

GV249: Research Design in Political Science

Department of Government

London School of Economics and Political Science

2016–17

Instructor

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Office Hours: Mon 14:30–15:30
Fri 9:30–10:30

GTA

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1 Introduction

The course will introduce students to the fundamentals of research design in political science. The course will cover a range of topics, starting from the formulation of research topics and research questions, the development of theory and empirically testable hypotheses, the design of data collection activities, and basic qualitative and quantitative data analysis techniques.

The course will address a variety of approaches to empirical political science research including experimental and quasi-experimental designs, large-n survey research, small-n case selection, and comparative/historical comparisons. As a result, topics covered in the course will be varied and span all areas of political science including political behaviour, institutions, comparative politics, international relations, and public administration.

Every week will involve the following in-person sessions:

Lecture: **Friday 11:00–12:00 in 32L.LG.03 (lower-ground level)**
Class: **Friday 13:00–14:00 in CLM.3.07**

Class sessions are hosted by the Graduate Teaching Assistant.

2 Learning Assessment and Feedback

2.1 Intended Learning Outcomes

By the end of the course, students will be able to:

1. Identify theories, hypotheses, and methods used in empirical political science research.
2. Apply different methods to political science research questions.
3. Analyze data to measure concepts, make comparisons, and draw inferences.
4. Define causation and the multiple ways of reaching causal inferences.
5. Communicate political science concepts, theories, and methods in writing.

These outcomes are indicative of what kinds of knowledge should be demonstrated on formative and summative assessments, including the exam.

2.2 Assessment

Students will be evaluated through (1) a 2-hour written exam covering the full breadth of course content and (2) a 3000-word written paper applying course material in the form of a research design proposal. The final mark will reflect an equal weighting of both forms of assessment.

The *written exam* covers the full breadth of material from the course and will test students' knowledge of course content, including concept definition, the appraisal of political science theories, the generation of hypotheses, and — most importantly — the appropriateness of different research designs for answering specific research questions. Note the exam form is slightly different from that used in the 2015–16 academic year. A sample paper will be provided that conveys the structure used in 2016-17. The exam will count for 50% of the final mark.

The *research design proposal* should outline the basic elements of a novel research project, namely a research question, theoretical contribution, testable hypotheses, and a description of the proposed data collection and analysis. Unlike the written exam, this paper should focus narrowly on a topic of the student's choice and display a greater depth of understanding of a smaller set of ideas raised in the course. This will count for 50% of the final mark. Students should work over the full academic year on the research design proposal. A schedule of formative deadlines for the proposal are:

- A proposal of two possible research topics is due at the end of November 2016 and will be presented in class.
- A literature review of relevant existing research is due at the end of February 2017.
- The final essay is due on Tuesday, 21 March 2017 at 5:00pm.

As formative work in preparation for both exam forms, students will complete short “problem set” assignments, approximately every other week (see course schedule for details), which allow them to apply material from the course to concrete political science examples (e.g., identifying design elements of a published research paper; proposing strategies for answering a given research question, etc.). While these formative assessments do not count toward the final mark, they provide an opportunity for peer and instructor feedback.

2.3 Assignments

The topic of each assignment (problem set or otherwise) and the due date for each are as follows:

Assignment	Type	Due Date
Identifying and Evaluating Claims	Problem Set 1	Tuesday Oct. 11
Concepts and Measurement	Problem Set 2	Tuesday Nov. 8
Data Collection I	Problem Set 3	Tuesday Nov. 22
Data Collection II	Problem Set 4	Tuesday Dec. 13
Proposal Topics Presentation	Formative Presentation	Nov./Dec.
Causality	Problem Set 5	Tuesday Jan. 17
Literature Review	Formative Essay	Tuesday Jan. 31
Theory Evaluation	Problem Set 6	Tuesday Feb. 14
Article Critique	Problem Set 7	Tuesday Feb. 28
Statistical analysis	Problem Set 8	Tuesday Mar. 14
Final Research Design Proposal	Summative Essay	Tuesday Mar. 21
ST Exam	Summative Exam	ST TBA

All assignments are due on Tuesday, via Moodle unless otherwise stated. Written and/or oral feedback will be provided by the next lecture after the end of that week. So, if an assignment is due Tuesday October 11, feedback will be provided by Friday October 21.

