

# PS 2704: Formal Political Theory II

(Advanced Formal Models of Politics)

Fall 2008

## Professor

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## Class Meetings

Tuesday 1:00-2:25 and Thursday 4:00-5:25  
4500 WW Posvar Hall

## Office Hours

By appointment

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This is the second course in the formal theory sequence for doctoral students in political science, which focuses on substantive applications of formal models. It builds on the basic knowledge of game theory developed in PS 2703 by examining major classes of models (sequential bargaining, signaling, principal-agent models, and repeated games) and surveying their applications. Time permitting, we will also consider alternatives to rational choice and issues in empirically evaluating formal models. The primary objectives are to familiarize students with “practical” (in a research sense) aspects of formal modeling and to develop the ability to read, understand, and critically evaluate papers in the formal theory literature. I do not expect that any of you will only do purely theoretical work during the course of your careers (since that’s not the nature of our program). Rather, my goal is that you will be well-prepared to use formal theory as an integral component of your research toolkit.

Students must be familiar with game theory at the level of PS 2703 and know how to solve for basic types of equilibrium concepts in simple games (i.e., Nash, subgame perfect, and perfect Bayesian). Exposure to game theory at an undergraduate level only (e.g., payoff tables and game trees) is insufficient.

## **Course Format and Requirements**

Class sessions will primarily be lectures spent working through the models and the logic of the main results of the papers that we read, and I expect that you will have read each assigned paper carefully *before* coming to class. While I don’t expect you to fully understand a paper after the first reading, when reading a paper closely, you should try to get an idea of what the main research question is, a qualitative understanding of its main results, and be familiar with some of the notation and key assumptions. For the more complicated papers, we will often work through special cases or stylized examples of the general model that is presented.

I strongly believe that the *only* way to develop adequate technical skills is through “learning by doing.” This means that there will be problem sets. However, since the aim of the course is to

prepare you to use formal theory in a professional academic context, there will also be other requirements.

**Participation (10%):** The readings are not easy, so this is a small reward for being prepared for class.

**Problem Sets (40%):** There will be a problem set approximately every other week with problems based on the models that we cover in class. Your problem sets will be graded in terms of whether your answers are correct *and* how thoroughly you explain the logic. In fact, as long as you make a significant attempt to solve the problems, the latter is a much more important determinant of your grade. This is to encourage you to be transparent in presenting the logic of your work, which has two benefits. First, if you do make a mistake, it is much easier for me to figure out what you did wrong. Second, by forcing you to be thorough, you are less likely to make mistakes in the first place.

**Presentation(s) (25%):** The very best way to understand a paper is to present it, so you will be responsible for presenting one or two papers on the syllabus to the rest of the class. The actual number of papers will depend on the pace of the course. In your presentation, you will: (1) summarize the key question, contribution, and main points, (2) present the model, and (3) provide the logic and intuition of the main results. You will also prepare a handout (or overhead slides) and write 3 homework problems corresponding to the paper as well as provide their solutions, which I will review and assign on the next problem set. (You are therefore exempt from the problems that you write.)

**Final paper (25%):** Your paper may be purely theoretical and present an original model (including an extension of an existing model), or it may be an “EITM-style” paper in which you derive original predictions from an existing model and explain how the predictions should be tested (you don’t actually have to carry out the empirical analysis). In either case, the paper must contain a model and some sort of original derivation (i.e., proof). The paper must also contain a literature review that provides some substantive justification for the model as well as a discussion of related models. Your review of the substantive (non-formal) literature does not have to be extensive, and instead should be relatively focused. Even if there is no existing model on your exact topic, you can still discuss models that involve related theoretical principles. The model does not have to be complicated, nor does it have to be publication-quality, but it should be substantively relevant (e.g., by formalizing an informal idea or attempting to explain an empirical regularity). Ideally, the work that you do on the paper can later be incorporated into your PhD paper/MA thesis or dissertation.

## Tentative Course Outline

The reading list contains a small sampling of the applications of game theory in political science chosen to illustrate bargaining, political competition, signaling, principal-agent relationships, and repeated games. I have tried to compile a selection that covers topics relevant to students in every subfield. Even if we do not study papers that are directly relevant to your specific research interests (e.g., because none exist), note that many of the general theoretical principles may nevertheless be applied to a variety of settings. I realize that the reading list is also quite ambitious, and a reasonable estimate is that we will do 1 or 2 papers each week. It is very likely that we will not cover everything on the list, and it would still be quite an accomplishment if we covered half of the readings.

