

Applications of Game Theory to Political Science Syllabus

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1 Introduction

This course is directed at advanced students who are already familiar with game theory and want to study how it has been applied in political science. Therefore, unlike introductory courses where the instructor teaches concepts the students do not yet know, in this course the goal is to study different examples of contemporary academic literature that display those same concepts in action. In essence, we will be reading and discussing papers.

This poses to challenges, one regarding skills, another regarding scope. Game theory, especially at the advanced level, makes intense use of math. So, it may happen that students in this course, even if they are familiar with the basic game theory concepts, may at times need to go the extra mile to deal with the math techniques some papers use. In terms of scope, the syllabus is meant to cover a wide variety of topics. As a discipline, political science is notorious for its diversity of themes and approaches. It is inevitable that during a course like this we will at some point need to step out of our comfort areas and deal with topics somewhat removed from what we have been focusing on.

2 Evaluation

The final grade is made up of three components: two presentations in class (20% each), four reaction papers (10% each) and a final essay (20%).

Over the course of the quarter, every student will be responsible for making two presentations in class. In those presentations, the student is expected to go in depth into the papers she chooses, explaining the background, how it speaks to broader debates in the discipline, the details of the game-theoretic analysis developed by the author, any possible criticisms and a summary of the paper's main points.

The reaction papers are short pieces 1-2 pages long based on a paper different from any of the ones the student has chosen to present. In these pieces, the student should offer a quick summary of the main points of the paper and a critical assessment, be it disagreements, connections with other approaches, etc.

The final essay can be on any topic and should be somewhere between 10 and 12 pages long (excluding bibliography and supporting material). Given that this is an advanced course in which students are already venturing into the frontier of the discipline, it is difficult to offer tight guidelines. The essay should read already as an intermediate product of a graduate thesis. There is, however, a problem that I am fully cognizant of: in game theory, more than in other approaches in political science, there is a big gap between understanding and doing. Developing formal models is a skill that takes time and is hard to acquire in just one course. I would very much like to see every student in this class being able to write an essay in which she develops her ideas with the aid of a formal model of her own creation. But I understand that some students may have a very hard time reaching that level of fluency. Therefore, other options will be acceptable such as, for instance, a thorough literature review although, of course, in those cases it will be very hard, if not impossible, to obtain a stellar grade.

3 Timeline and Readings

Week 1: Introduction

Week 2: Security and Conflict in International Relations

- Fearon, James D. "Rationalist Explanations for War." *International Organization* 49, no. 3 (1995): 379-414.
- Baliga, Sandeep, and Tomas Sjöström. "Strategic Ambiguity and Arms

Proliferation.” *Journal of Political Economy* 116, no. 6 (2008): 1023-057.

- Fey, Mark, and Kristopher W. Ramsay. ”Mutual Optimism and War.” *American Journal of Political Science* 51, no. 4 (2007): 738-54.
- Avidit Acharya and Kristopher W. Ramsay (2013), ”The Calculus of the Security Dilemma”, *Quarterly Journal of Political Science*: Vol. 8: No. 2, pp 183-203.

Week 3: International Institutions

- Powell, R. (1993). Guns, Butter, and Anarchy. *The American Political Science Review*, 87(1), 115-132.
- Blaydes, L. (2004). Rewarding Impatience: A Bargaining and Enforcement Model of OPEC. *International Organization*, 58(2), 213-237.
- Koremenos, B. (2001). Loosening the Ties That Bind: A Learning Model of Agreement Flexibility. *International Organization*, 55(2), 289-325.

Week 4: Electoral Competition

- Roemer, J. (1999) *Political Competition*, Harvard University Press. Chs. 3, 6, and 8.

Week 5: Governments and Legislatures

- Baron, D. P., & Ferejohn, J. A. (1989). Bargaining in Legislatures. *The American Political Science Review*, 83(4), 1181–1206.
- Baron, D. P., & Diermeier, D. (2001). Elections, Governments, and Parliaments in Proportional Representation Systems. *The Quarterly Journal of Economics*, 116(3), 933–967.
- Baron, D.P., Diermeier, D. & Fong, P. 2012, “A dynamic theory of parliamentary democracy”, *Economic Theory*, vol. 49, no. 3, pp. 703-738.