2.4 Assignment Policies

All work for the course should follow policies and procedures as described in the Government Department’s Undergraduate Student Handbook¹. Students should, in particular, be aware of the LSE policy on plagiarism (<http://www.lse.ac.uk/socialPolicy/InformationForCurrentStudents/plagiarism.aspx>).

No late work will be accepted and given the long-term nature of the research design proposal, it is the general policy of the course not to offer extensions on this.

¹<http://www.lse.ac.uk/government/StudentInformation/Current-undergraduate-students/Undergraduate-Handbook.aspx>

2.5 Special Note for General Course Students

Students in the General Course must complete all formative and summative coursework. In addition to the overall final mark for the course, General Course students will also receive a “class grade” as determined by the instructor and GTA.

This mark will be determined by the following formula:

10%	Class Attendance
10%	Lecture and Online Participation
20%	Class Participation
20%	Group and Individual Projects
40%	Performance on Formative Problem Sets (8 x 5% each)

For more details on this, please see the LSE website.²

3 Getting Help

Should you encounter any difficulties during this course, there are resources available to you. The instructor and GTA hold regular office hours that you are always welcome to attend or contact us via email.

In addition to this, you may at some point find the help of the following LSE offices helpful:

- For issues related to the degree programme or exam policies: the Government Department undergraduate team (gov.ug@lse.ac.uk) or the Student Services Centre³
- For issues of disability or health that impacts your life as a student: Disability and Wellbeing Service,⁴ or for issues of mental health, stress, etc.: Student Counselling Service⁵
- For academic and writing support: Teaching and Learning Centre,⁶ the Language Centre,⁷ and the Library⁸

²<http://www.lse.ac.uk/study/generalCourse/currentStudentsAndAlumni/GeneralCourseAssessment.aspx>

³<http://www.lse.ac.uk/intranet/students/supportServices/studentServicesCentre/Home.aspx>

⁴<http://www.lse.ac.uk/intranet/LSEServices/disabilityAndWellBeingService/home.aspx>

⁵<http://www.lse.ac.uk/intranet/students/supportServices/healthSafetyWellbeing/adviceCounselling/studentCounsellingService/Home.aspx>

⁶<http://www.lse.ac.uk/intranet/LSEServices/TLC/Home.aspx>

⁷<http://www.lse.ac.uk/language/EnglishProgrammes/EnglishHome.aspx>

⁸<http://www.lse.ac.uk/library/usingTheLibrary/training/Information-skills-and-resources.aspx>

4 Course Materials

4.1 Course Website

All material relevant to the course will be uploaded to the course Moodle site, which can be found at: <https://moodle.lse.ac.uk/course/view.php?id=4889>

4.2 Textbooks and Readings

The following text is **required** reading for the course:

- – Dimiter Toshkov. *Research Design in Political Science*. Palgrave, 2016.

We will use the entire Toshkov text as a core reading for the course. Additional readings for each week are listed on the course schedule. Journal articles should be available online and selections from books are available as eBooks or via the library's ReadingListsLSE service. All readings should be completed *before* the scheduled lecture meeting. We may discuss readings in lecture, as well as in the subsequent class meeting.

