POLS 8030
Thurs: 3:55-6:40 p.m.
Baldwin 104
Fall, 2021

Dr. Keith Dougherty
Office: Baldwin 418
Office Hours: let's make an appointment
dougherk@uga.edu
http://spia.uga.edu/faculty_pages/dougherk/

Spatial Voting Theory

This course provides a rigorous introduction to spatial voting theory and its application to voting of all kinds: legislative voting, judicial politics, parliamentary procedure, mass elections, and more. Topics include the median voter theorem, properties of the majority preference relationship, multidimensional voting, and a brief introduction to the empirical estimation of ideal points. The emphasis is on theory – i.e. the logic behind spatial voting games and the conclusions that follow – not on the empirics. However, I also have a few weeks on the estimation of ideal points and their empirical applications. Although we will use examples and applications from political science and international affairs, the emphasis of this course is on *methodological skills* rather than substantive knowledge. No prior knowledge of game theory or spatial voting models is needed. However, I will assume that students have sufficient aptitude for abstract reasoning and enough algebra to move at a fairly quick pace. I also assume that you have a basic knowledge of R, which we will use to estimate ideal points from voting data and make neat graphs. If you don't have that kind of background, don't worry. Just continue to pester me for more introductory material.

My goal is to get your theoretical training up to the level of your excellent statistical training. Specifically, the course should enable you to:

- Think logically and rigorously.
- Construct and analyze simple spatial voting games for your own research.
- Gain familiarity with several well-known theorems and papers in spatial voting theory.
- Provide a push-button approach to the empirical estimation of ideal points.

The only way to learn mathematics is through practice. **Most of your learning will occur when you are attempting to solve problems on your own.** Solving problems can be frustrating, just like real research can be frustrating, and it will often involve more than replicating the examples in class or in the textbooks. But once you have struggled with the solutions yourself, your analytical skills will improve greatly. **I highly recommend that you partner with at least one other student in the class and pick one or two problems a week from the text that you and your partner will work through on the weeks that homeworks are not due. You can also work on homeowrks together on the weeks homeworks are due, thought you must provide separate, individually written answers.**

Grading

As graduate students you should worry more about learning than your grade. Nevertheless, your grade consists of seven homework assignments, which will help you practice the analytical techniques introduced in class, help you use R to estimate ideal points, and encourage you to apply these models to your own research. I will drop your two lowest homework grades, then assign the average of the remaining five grades as your overall grade. You must attempt to work through *as much of the homeworks as possible on your own*, and then work with other students only when you are stuck or want to check your answers. That will help you learn. Furthermore, write up your own answers neatly, using your own words, derivations, and explanations. You will probably have to re-write your homeworks before they are turned in.

In Class Experiments

To give you some relief, I may offer a few in-class "experiments" that should allow you to rack-up extra credit points depending on how you play. The extra credit points will be assigned to a specific homework and cannot be transferred to another homework. You can opt out of any game you don't want to play (some may require you to gamble points), but the in-class experiments help you see the problem from a first hand perspective and allow you develop more sophisticated criticisms of the theories. They are also fun. There are no make-ups for in class experiments, so please try to attend regularly.

	Date
HW 1 (Median Voter Theorem)	Sept 2
HW 2 (Nash equlibrium)	Sept 9
HW 3 (subgame perfection)	Sept 23
HW 4 (estimating ideal points)	Oct 7
HW 5 (multidimensional voting)	Nov 4
HW 6 (bargaining theory)	Nov 11
HW 7 (applying spatial models to your research)	Dec 2

Academic Honesty

All academic work must meet the standards contained in "A Culture of Honesty." Students are responsible for informing themselves about these standards before performing academic work. The penalties for academic dishonesty are severe and ignorance is not an acceptable defense. Also note that the course syllabus is a general plan for the course and that deviations announced to the class by the instructor may be necessary.

Late Assignments

Homework assignments require a fair amount of analysis time. Please plan ahead to avoid turning them in late. **Late assignments will be lowered one letter grade for every *working* day they are late**. If an assignment is late, it would be a good idea to upload it on eLC then email me to let me know it has been posted.

