

Design and Analysis of Survey Experiments

January 2024

Instructor Dr. Brett Bessen
Time Jan. 15-17, 9am-11
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Location Virtual (Zoom)

Course Description

Survey experiments are a powerful tool for research on social and political attitudes. This course offers practical insights into the design and analysis of survey experiments, addressing common issues faced by researchers. We'll start with causal inference, randomization, and treatment effects (day 1), discuss issues in the design of survey experiments (day 2), and discuss some more advanced problems, including subgroup effects and attrition (day 3). By the end of the course, you should be well-equipped to design and analyze survey experiments.

Using R

Social science data are often messy; learning to work with data takes time and patience. We will use R to clean and analyze data. While there are similar software programs—e.g., Stata or SPSS—R is free, widely used, and provides a good foundation for other programming languages. Throughout the course, I will provide scripts showing you how to implement the methods discussed in R. In addition to following these scripts, you are encouraged to try alternative code and consult online resources.

Recommended Texts

Cunningham, S. (2021). *Causal inference: The mixtape*. Yale university press

Druckman, J. N. and Green, D. P., editors (2021). *Advances in Experimental Political Science*. Cambridge University Press

Gerber, A. S. and Green, D. P. (2012). *Field Experiments: Design, Analysis, and Interpretation*. W. W. Norton

Mutz, D. C. (2011). *Population-based Survey Experiments*. Princeton University Press

Course Schedule

Jan 15: Experiments and Causality

Topics: Experiments as Fair Tests, Potential Outcomes, Random Assignment, Treatment Effects, Using Regression, Statistical Power

Recommended Readings

Druckman, J. N., Green, D. P., Kuklinski, J. H., and Lupia, A. (2011). Experiments: An introduction to core concepts. In *Cambridge Handbook of Experimental Political Science*. Cambridge University Press

Gaines, B. J., Kuklinski, J. H., and Quirk, P. J. (2007). The logic of the survey experiment reexamined. *Political Analysis*

Gerber, A., Arceneaux, K., Boudreau, C., Dowling, C., Hillygus, S., Palfrey, T., Biggers, D. R., and Hendry, D. J. (2014). Reporting guidelines for experimental research: A report from the experimental research section standards committee. *Journal of Experimental Political Science*

Holland, P. W. (1986). Statistics and causal inference. *Journal of the American Statistical Association*

Jan 16: Designing Your Experiment

Topics: Samples, Factorial Designs, Crafting Treatments, Measurement, Using Qualtrics

Recommended Readings

Clifford, S., Sheagley, G., and Piston, S. Increasing precision without altering treatment effects: Repeated measures designs in survey experiments. *American Political Science Review*

Krupnikov, Y., Nam, H. H., and Style, H. (2021). Convenience samples in political science experiments. In Druckman, J. N. and Green, D. P., editors, *Advances in Experimental Political Science*. Cambridge University Press

Mutz, D. C. (2021). Improving experimental treatments in political science. In *Advances in Experimental Political Science*. Cambridge University Press

Jan 17: Subgroup Effects and Alternative Designs

Topics: Heterogenous treatment effects, Attrition, With-in-subjects designs, Conjoint

Recommended Readings

Bansak, K., Hainmueller, J., Hopkins, D. J., Yamamoto, T., Druckman, J. N., and Green, D. P. (2021). Conjoint survey experiments. *Advances in Experimental Political Science*

Kam, C. D. and Trussler, M. J. (2017). At the nexus of observational and experimental research: Theory, specification, and analysis of experiments with heterogeneous treatment effects. *Political Behavior*

Lo, A., Renshon, J., and Bassan-Nygate, L. (2023). A practical guide to dealing with attrition in political science experiments. *Journal of Experimental Political Science*

Montgomery, J. M., Nyhan, B., and Torres, M. (2018). How conditioning on posttreatment variables can ruin your experiment and what to do about it. *American Journal of Political Science*