Recommended readings for each course topic, which are not required to be read and are not covered by the exam, are listed on the course schedule under the heading *See Also*. These may be useful as further reading or in developing the research design proposal portion of the exam. Students may also be interested in the following general texts on research design in the social sciences:

- Gary King, Robert O. Keohane, and Sidney Verba. *Designing Social Inquiry*. Princeton University Press, Princeton, NJ, 1994.
- William R. Shadish, Thomas D. Cook, and Donald T. Campbell. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Houghton-Mifflin, Boston, MA, 2001.
- Barbara Geeddes. *Paradigm and Sand Castles: Theory Building and Research Design in Comparative Politics*. University of Michigan Press, 2003.
- Joshua D. Angrist and Jörn-Steffen Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press, Princeton, NJ, 2008.
- Paul R. Rosenbaum. *Design of Observational Studies*. Springer, New York, 2009.
- Alan S. Gerber and Donald P. Green. *Field Experiments: Design, Analysis, and Interpretation*. W.W. Norton, 2012.
- John Gerring. *Social Science Methodology: A Unified Framework*. Cambridge University Press, New York, second edition, 2012.
- Paul M. Kellstedt and Guy D. Whitten. *The Fundamentals of Political Science Research*. Cambridge University Press, Cambridge, UK, 2nd edition, 2013.
- Guido W. Imbens and Donald B. Rubin. *Causal Inference in Statistics, Social, and*

Biomedical Sciences. Cambridge University Press, 2015.

– Stephen L. Morgan and Christopher Winship. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Cambridge University Press, New York, 2nd edition, 2015.

4.3 Software

For several weeks throughout the course, we will use the free and open source statistical analysis software R. You can download and install R on your personal computer from <https://cran.r-project.org/>. You may also wish to install an advanced text editor that will make it easier to use. Possibilities include RStudio (<https://www.rstudio.com/products/rstudio/download3/>), Notepad++ on Windows (<https://notepad-plus-plus.org/>), or any other listed here: https://en.wikipedia.org/wiki/Comparison_of_text_editors.

5 Schedule

The general schedule for the course is as follows. Details on topics covered and the readings for each week are provided on the following pages. Sessions 1–11 meet during Michaelmas Term and Sessions 11–20 meet during Lent Term.

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- 5.1 Course Introduction (Sep. 30)**
 - 5.2 Concepts: “I’ll know it when I see it” (Oct. 7)**
 - 5.3 Measurement: Concepts in Practice (Oct. 14)**
 - 5.4 Tabulation and Visualization (Oct. 21)**
 - 5.5 Description and Evidence Gathering (Oct. 28)**
 - 5.6 Translating Texts into Interpretations and Numbers (Nov. 11)**
 - 5.7 Actually Talking to People (Nov. 18)**
 - 5.8 Case Studies (Nov. 25)**
 - 5.9 Sampling and Representativeness (Dec. 2)**
 - 5.10 Ethics and Research Integrity (Dec. 9)**
 - 5.11 Causality: Explanation versus Prediction (Jan. 13)**
 - 5.12 Literature Review (Jan. 20)**
 - 5.13 Theory Development and Hypothesis Generation (Jan. 27)**
 - 5.14 Case Comparisons (Feb. 3)**
 - 5.15 Causal Mechanisms (Feb. 10)**
 - 5.16 Statistical Inference (Feb. 24)**
 - 5.17 Getting to Regression: The Workhorse of Quantitative Political Analysis (Mar. 3)**
 - 5.18 Matching and Regression: Accounting for Rival Explanations (Mar. 10)**
 - 5.19 Experimental Design and the Search for Quasi-Experiments (Mar. 17)**
 - 5.20 Conclusion, Exam Prep, Synthesis (Mar. 24)**
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Note: Lectures and classes are held in weeks 1–5, 7–11 of each term. There will be no lecture or class during reading weeks (Oct. 31–Nov. 4 and Feb. 13–17).

MICHAELMAS TERM

5.1 Course Introduction (Sep. 30)

An overview of the course and an introduction to political science research. How do we identify research topics to study empirically? What makes for a good political science research questions?

- Ch. 1 and pp.44-54 from Toshkov.

5.2 Concepts: “I’ll know it when I see it” (Oct. 7)

Before we can study something we need to know what that “something” is. This is concept definition. How do we define concepts and how do we separate different concepts from one another?

