Playing in the Lab: Lab Experiments on Games. Applications to Political Economy.

Goals: This course analyzes the methodology of lab experiments on games, and uses a specific topic in Political Economy—collective decision-making, primarily through voting—as example of how lab experiments studying strategic situations can be designed, what they can test, and what they can achieve.

The course has two threads. On one hand, we will study methodological questions in experimentation. This involves not only discussions of experimental design and procedures, but also the extensions of traditional models developed to accommodate the noisy choices observed in the lab. While we will start from game-theoretic models of rational and self-interested individuals, the experimental results often demand consideration of psychological and sociological factors. We will study how different models of behavioral game-theory strive to provide systematic accounts of the data generated in the lab.

On the other hand, we will focus on the substantive questions of political economy, focusing in particular on collective decision-making, with a strong foundation in theory. The economic choices of a society are coordinated through prices; the political choices through voting. Even outside the political realm, voting is the most common procedure through which groups make collective decisions. It is both a fundamental empirical fact of our social and political lives and a rich source of theoretical questions and paradoxes.

Experiment: Students will take part in one experiment, run in CELSS on September 11th, during class time.

Course Requirements:
The students are required to prepare the draft of an experimental paper. No actual experiment is required, but the paper should include a theoretical model and hypothesis, a detailed experimental design, and the draft of the experimental instructions.

Timing for the paper:
- Oct 9: 1-2 page proposal with the question to be studied and a sketch of the experiment.
- Nov 13: Relevant literature, initial draft of the model and of the experimental instructions.
- The deadline for the paper is Dec 14.

Students are also required to take the online IRB course and test for Human Subject Research (TC0087) and to attend the workshop on programming in ZTree/OTree. (Date to be announced).
REFERENCES

(a) Experimental methods


Note: several chapters can be found on the web.

(b) Behavioral game theory


(c) Experimental political economy


INDICATIVE CLASS SCHEDULE

**Introduction** (Sept. 4)


Casella, A., Introduction to Experiments, notes, in Courseworks.

**Experiment and discussion** (Sept 11-18)

**Bad Policies** (Sept 18-Sept 25)


**Methodology 1: Quantal Response Equilibrium** (Oct 2)


**Voting 1: Voter Participation** (Oct 9)


**Voting 2. Aggregation of preferences.** (Oct 16-Oct 23)


Casella, A., A. Gelman and T. Palfrey, 2006, “An Experimental Study of Storable Votes”, *Games


**Methodology 2: more models of bounded rationality.** Equilibrium models (cursed equilibrium, analogy-based expectation equilibrium), and non (level k, cognitive hierarchy). (Oct 30 - Nov 13)


(WP:  http://www.penczynski.de/attach/Outofyourmind.pdf)


**Voting 3: Aggregation of information** (Nov 23 - Nov 30)


**Voting 4. Vote buying and vote trading** (Dec. 4)


**Methodology 3: Statistical methods (when??)**