### The Role of Formal Models

*NOTE: These readings are required for the first session, and must be done prior to class.*

- Morton, *Methods and Models*, chapter 2
- Powell, *In the Shadow of Power*, pp. 23-38

### Bargaining with Complete Information

#### Alternating Offers

- McCarty and Meirowitz, *Political Game Theory*, pp. 281-286
- Osborne, *Introduction to Game Theory*, pp. 465-477

#### Majority Rule

- Baron and Ferejohn. 1989. "Bargaining in Legislatures" *APSR*
- McCarty and Meirowitz, pp. 286-294

#### Parliamentary Government

- Diermeier and Feddersen. 1998. "Cohesion in Legislatures and the Vote of Confidence Procedure" *APSR*
- Austen-Smith and Banks. 1988. "Elections, Coalitions, and Legislative Outcomes" *APSR*

### Bargaining with Incomplete Information

#### Veto Bargaining

- McCarty and Meirowitz, pp. 294-304
- Cameron. 2000. *Veto Bargaining*, chapter 4

## Conflict

- Fearon. 1995. "Rationalist Explanations for War" *IO*
- Filson and Werner. 2002. "A Bargaining Model of War and Peace" *AJPS*

## **Lobbying and Influence**

### Informational Lobbying

- Potters and van Winden. 1992. "Lobbying and Asymmetric Information" *Public Choice*
- Austen-Smith and Wright. 1992. "Competitive Lobbying for a Legislator's Vote" *Social Choice and Welfare*

### Vote Buying

- Groseclose and Snyder. 1996. "Buying Supermajorities" *APSR*
- Diermeier and Myerson. 1999. "Bicameralism and its Consequences for the Internal Organization of Legislatures" *AER*

## **Learning and Information Transmission**

### Legislative Organization

- Gilligan and Krehbiel. 1987. "Collective Decision-Making and Standing Committees: An Informational Rationale for Restrictive Amendment Procedures" *JLEO*

### Informing Voters

- Gordon, Huber, and Landa. 2007. "Challenger Entry and Voter Learning" *APSR*
- Snyder and Ting. 2002. "An Informational Rationale for Party Brand Names" *AJPS*

## **Principal-Agent Models and Institutional Design**

### Electoral Accountability

- Ferejohn. 1986. "Incumbent Performance and Electoral Control." *Public Choice*

### Bureaucracy

- Banks. 1989. "Agency Budgets, Cost Information, and Auditing." *AJPS*
- Huber and McCarty. 2004. "Bureaucratic Capacity, Delegation, and Political Reform" *APSR*

### Federalism

- Crémer and Palfrey. 1999. "Political Confederation." *APSR*

## **Repeated Games and Dynamics**

### Institutions, Cooperation and Collective Action

- Bendor and Mookherjee. 1987. “Institutional Structure and the Logic of Ongoing Collective Action” *APSR*
- Milgrom, North, and Weingast. 1990. “The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs” *Economics and Politics*
- Fearon and Laitin. 1996. “Explaining Interethnic Cooperation” *APSR*
- Rosendorff. 2005. “Stability and Rigidity: Politics and Design of the WTO’s Dispute Settlement Procedure” *APSR*

### Leadership and Regime Change

- Acemoglu and Robinson. 2001. “A Theory of Political Transitions” *AER*
- Bueno de Mesquita, Morrow, Siverson, and Smith. 2002. “Political Institutions, Policy Choice, and the Survival of Leaders.” *BJPS*

## **Behavioral and Computational Models**

- Kollman, Miller, and Page. 1992. “Adaptive Parties in Spatial Elections” *APSR*
- Bendor, Diermeier, and Ting. 2003. “A Behavioral Model of Turnout” *APSR*
- Bendor, Moe, and Shotts. 2001. “Recycling the Garbage Can: An Assessment of the Research Program” *APSR*

## **Experimental and Empirical Tests of Models**

- Morton. 1999. *Methods and Models*, chapter 4

### Experimental Tests of Bargaining

- Frechette, Kagel, and Lehrer. 2003. “Bargaining in Legislatures: An Experimental Investigation of Open versus Closed Amendment Rules” *APSR*
- Diermeier and Gailmard. 2006. “Self-Interest, Inequality, and Entitlement in Majoritarian Decision-Making” *QJPS*

### Comparing Alternative Theories

- Chiou and Rothenberg. 2003. “When Pivotal Politics Meets Partisan Politics” *AJPS*
- Krehbiel, Meirowitz, and Woon. 2005. “Testing Theories of Lawmaking”
- Primo, Binder, and Maltzman. 2008. “Who Consents? Competing Pivots in Federal Judicial Selection” *AJPS*

## Integrating Formal Theory and Statistical Analysis

- Clinton and Meirowitz. 2004. "Testing Explanations of Strategic Voting in Legislatures: A Reexamination of the Compromise of 1790" *AJPS*
- Signorino. 1999. "Strategic Interaction and the Statistical Analysis of International Conflict" *APSR*