- Ch. 4 from Toshkov.
- Ch. 5–6 from Gerring.

Available from: <https://contentstore.cla.co.uk/secure/link?id=e3d9e19d-b22c-e611-80bd-0cc47a6bddeb>

- Jane J. Mansbridge. Rethinking representation. *American Political Science Review*, 97(04):515–528, December 2003.

See also these recommended readings:

- Gary Goertz. *Social Science Concepts: A User’s Guide*. Princeton University Press, Princeton, NJ, 2005.
- Appendix on Etymology (pp.241–252) from Hanna Fenichel Pitkin. *The Concept of Representation*. University of California Press, Berkeley, CA, 1967.
- Giovanni Sartori. Concept misinformation in comparative politics. *American Political Science Review*, 64(4):1033–1046, December 1970.

5.3 Measurement: Concepts in Practice (Oct. 14)

To study something, we need to be able to observe and measure it. How do we *operationalize* concepts so that we can study political phenomena? What are challenges of measuring concepts? How do we assign quantitative values to observations?

- Ch. 5 from Toshkov.
- Robert Adcock and David Collier. Measurement validity: A shared standard for qualitative and quantitative research. *American Political Science Review*, 95(3):529–546, 2001.
- Gerardo L. Munck and Jay Verkuilen. Conceptualizing and measuring democracy: Evaluating alternative indices. *Comparative Political Studies*, 35(1):5–34, February 2002.

See also these recommended readings:

- Markus Prior. Improving media effects research through better measurement of news exposure. *The Journal of Politics*, 71(03):893–908, July 2009.
- Ch. 7 from Gerring.
- Pamela Paxton. Women’s suffrage in the measurement of democracy: Problems of operationalization. *Studies in Comparative International Development*, 35(3):92–111, September 2000.

5.4 Tabulation and Visualization (Oct. 21)

How do we summarize our observations using tables and graphs? How do we communicate our research to technical and non-technical audiences in clear and meaningful ways?

- Jonathan P. Kastellec and Eduardo L. Leoni. Using graphs instead of tables in political science. *Perspectives on Politics*, 5(4):755–771, 2007.
- Hadley Wickham. A layered grammar of graphics. *Journal of Computational and Graphical Statistics*, 19(1):3–28, 2010.

See also these recommended readings:

- Especially Ch. 5 (“Chartjunk”) from Edward Tufte. *The Visual Display of Quantitative Information*. Graphics Press, 1983.
- Ch. 5 (pp.109 to end) from Kellstedt and Whitten.
- Alberto Cairo. *The Functional Art*. New Riders, 2012.

Preview chapter available for free online from: http://www.elartefuncional.com/images/Intro_chapter1.pdf

- *Flowing Data*. <http://flowingdata.com/>
- *Visual Business Intelligence*. <http://www.perceptualedge.com/blog/>
- *The Functional Art*. <http://www.thefunctionalart.com/>
- *Information is Beautiful*. <http://www.informationisbeautiful.net/>
- *Junk Charts*. <http://junkcharts.typepad.com/>

5.5 Description and Evidence Gathering (Oct. 28)

How should we gather and use *descriptions* of political phenomenon, be they qualitative or quantitative in nature? What kinds of evidence can we gather to draw conclusions about the social and political world?

- Ian Lustick. History, historiography, and political science: Multiple historical records and the problem of selection bias. *American Political Science Review*, pages 605–618, 1996.
- John Gerring. Mere description. *British Journal of Political Science*, 32(1980):1–26, May 2012.

See also these recommended readings:

- Ruth Finnegan. Using documents. In Roger Sapsford and Richard Jupp, editors, *Data Collection and Analysis*, pages 138–152. SAGE Publications, Thousand Oaks, CA, 1996.

Reading Week – No Lecture or Class (Oct. 31–Nov. 4)

5.6 Translating Texts into Interpretations and Numbers (Nov. 11)

Primary and secondary source documents provide a written record of politically relevant events and processes. Texts can be used in a number of ways in political science research. How do we draw meaning from texts in qualitative and quantitative ways? How does textual information become useful data for making political inferences?

