
PS 681: INTERMEDIATE GAME THEORY. WINTER 2014

Arthur Lupia & Timm Betz

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Class Time: Tuesday & Thursday 11:00-11:30. Room: 1006 Dana Bldg
Section Time: Wednesday 9-10. Room: G128 Angell Hall

Office Hours: Lupia: Tuesday 1-3, 6757 Haven Hall.
Betz: Monday 4-5, Wednesday 10-11, and Thursday 4-5.

Primary Texts

- Nolan McCarty and Adam Meirowitz. 2007. *Political Game Theory: An Introduction*. Cambridge University Press. (Henceforth denoted MM)
- Eric Rasmusen. 2006. *Games and Information: An Introduction to Game Theory. Fourth Edition*. Blackwell Publishing Ltd. (Henceforth denoted RAS).

Description

The purpose of this course is to train students to apply game theoretic methods to political science problems. Skill development will be evaluated through a series of problem sets and exams. Questions of research design and application will be addressed. Throughout the course, we will hold article-based workshops where we will use papers that I have written as a basis for discussions of how to (and how not to) integrate models into research designs. The main premise of this class is that you will learn more about game theory by doing it rather than simply reading about it. Students wishing to integrate game-theoretic research designs into their own research can use this course as a basis for fully engaging in the department's new advanced offerings in formal modeling.

Prerequisite. Political Science 598 or equivalent background is a prerequisite. Please review the mathematical appendices in both of the primary texts and be sure that you have a good working knowledge of the concepts contained in these appendices.

1/9 INTRODUCTION and EXPECTATIONS

- RAS pp. 1-7.
- A Lupia. 2000. "The Public Value of Political Science: Information for Buyers and Sellers." *PS* 33: 7-13.
- A Lupia, MD McCubbins, and SL Popkin. 2000. "Incorporating Reason into the Study of Politics." In Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin (eds.) *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*. New York: Cambridge University Press, 1 - 20.

1/14	THE THEORY OF CHOICE.	MM Ch 1 and 2 (pp. 1-25).
1/16	CHOICE UNDER UNCERTAINTY	MM Ch 3 (pp. 27-62).
1/21	SOCIAL CHOICE THEORY	MM Ch 4 (pp. 66-85).
1/23, 28	NORMAL FORM GAMES	RAS Ch 1-1.4 (pp. 9-31)
1/30, 2/4	NORMAL FORM BAYESIAN GAMES	MM Ch 6 (pp. 150-69)
2/6, 11	EXTENSIVE FORM GAMES	RAS Ch 4 (pp. 108-127)
	During the weeks of 2/10 and 2/17, we will have class at section time and section at Thursday's class time.	
2/12, 18, 19	DYNAMIC INC INFO GAMES	RAS Ch 2, 6.1, 6.2, 7.1 pp. 40-69, 156-164, 181-184)
2/25*	A Lupia, LS Casey, KL Karl, S Piston, TJ Ryan, C Skovron. 2013. "Why Prejudice Persists: A Model of Race and Perception in Candidate Evaluations."	
2/27*	ER Gerber, A Lupia, and MD McCubbins. 2004. "When Does Government Limit the Impact of Voter Initiatives? The Politics of Implementation and Enforcement." <i>Journal of Politics</i> 66: 43-68.	
	BREAK	
3/4	Catch-up and Review	
3/6	MIDTERM EXAM	
3/11*	A Lupia. 1992. "Busy Voters, Agenda Control, and the Power of Information." <i>American Political Science Review</i> 86: 390-403.	
3/13*	J Bendor, D Diermeier, and M Ting. 2003. "A Behavioral Model of Turnout." <i>American Political Science Review</i> 97: 261-280.	
3/18	REPEATED GAMES	MM Ch 9 (pp. 251-73) RAS Ch 5:1-3 (pp. 128-137)
3/20	BARGAINING THEORY	MM Ch 10 (pp. 275-318) RAS Ch 12:1-5 (pp. 357-369)

3/25* Choose one paper

- A Lupia and K Strom. 1995. "Coalition Termination and the Strategic Timing of Parliamentary Elections." *American Political Science Review* 89: 648-665.
- DP Baron and JA Ferejohn. 1989. "Bargaining in Legislatures." *American Political Science Review* 83: 1181-1206.

3/27* G Sin and A Lupia. 2013. "How the Senate and President Affect the Timing of Power-Sharing Rule Changes in the US House" *Journal of Law, Economics, and Organization* 29: 1184-1216.

4/1* JD Fearon. 1998. "Bargaining, Enforcement, and International Cooperation." *International Organization* 52: 269-305.

4/3 NO CLASS – MPSA MEETING

4/10* Choose one

- E Bueno de Mesquita. 2007. "Politics and the Suboptimal Provision of Counterterrorism." *International Organization* 61: 9-36.
- A Lupia and JO Menning. 2009. "When Can Politicians Scare Citizens into Supporting Bad Policies." *American Journal of Political Science* 53: 90-106.

4/15* A Lupia, AS Levine, and N Zharinova. 2010. "Should Political Scientists Use the Self-Confirming Equilibrium Concept? Benefits, Costs and an Application to Jury Theorems." *Political Analysis* 18: 103-123.

4/17 & 4/22 Student model proposals

GRADING.

- Problem Sets: 9@ 5 points each.
 - Due at 5:00 pm one week after MM Chapter 2 is completed in class
MM 2:1-3;
Exercise 2.1 (alternate wording): Suppose that X is finite and R is a complete and reflexive binary relation on X . Prove that in this case, $M(R,S)$ is not empty if and only if R is acyclic.
 - Due At 5:00pm one week after MM Chapter 3 is completed in class
3:1,4,5 (focus on the two-period case)
 - Due At 5:00pm one week after MM Chapter 4 is completed in class
4:1,4,5,7;
 - Due At 5:00pm one week after RAS Chapter 1 is completed in class
1:2-12 (even)
 - Due At 5:00pm one week after MM Chapter 6 is completed in class
6:1-5
 - Due At 5:00pm one week after RAS Chapter 4 is completed in class
4:2,4

Due At 5:00pm one week after RAS Chapter 2 is completed in class
2:2-8 (even)

Due At 5:00pm one week after RAS Chapter 5 is completed in class
5: 2-8 (even)

Due At 5:00pm one week after RAS Chapter 12 is completed in class
12:2-8

- Article Workshop* 8@2 points each.
 - For eight of the nine workshops, you must produce a report of 250-500 words that
 - Makes an attempt to explain the logic of one or more proofs AND/OR Makes an attempt to motivate an extension or alteration of the model that allows it to better serve a specific substantive purpose. This purpose may be the purpose stated by the paper's author or it may be an alternate purpose that you come up with.
 - The report is **due at 24 hours prior to the beginning of class** during which the article is being discussed. No extensions will be granted and reports submitted after this time will receive a grade of zero.
 - I will integrate the content of these reports into class discussions.
- Paper proposal: 5 points. Submit a 3-5 page prospectus on how you can use formal logic to advance a debate on a literature about which you care. You will have five minutes to present this idea to the class. Each presentation will be followed by a brief Q&A
- Midterm: 15 points.
- Final Exam: 20 points. The final will be cumulative. By this point in the class, I expect you to perform well on the exam not because you care about the grade, but because you understand the value of formal modeling to your research agenda.