2023 Summer Short Course

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Zoom synchronous (but will make videos and exercises available)
July 25-28: 10:00 am–12:00 pm; 1:00 pm–3:00 pm

Course Description

This short course is intended to help you review for comps, shore up your measurement skills, cover some recent methodological critiques of survey experiments, and introduce students to incorporating the context using multilevel models.

There are no prerequisites. In each day's sessions, I will do some lecture, review some readings (which you may read but they are not required), and try to provide an intuitive non-mathematical explanation of the readings. I will give some time for you to work through some examples together in small groups or alone.

I will plan on making myself available to discuss your projects (whether related to the topic of the course or not).

Course Schedule

The plan for the course is listed below, though it may change depending on the pace at which we get through material.

Day 1. Review and measurement

Review of various problems in interpreting multiple regression and threats to causal inference.
Review of various causal mechanisms: exogeneity, confounders, mediation, moderation, Simpson's paradox, etc.
Overview of causal inference methods
Overview of a set of comparative and qualitative methods

Day 2. Measurement

Writing and evaluating survey questions

Scaling: dichotomous items (IRT and Guttman scales), Likert scales, etc.
Assessing the validity of indices
Reliability (alpha, factor analysis)

Day 3a. Topics in survey experiments

Treatments as concepts
Recent methodological critiques of survey experiments
      When to control for post-treatment covariates
      What to do with respondents that fail manipulation checks
      Repeated questions

Day 3b. Incorporating contextual information in surveys

Theory and the context
Ecological and individualistic fallacies
Data sources

Day 4. Multilevel models

Establishing the basics: the inter-class correlation coefficient and variance components
Random intercepts
Random coefficients
Cross-level effects

Helpful Texts

There are no required texts for this course. Some great resources on survey research and multilevel models include:

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

- Shadish, William, R, Thomas D. Cook, and Donald T. Campbell. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inferences*. Boston: Houghton Mifflin.

- Andrew Gelman and Jennifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press.

- Stephen W. Raudenbush and Anthony S. Bryk. 2002. Hierarchical Linear Models: Applications and Data Analysis Methods. 2nd edition. Sage Press.