- Justin Grimmer and Brandon M. Stewart. Text as data: The promise and pitfalls of automatic content analysis methods for political texts. *Political Analysis*, 21:267–297, January 2013.
- Lori Young and Stuart Soroka. Affective news: The automated coding of sentiment in political texts. *Political Communication*, 29(2):205–231, April 2012.

See also these recommended readings:

5.7 Actually Talking to People (Nov. 18)

Collecting political science data often requires actually talking to human beings about their knowledge, thoughts, feelings, opinions, and actions. Some of this is also takes place in group or public settings. How do we conduct interviews? What roles do different kinds of interviews play in political science research? How do we talk to people in natural settings in a way that helps us draw inferences about politics?

- Alice Goffman. On the run: Wanted men in a philadelphia ghetto. *American Sociological Review*, 74(3):339–357, 2009.
- Lubet, Steven. “Ethnography on Trial.” *The New Republic*, 15 July 2015. Available from: <https://newrepublic.com/article/122303/ethnography-trial>
- Nora Cate Schaeffer and Stanley Presser. The science of asking questions. *Annual Review of Sociology*, 29:65–88, 2003.
- Robert L. Peabody. Interviewing political elites. *PS: Political Science & Politics*, 23:451–455, 1990.

See also these recommended readings:

- Richard F. Fenno, Jr. U.S. House members in their constituencies: An exploration. *American Political Science Review*, 71(3):883–917, September 1977.
- Dennis Chong. How people think, reason, and feel about rights and liberties. *American Journal of Political Science*, 37(3):867–899, August 1993.
- Lisa Wedeen. Ethnographic work in political science. *Annual Review of Political Science*, May 2010.
- Pamela Johnston Conover, Ivor Crewe, and Donald D. Searing. The nature of citizenship in the united states and great britain: Empirical comments on theoretical themes. *Journal of Politics*, 53(3):800–832, August 1991.
- pp. 217-257 (Ch. 7 especially section 7.3 to end) from Robert M. Groves, Floyd J. Fowler, Mick P. Couper, James M. Lepkowski, Eleanor Singer, and Roger Tourangeau. *Survey Methodology*. Wiley-Interscience, second edition, 2009.
- Herbert J. Rubin and Irene S. Rubin. *Qualitative Interviewing: The Art of Hearing Data*. SAGE Publications, Thousand Oaks, CA, 2005.
- Beth L. Leech. Symposium on interview methods in political science. *PS: Political Science & Politics*, 23(3):663–688, 2002.

5.8 Case Studies (Nov. 25)

Case studies are in-depth examinations of a single manifestation of a political phenomenon and are one of the most common methods of inquiry in political science. What can we do with case studies? How do we conduct a case study? What kinds of evidence do we gather about a case? How do they help us to understand politics?

- Ch. 10–11 from Toshkov.
- John Gerring. What is a case study and what is it good for? *American Political Science Review*, 98(2):341–354, May 2004.
- Carol Mershon. The costs of coalition: Coalition theories and italian governments. 90(3):534–554, 1996.
- Lisa Wedeen. Acting ‘as if’: Symbolic politics and social control in syria. 40(3):502–523, 1998.

See also these recommended readings:

- James Mahoney and Gary Goertz. The possibility principle: Choosing negative cases in comparative research. *American Political Science Review*, 98:653–669, 2004.
- David J. Harding, Cybelle Fox, and Jal D. Mehta. Studying rare events through qualitative case studies: Lessons from a study of rampage school shootings. *Sociological Research & Methods*, 31(2):174–217, 2002.

5.9 Sampling and Representativeness (Dec. 2)

In quantitative political science research, sampling is the basis of both claims about “representativeness” (i.e., the extent to which findings from a study apply to some well-defined population) and statistical inference (i.e., claims about whether some observation is “statistically significant”). What is sampling? How do we sample from populations? How does sampling allow us to make inferences about populations?

