

Causal Inference II (Survey Experiments)

D.J. Flynn, School of Global and Public Affairs, IE University

RECSM Summer School 2019

Course description

This course examines survey experimental methods for causal inference. After providing an overview of the essential aspects of survey experiments, the course focuses primarily on common threats to inference that arise in survey experimental settings and how to avoid them. Selected topics will include theory testing, treatment design, estimation of heterogeneous treatment effects, convenience sampling, and generalizability. The course will conclude with an applied session in which students design survey experiments using Qualtrics and peer review other students' designs.

Prerequisites and software

The course assumes familiarity with hypothesis testing and regression (e.g., one introductory graduate statistics course). I will use R for in-class examples, but students are free to use Stata or another program of their choice. All slides and code used in class will be made available online.

We will use Qualtrics, a popular survey platform, to program survey experiments. If students do not have access to Qualtrics via their home institutions, they should [sign up for a free trial version of Qualtrics](#) before our second day of class (5 July).

Background reading (recommended)

Students who have not encountered (survey) experiments in a previous course are advised to complete the following readings before class:

- Druckman, James N., Donald P. Green, James H. Kuklinski, and Arthur Lupia. 2011. "Experiments: An Introduction to Core Concepts." In James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia, eds., *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.
- Sniderman, Paul M. 2011. "The Logic and Design of the Survey Experiment: An Autobiography of a Methodological Innovation." In James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia, eds., *Cambridge Handbook of Experimental Political Science*. New York: Cambridge University Press.
- Druckman, James N. 2010. "Experimental Myths." *The Experimental Political Scientist* 1: 9–11.

Schedule and required readings

Day 1 (4 July)

Session 1 (14:00–16:00h): Context and introduction. History and evolution of (survey) experiments, potential outcomes framework, SUTVA and component assumptions, internal and external validity, treatment design, experimental applications (framing, information, cue-taking, race and politics), preregistration and ethics.

- 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(4): 627–635.
- Dafoe, Allan, Baobao Zhang, and Devin Caughey. 2018. “Information Equivalence in Survey Experiments.” *Political Analysis*. 26(4): 399–416.
- Leeper, Thomas J. and Rune Slothuus. 2018. “Can Citizens Be Framed? How Persuasive Information More than Emphasis Framing Changes Political Opinions.” Working paper.

Session 2 (16:00–18:00h): Treatment effect heterogeneity. Theorizing heterogeneous treatment effects (HTEs), designs for testing HTEs, estimation via interactions, statistical power and error, post-treatment bias.

- Kam, Cindy and Marc Trussler. 2017. “At the Nexus of Observational and Experimental Research: Theory, Specification, and Analysis of Experiments with Heterogeneous Treatment Effects.” *Political Behavior* 39(4): 789–815.
- Montgomery, Jacob B., Brendan Nyhan, and Michelle Torres. 2018. “How Conditioning on Posttreatment Variables Can Ruin Your Experiment and What to Do about It.” *American Journal of Political Science* 62(3): 760–775.
- Guess, Andrew and Alexander Coppock. Forthcoming. “Does Counter-Attitudinal Information Cause Backlash? Results from Three Large Survey Experiments.” *British Journal of Political Science*.

Day 2 (5 July)

Session 3 (14:00–16:00h): Settings, realism, and validity. The influence of samples and timing, mundane and experimental realism, pre-treatment effects, multi-wave designs and repetition, attrition, treatment effect durability. MTurk, MTurkR, and other common approaches to convenience sampling.

- Barabas, Jason and Jennifer Jerit. 2010. “Are Survey Experiments Externally Valid?” *American Political Science Review* 104(2): 226–242.
- Druckman, James N. and Thomas J. Leeper. 2012. “Learning More from Political Communication Experiments: Pretreatment and Its Effects.” *American Journal of Political Science* 56(4): 875–896.

- Coppock, Alexander, Thomas J. Leeper, and Kevin J. Mullinix. 2018. “The Generalizability of Heterogeneous Treatment Effect Estimates Across Samples.” *Proceedings of the National Academy of Science* 115(49) 12441–12446.

Session 4 (16:00–18:00h): Programming survey experiments in Qualtrics, peer review. Short lecture on Qualtrics survey platform. Students will work in small groups to design survey experiments in Qualtrics. All groups will present their experiments for peer review from other students and the instructor.

- No assigned readings. Please review reading and lecture material above and come with questions for clarification.

Instructor biography

D.J. Flynn is Assistant Professor of Political Science in the School of Global and Public Affairs at IE University in Madrid. He is also affiliated with IE’s Center for the Governance of Change. He earned his PhD in Political Science from Northwestern University (2016) and was a postdoctoral fellow in Quantitative Social Science at Dartmouth College (2016–2018). His research uses experimental and statistical methods to examine how misinformation distorts important aspects of democratic politics, including public opinion, representation, and accountability. His methodological interests are in survey and experimental design with particular focus on the measurement of knowledge.