**Social Experiments: Design and Generalization**
**PP449**
University of Chicago
Winter 2020
Mondays Wednesday 9:30-10:50am

Keller Center Room tbd

Instructor
Colm O'Muircheartaigh
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OH: Thursday 1:30-2:30pm and 3:00-4:00pm in Keller 3021
or by appointment

Teaching Assistant
tbd

## Course description

The pressure in many fields (notably medicine, health research, and education) for evidence-based results has increased the importance of the design and analysis of social investigations. We will consider the complementary strengths of surveys and experiments in assessing evidence for generalization in policy areas; randomized clinical trials in medicine, field experiments in economics and psychology, and the use of scientific evidence in policy formulation will be among the examples. The course will comprise three broad streams: the design and analysis of social experiments and quasi-experiments; the design and analysis of sample surveys; and how the interrelationships between the two approaches can strengthen causal claims from social data.

There are two major challenges in providing evidence [generalizing findings] from social research: (i) determining causation and (ii) generalizing results from a sample of observed cases to the rest of the (unobserved) population. Statistics has provided the two fundamental approaches to addressing these challenges: (randomized) field experiments and (random) sample surveys.

The course will tackle the issues of generalization from these two perspectives: (i) the classical statistical design of experiments (developed by statisticians between the 1910s and the 1950s) that can be found in texts by Fisher, Cox, Snedecor and Cochran, and others); this approach relates closely to the design of quasi-experiments and experiments in the social sciences, as described by Campbell and Stanley in the 1950s, and extended by Cook, Shadish, and others; (ii) the design and analysis of sample surveys, originating in the 1890s, in particular multi-stage clustered designs, and experiments embedded in them, as presented by Cochran, Kish, and others.

## Course Materials:

The following three books provide background reading:

A S Gerber and D P Green: *Field Experiments: Design, Analysis, and Interpretation*. W W Norton and Co. 2012
W R Shadish, T D Cook, and D T Campbell: *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Houghton Mifflin Co. 2002
G Kalton: *Introduction to Survey Sampling* (Quantitative Applications in the Social Sciences). A Sage University Paper. 1983

I will post topic-specific materials on the Canvas site each week.

## Class materials

The slides presented in class will be posted on Canvas on the day following each class.
Each exercise will be posted on Canvas a week before it is due.

## Homework Assignments

There will be a homework assignment every two weeks. Assignments will be due before class on the Monday of the following week. The assignments will account for 30% of the class grade.

## Office hours

Professor O'Muircheartaigh: Thursdays 1:30-4:00pm in Keller 3021, starting Thursday, January 9

TA: Office hours and location tbd

## Grading

The grade will be based on three components: class attendance and participation (20%), weekly homework assignments (30%) and a final (50%).