- Larry V. Hedges. Recommendations for practice: Justifying claims of generalizability. *Educational Psychology Review*, 25(3):331–337, August 2013.
- “External Validity,” pp.83–95 from William R. Shadish, Thomas D. Cook, and Donald T. Campbell. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Houghton-Mifflin, Boston, MA, 2001.

Available from: <https://contentstore.cla.co.uk/secure/link?id=e2d9e19d-b22c-e611-80bd-0cc47a6bddeb> (Please note some of the terminology used in this excerpt is outdated and may read as inappropriate today.)

See also these recommended readings:

- “Increasing the number of observations” (pp. 208–230) from Gary King, Robert O. Keohane, and Sidney Verba. *Designing Social Inquiry*. Princeton University Press, Princeton, NJ, 1994.
- Ch. 6 from Kellstedt and Whitten.

5.10 Ethics and Research Integrity (Dec. 9)

The practice of political science research evokes numerous ethical considerations. By observing the world, political scientists potentially obtain data that is confidential or private. By intervening in the world, political scientists potentially affect real-world politics in expected and unexpected ways. How do we think about and address these and other ethical challenges of conducting research?

- The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The Belmont report: Ethical principles and guidelines for the protection of human subjects of research. Technical report, The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1978.
- Spiros Simitis. From the market to the polis: The EU directive on the protection of personal data. *Iowa Law Review*, 80(445):445–469, 1994–95.
- “LSE Research Ethics Policy.” Available at: <http://www.lse.ac.uk/intranet/LSEServices/policies/pdfs/school/resEthPolPro.pdf>

LENT TERM

5.11 Causality: Explanation versus Prediction (Jan. 13)

Political science is generally concerned with questions of causality. To do that we need to learn to think counterfactually. How do we know that something causes something else? How do we separate “correlation” from “causation”?

- Ch. 6 from Toshkov.
- Paul W. Holland. Statistics and causal inference. *Journal of the American Statistical Association*, 81(396):945–960, 1986.

See also these recommended readings:

- Ch. 8 from Gerring.
- Galit Shmueli. To explain or to predict? *Statistical Science*, 25(3):289–310, aug 2010.
- Brady, Henry. “Causation and Explanation in the Social Sciences” (Ch. 8; pp.217–270) from Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier, editors. *The Oxford Handbook of Political Methodology*. Oxford University Press, Oxford, UK, 2008.

5.12 Literature Review (Jan. 20)

What is a “scientific literature”? How do we know what we think we know about the social and political world? How do we evaluate, synthesize, and integrate a collective body of research evidence?

- Richard R. Lau and Ivy Brown Rovner. Negative campaigning. *Annual Review of Political Science*, 12(1):285–306, June 2009.
- Margaret Levi and Laura Stoker. Political trust and trustworthiness. *Annual Review of Political Science*, 3:475–507, 2000.
- John P.A. Ioannidis. Why most published research findings are false. *PLoS medicine*, 2(8):e124, August 2005.

See also these recommended readings:

- Theodore D. Sterling. Publication decisions and their possible effects on inferences drawn from tests of significance—or vice versa. *Journal of the American Statistical Association*, 54(285):30–34, 1959.
- Alan S. Gerber, Neil Malhotra, Conor M. Dowling, and David Doherty. Publication bias in two political behavior literatures. *American Politics Research*, 38:591–613, 2010.
- Ulrich Schimmack. The ironic effect of significant results on the credibility of multiple-study articles. *Psychological Methods*, 17(4):551–66, December 2012.

5.13 Theory Development and Hypothesis Generation (Jan. 27)

How do we create social science theories based on past evidence and novel observation? What roles do induction and deduction play in contemporary political science? Hypotheses are the observable implications of theories. How do we derive hypotheses from theories? How do we overcome “observational equivalence” wherein multiple theories yield similar expectations about the world? What does it mean to test a hypothesis?

