provide such measures.
- Sexual Assault Reporting If a student comes to me to discuss or disclose an instance of sexual assault, sex discrimination, sexual harassment, dating violence, domestic violence or stalking, or if I otherwise observe or become aware of such an allegation, I will keep the information as private as I can, but as a faculty member of Washington University, I am required to immediately report it to my Department Chair or Dean or directly to Ms. Jessica Kennedy, the University's Title IX Coordinator. If you would like to speak with the Title IX Coordinator directly, Ms. Kennedy can be reached at (314) 935-3118, jwkennedy@wustl.edu, or by visiting her office in the Women's Building. Additionally, you can report incidents or complaints to Tamara King, Associate Dean for Students and Director of Student Conduct, or by contacting WUPD at (314) 935-5555 or your local law enforcement agency. You can also speak confidentially and learn more about available resources at the Relationship and Sexual Violence Prevention Center by calling (314) 935-8761 or visiting the 4th floor of Seigle Hall.