Week 6: Voting and Turnout

- Morton, R. B. (1991). Groups in Rational Turnout Models. *American Journal of Political Science*, 35(3), 758–776.
- Castanheira, Micael (2003). Victory Margins and the Paradox of Voting. *European Journal of Political Economy*, vol. 19, no. 4, pp. 817-41.
- Medina, Luis F. (2011). Is there Really a Turnout Paradox?. *Journal of Theoretical Politics*, vol. 23, no. 3, pp. 382-99.

Week 7: Political Economy of Trade, Taxation and Monetary Policy

- Persson, T., Roland, G., & Tabellini, G. (2000). Comparative Politics and Public Finance. *Journal of Political Economy*, 108(6), 1121–1161.
- Elhanan Helpmann, Politics and Trade Policy, NBER Working Paper.
- Cukierman, Alex and Francesco Lippi (1999). Central bank independence, centralization of wage bargaining, inflation and unemployment: Theory and some evidence. *European Economic Review*, vol. 43, no. 7, pp. 1395-1434.

Week 8: Political Redistribution

- Allan Meltzer y Scott Richard, “A Rational Theory of the Size of Government.” in *Journal of Political Economy*
- Diermeier, Daniel, Georgy Egorov, y Konstantin Sonin. ”Political Economy of Redistribution.” in *Econometrica* 85, no. 3 (2017): 851-70.
- Moses Shayo, A Model of Social Identity with an Application to Political Economy: Nation, Class, and Redistribution in *American Political Science Review*, Vol. 103, No. 2, pgs. 147-174.

Week 9: Authoritarian Regimes

- Bó, E. D., Powell, R. (2009). A Model of Spoils Politics. *American Journal of Political Science*, 53(1), 207–222.

- Georgy Egorov, Konstantin Sonin, Dictators and Their Viziers: Endogenizing the Loyalty–Competence Trade-off, *Journal of the European Economic Association*, Volume 9, Issue 5, 1 October 2011, Pages 903–930
- Jennifer Gandhi and Adam Przeworski, Cooperation, Cooptation and Rebellion under Dictatorships, *Economics and Politics*, Vol. 18, No. 1, pgs. 1 - 26.

Week 10: Origin of Institutions

- Greif, A. (1993). Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition. *The American Economic Review*, 83(3), 525–548.
- Greif, A., Milgrom, P., and Weingast, B. R. (1994). Coordination, Commitment, and Enforcement: The Case of the Merchant Guild. *Journal of Political Economy*, 102(4), 745–776.
- David Stasavage, Credible Commitment in Early Modern Europe: North and Weingast Revisited, *The Journal of Law, Economics, and Organization*, Volume 18, Issue 1, 1 April 2002, Pages 155–186.

Week 11: Collective Action

- Esteban, J., & Ray, D. (2001). Collective Action and the Group Size Paradox. *The American Political Science Review*, 95(3), 663–672.
- Apesteguia, J., & Maier-Rigaud, F. P. (2006). The Role of Rivalry: Public Goods versus Common-Pool Resources. *The Journal of Conflict Resolution*, 50(5), 646–663.
- Gould, R. V. (1993). Collective Action and Network Structure. *American Sociological Review*, 58(2), 182–196.
- Shadmehr, Mehdi, and Dan Bernhardt. "Collective Action with Uncertain Payoffs: Coordination, Public Signals, and Punishment Dilemmas." *The American Political Science Review* 105, no. 4 (2011): 829–51.
- Medina, Luis Fernando (2007). *A Unified Theory of Collective Action and Social Change*, University of Michigan Press.

Week 12: Clientelism and Corruption

- Stokes, S. (2005). Perverse Accountability: A Formal Model of Machine Politics with Evidence from Argentina. *American Political Science Review*, 99(3), 315-325.
- Robinson, J and Daniel Verdier (2013) The Political Economy of Clientelism, *Scandinavian Journal of Economics*, 115(2), 260–291, 2013.

Week 13: Political Contention

- Lohmann, S. (1994). The Dynamics of Informational Cascades: The Monday Demonstrations in Leipzig, East Germany, 1989-91. *World Politics*, 47(1), 42–101.
- Esteban, J., & Ray, D. (2008). Polarization, Fractionalization and Conflict. *Journal of Peace Research*, 45(2), 163–182.

Week 14: Taking Stock