- Ch. 3 from Toshkov.
- James D. Fearon. Counterfactuals and hypothesis testing in political science. *World Pol*, 43(2):169–195, January 1991.
- Nina Tannenwald. The nuclear taboo: The united states and the normative basis of nuclear non-use. *International Organization*, 53(3):433–468, Summer 1999.

See also these recommended readings:

- Morris P. Fiorina. Formal models in political science. *American Journal of Political*

Science, 19(1):133–159, February 1975.

5.14 Case Comparisons (Feb. 3)

How do comparisons between cases help us to make inferences about causality? How do we select cases so that comparisons between them are informative about theories and hypotheses?

- Ch. 9 from Toshkov.
- Matthew Lange, James Mahoney, and Matthias vom Hau. Colonialism and development: A comparative analysis of spanish and british colonies. 2006.
- Richard F. Doner, Bryan K. Ritchie, and Dan Slater. Systemic vulnerability and the origins of developmental states: Northeast and southeast asia in comparative perspective. *International Organization*, 59:327–361, Spring 2005.

See also these recommended readings:

- Jacob S. Hacker. The historical logic of national health insurance: Structure and sequence in the development of British, Canadian, and U.S. medical policy. *Studies in American Political Development*, 12:57–130, 1998.
- James Mahoney. Strategies of causal inference in small-n analysis. *Sociological Research & Methods*, 28(4):387–424, May 2000.
- Arend Lijphart. Comparative politics and the comparative method. *American Political Science Review*, 65(3):682–693, September 1971.
- James Mahoney. Nominal, ordinal, and narrative appraisal in macrocausal analysis. *American Journal of Sociology*, 104(4):1154–1169, January 1999.
- Barbara Geddes. A game theoretic model of reform in Latin American democracies. *American Political Science Review*, 85(2):371–392, 1991.
- David Collier and James Mahoney. Insights and pitfalls: Selection bias in qualitative research. 49(1):56–91, 1996.
- Jean Dreze and Amartya Sen. *Hunger and Public Action*, chapter China and India, pages 204–225. Clarendon Press, Oxford, 1989.

5.15 Causal Mechanisms (Feb. 10)

Aside from knowing that one thing (X) caused another thing (Y), we often want to know how that causal process worked. This is the study of “causal mechanisms”. How do we study causal mechanisms to gain a deeper understanding of causal relationships in politics? How do we study the process by which a causal effect plays out?

- Ch. 10 (pp.325–353) from Stephen L. Morgan and Christopher Winship. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Cambridge University Press, New York, 2nd edition, 2015.

Available online at Cambridge Books Online

- Henry E. Brady. Data-set observations versus causal-process observations: The 2000 u.s. presidential election. In Henry E. Brady and David Collier, editors, *Rethinking Social Inquiry: Diverse Tools, Shared Standards*, pages 267–271. Rowman and Littlefield, Lanham, 2004.

See also these recommended readings:

- Dietrich Rueschemeyer and John D. Stephens. Comparing historical sequences — a powerful tool for causal analysis. *Comparative Social Research*, 17:55–72, 1997.
- Kosuke Imai, Luke Keele, Dustin Tingley, and Teppei Yamamoto. Unpacking the black box: Learning about causal mechanisms from experimental and observational studies. *American Political Science Review*, 105(4):765–789, November 2011.
- John G. Bullock, Donald P. Green, and Shang E. Ha. Yes, but what’s the mechanism? (don’t expect an easy answer). *Journal of Personality and Social Psychology*, 98(4):550–558, April 2010.

Reading Week – No Lecture or Class (Feb. 13–17)

5.16 Statistical Inference (Feb. 24)

Random sampling allows us to quantitatively test hypotheses about empirical regularities. This allows us to make claims about “statistical significance” (such as whether two groups differ from one another or whether a feature of a group differs from an expectation dictated by theory). How do we use statistical significance testing in political science? How do we interpret statistical significance tests?

