Proposed New Undergraduate Class: Experimental Methods in Political Science

Course Description

This course is designed to provide an introduction to experimental methods in political science for undergraduate students. The emphasis of the course will be on several different styles of laboratory experiments, but field experiments (and briefly, survey experiments) will also be discussed.

Experimental methods have become an increasingly important tool for political scientists. What are the potential strengths and weaknesses of different kinds of experiments relative to other research methods, such as surveys or statistical analyses of real-world data? What sorts of things can we hope to learn from experiments? And what are some of the important methodological issues that must be considered in designing effective experimental tests of theories? During the course of the semester, we will address all of these questions. By the end of the semester, students should not only have read a broad selection from the experimental literatures in political science, but also gained specific insights into experimental design.

While the purpose of the course is primarily methodological, there is no better way to get a feel for how experiments work than to read experimental literatures from different fields. The experiments that we will discuss during the course of the semester will fall into three main categories: political economy (tests of theories of institutional structure, voting rules, and related topics); political psychology (exploring topics such as persuasion, political attitudes, and the processing of political information); and foundational issues (tests of the decision- and game-theoretic foundations that underlie most rational choice and formal work in political science). We will also engage in some in-class experiments as we read through the literature.

Prerequisites

Students should have completed either V53.0800, Quantitative Methods in Political Science, or an equivalent statistics course in another discipline and a course in game theory (either V53.0840 or V53.0844 or an equivalent such course in another discipline).

Texts

Morton, Rebecca B. and Kenneth Williams, Experimental Methods in Political Science, manuscript


Optional reference books on statistics and game theory:


**Grades**

There will be an in class midterm and non-cumulative final exam. You will also be expected to submit an experimental design two weeks before classes end. The design must provide a detailed, and plausible, scheme for an experiment that address a specific political research question of the student’s choosing (with prior approval of the instructor before the midterm exam). The design (along with a brief literature review and other necessary background materials) will typically run about 10-20 pages in length. Depending on time constraints, we will conduct some or all of the experiments in class during the last two weeks of the semester and the class as a whole will critique the designs. Grades on late assignments will be reduced 5% per day. You will also be graded on class participation, evidence of reading material assigned in advance, and your discussion of the experimental designs of your colleagues. Make-up exams will not be available for students who fail to notify me in advance of missing an examination, nor for students without an acceptable explanation and, if necessary, documentation.

Grades will be computed on the following basis:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Experimental Design</td>
<td>30%</td>
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<tr>
<td>Class Participation</td>
<td>10%</td>
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<td>Midterm Exam</td>
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<td>Final Exam</td>
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**Tentative Course Schedule**

Topic 1 – What is experimentation? What is not experimentation?
We will discuss the fundamentals of experimentation: manipulation, control, and random assignment and the variation in the use of these fundamentals across the discipline. Discussion of the difference between experiments and simulations. Importance of the design process in an experiment. Discussion of the concept of a “natural experiment” and the history of experimentation.

Reading Assignments:

Morton, Chapter 1
Salsburg, entire book
Kagel, chapter 1, pages 26-34
Friedman, chapters 1 and 3

Topic 2 – History of Experiments in Political Science
Kinder, chapter 1
Kagel, chapter 1, pages 3-20
Salsburg, entire book
Morton, Chapter 2
Friedman, Chapter 9

Topic 3 -- Types of Experiments in Political Science
We will discuss the differences between laboratory, field, and survey experiments and the different audiences for different types of experiments.

Morton, Chapter 3
Kagel, chapter 1, pages 21-23


Topic 4 – Theory Testing and Experiments – Classic Cases

Discussion of the differences between formal theory testing and psychological theory testing. Advantages of experiments over using naturally occurring data. Role of Scripts and internal validity. Discussion of analogy to “structural estimation”. Examples of classic game theoretic experiments, with particular emphasis on public good games.