No assigned readings. Lecture and class will focus on a laboratory-type activity.

See also these recommended readings:

- W.S. Robinson. Ecological correlations and the behavior of individuals. *American Sociological Review*, 15(3):351–357, 1950.
- Ch. 7 from Kellstedt and Whitten.

5.17 Getting to Regression: The Workhorse of Quantitative Political Analysis (Mar. 3)

By far the most commonly used method of quantitative analysis in political science is “regression.” What is regression? How do we use it? How do we interpret the results of regression analyses?

- Ch. 8 from Toshkov.
- Douglas A. Hibbs. On the political economy of long-run trends in strike activity. 8(2):153–175, 1978.

5.18 Matching and Regression: Accounting for Rival Explanations (Mar. 10)

How do we use regression analysis to make causal inferences? How do we account for the fact that an outcome we are interested in might be caused by multiple events, features, or attributes of cases?

- Thomas R. Cusack, Torben Iversen, and David Soskice. Economic interests and the origins of electoral systems. *American Political Science Review*, 101(3):373–391, July 2007.

See also these recommended readings:

- Jasjeet S. Sekhon. Opiates for the matches: Matching methods for causal inference. *Annual Review of Political Science*, 12:487–508, 2009.
- Paul R. Rosenbaum and Donald B. Rubin. The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1):41–55, April 1983.
- Peter M. Aronow and Cyrus Samii. Does regression produce representative estimates of causal effects? *American Journal of Political Science*, 2015. Unpublished paper.
- Peter M. Steiner, Thomas D. Cook, William R. Shadish, and M.H. Clark. The importance of covariate selection in controlling for selection bias in observational studies. *Psychological Methods*, 15(3):250–267, September 2010.
- Rajeev H. Dehejia and Sadek Wahba. Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and Statistics*, 84(1):151–161, February 2002.

5.19 Experimental Design and the Search for Quasi-Experiments (Mar. 17)

The clearest path to causal inference is through experimentation. How does experimentation differ from observational research? Why does experimentation provide a uniquely powerful design for making causal inferences? In lieu of experimentation, how can design research around real-world variation that has quasi-experimental properties?

- Ch. 7 from Toshkov.
- Alan S. Gerber and Donald P. Green. Field experiments and natural experiments. In Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier, editors, *Oxford Handbook of Political Methodology*, chapter 15. Oxford University Press, Oxford, UK, 2008.
- Rikhil R Bhavnani. Do electoral quotas work after they are withdrawn? evidence from a natural experiment in India. *American Political Science Review*, 103(1):23–35, 2009.
- Donald T. Campbell and H. Laurence Ross. The Connecticut crackdown on speeding: Time-series data in quasi-experimental analysis. *Law & Society Review*, 3(1):33–54, 1968.

See also these recommended readings:

- Jasjeet S. Sekhon and Rocío Titiumik. When natural experiments are neither natural nor experiments. *American Political Science Review*, 106(1):1–23, February 2012.
- Adam J. Berinsky and Sara Chatfield. An empirical justification for the use of draft lottery numbers as a random treatment in political science research. *Political Analysis*, 23(3):449–454, June 2015.
- Joshua D. Angrist. Lifetime earnings and the vietnam draft lottery: Evidence from social security administrative records. *American Economic Review*, 80(3):313–336, 1990.

5.20 Conclusion, Exam Prep, Synthesis (Mar. 24)

Where have we been? What have we learned? Where do we go from here?

- Ch. 11 from Toshkov.
- Robert A. Dahl. The behavioral approach in political science: Epitaph for a monument to a successful protest. *American Political Science Review*, 55(4):763–772, 1961.
- Charles Merriam. The present state of the study of politics. 15:173–85, 1921.
- James Mahoney and Gary Goertz. A tale of two cultures: Contrasting quantitative and qualitative research. *Political Analysis*, 14(3):227–249, June 2006.
- Theodore J. Lowi. The state in political science: How we become what we study. 86:1–7,

1992.