Friedman, Chapter 2
Morton, Chapter 4
Kagel, Chapter 1, pages 35-110, chapter 2
Palfrey: "Conflict Between Private Incentives and the Common Good" in Kinder
Isaac, Walker, and Thomas: "Divergent Evidence on Free Riding" in Kinder
Dawes, Orbell, Simmons and Van de Kragt: "Organizing Groups" in Kinder

Topic 5 – Theory-Driven Fact Finding and Experiments

Discussion of how experiments can move from testing theory to discovering “new facts”.

Reading Assignments:
Morton, Chapter 5
Roth, Chapters 3 and 4

Topic 6 – Experiments on “Not So Classic” Games & Rationality Assumptions
Discussion of theory experiments on special games that aren’t obviously capturing reality but can be strong tests of theoretical concepts such as the centipede game and the beauty contest game. Discussion of experiments testing rationality assumptions.

Readings Assignments:

Morton, Chapter 6


Roth, Chapter 8

Topic 7 – Theory Testing and Experiments in Political Science, First Generation

First generation of formal theory in political science focused on predictions that came from cooperative game theory and social choice theory. Experimental analysis of these models helped lead to more applied formal theory using noncooperative game theory.

Reading Assignments:

Morton, Chapter 7


“Voting Games and Computational Complexity,” Glenn W. Harrison & Tanga McDaniel, working paper

Palfrey. “Agendas and Decisions in Government” in Kinder

Fiorina and Plott. “Committee Decisions under Majority Rule: An Experimental Study” in Kinder

Eavey and Miller, “Bureaucratic Agenda Control” in Kinder

Topic 8 – Theory Testing and Experiments in Political Science, Second Generation

Second generation of formal theory in political science focuses on predictions that come from more applied, noncooperative game theoretic models. Of particular interest are experiments on turnout and voting games.
Reading Assignments:

Morton, Chapter 8


Schram & Sonnemans in *Journal of Economic Psychology*, 1996


Topic 9 – Theory Testing and Political Psychology

Discussion of experiments designed to evaluate theories arising out of political psychology and differences between these and those testing formal models.

Reading Assignments:

Morton, Chapter 9

Lodge and Hamill. “A Partisan Schema for Political Information Processing” in Kinder.


Iyengar, Peters, and Kinder, "Experimental Demonstrations of the 'Not-So-Minimal' Consequences of Television News Programs" in Kinder.


Topic 10 – More on Scripts in Experiments

Scripts (instructions in experiments) provide descriptions of players, action choices, and possible payoffs. In formal theory experiments these are very detailed and players “enact” the scripts. In political psychology experiments scripts are almost nonexistent. Do scripts matter?

Reading Assignments:

Morton, Chapter 10


Topic 11 – Other Differences Between Formal Theory Experiments and Political Psychology Experiments

Formal theory experiments usually focus on behavior of group, whereas political psychology experiments examine individual level, decision theoretic behavior. Why is better? In formal theory experiments, the subjects often repeat the tasks many times but rarely repeat tasks in political psychology experiments. Is repetition good or bad? Political psychologists often use deception in experiments, formal theory experiments rarely have deception. Is deception a necessary evil?

Reading assignments:

Morton, Chapter 11


Topic 12 – Motivating Subjects and Choosing Subjects

In formal theory experiments subjects are motivated through financial incentives but in psychology experiments this is rarely the case? Does it matter? How do we handle risk aversion – which may interfere with financial incentives? Where are subjects recruited? Does it make a difference what types of subjects we recruit?

Morton, Chapter 12

Friedman, Chapters 2 and 4

Roth, Chapter 1


Topic 13 – Analyzing Experimental Data

Data from experiments should be straightforward to analyze since the design is supposed to be where the statistics matters. But is that always the case? How do we address subject’s errors?

Reading Assignments:

Morton, Chapter 13

Friedman, Chapters 7 and 8


Topic 14 – Ethical Issues in Experimentation

Experiments involve interfering in real individual decisions. There are famous cases of experiments that cause serious harm to the subjects. What are the ethical questions facing political scientists who use experiments?

Morton, Chapter 14

Topic 15 – The Future of Experimentation in Political Science – the influence of behavioral economics?

Morton, Chapter 15


Gintis et al. 2001. “Cooperation, Reciprocity, and Punishment in Fifteen Small-Scale Societies.”