Texts and Other Readings

Two textbooks are *required* for the course:

- **Martin Osborne. 2004. *An Introduction to Game Theory*. Oxford University Press.** – an introduction to all types of game theory written by the master.

- **Keith Poole. 2005. *Spatial Models of Parliamentary Voting* (*SMPV*). Cambridge University Press** – a great book on ideal point estimation which is difficult, but covers the bases.

One textbook is *highly recommended* for the course:

- **Joel Watson. 2013. *Strategy: An Introduction to Game Theory*. W.W Norton** – a simpler, more friendly way to learn game theory than Osborne.

Additional chapters and articles will be in the dropbox set up for the course. Those are marked with **DB** below. I will send you directions on how to sign up for dropbox to your uga email address shortly after the class begins. It's free. If any of the electronic readings require a password, it will be "dougherty", all lower case. If you want to study a game theoretic concept in greater detail, you might also try Roger Myerson. 1991. *Game Theory: Analysis of Conflict*. Harvard University Press – on course reserve.

Schedule of Topics and Readings

Aug 19 **Introduction**

Aug 26 **Theory: Unidimensional Voting & the Core**
*Hinich and Munger, Analytical Politics, Chapter 2, "The Spatial Model of Downs and Black," **DB**.
*Osborne, Chapter 8 (sections 1, 2, & 6).
*Bradbury and Crain, 2005. "Legislative District Configurations and Fiscal Policy in American States," *Public Choice*, **DB** – skim.

Sept 2 **Review: Nash Equilibria & Subgame Perfect Equilibria**
<u>Recommended</u>: Watson, *Strategy: An Introduction to Game Theory*, Chapters 2, 3, 9, 14, and 15 – highly recommended as an easier start.
*Osborne, Chapter 1 (sections 2-3), Chapter 2 (through 2.9.3), Chapter 5.

Sept 9 **Application: Nash, Elections, and Comparative Politics**
*Osborne, Chapter 3 (section 3).
*Adams and Merrill. 2006. "Why Small, Centrist Third Parties Motivate Policy Divergence by Major Parties." *APSR* 100(3):403-17, **DB**.

Sept 16 **Application: SPE and Committees**

*Osborne, Chapter 6 (sections 1-3), Chapter 7 (sections 1-4).

*Denzau and Mackay. 1983. "Gatekeeping and monopoly power of committees: An analysis of sincere and sophisticated behavior." *AJPS*, 27(4): 740-761, **DB**.

Sept 23 **Estimation: Single Dimension (part 1)**

*Poole and Rosenthal, 1997. *Congress: A Political-Economic Theory of Roll Call Voting*, Chapter 2, **DB**.

*Poole. 2005. *SMPV*, Chapter 2 (pp. 18-30 only) and Chapter 3 (pp. 46-60 only).

<u>Recommended</u>: Poole, Keith. 2000. "Non-Parametric Unfolding of Binary Choice Data." *Political Analysis* 8: 211-237, **DB** – a careful development of optimal classification (slightly difficult).

Sept 30 **Estimation: Single Dimension (part 2)**

*Poole. 2005. *SMPV*. chapter 5 (pp. 141-155 only) and Chapter 6 (pp. 162-172 only).

*Clinton, Jackman, and Rivers. 2004. "The Statistical Analysis of Roll Call Data," *APSR*, 98(2): 355-370, **DB**.

Oct 7 **Application: The Supreme Court**

*Bonneau et al. 2007. "Agenda Control, the Median Justice, and the Majority Opinion on the U.S. Supreme Court," *AJPS*, 51(4): 890-905.

*Carruba et al. 2012. "Who Controls the Content of Supreme Court Decisions?" *AJPS*, 56(2):400-12.

*Clark and Lauderdale. 2010. "Locating Supreme Court Opinions in Doctrine Space," *AJPS*, 54(4): 871-90.

Oct 14 **Application: The Responsiveness of Politicians to the Public**

*Bonica, Adam. 2014. "Mapping the Ideological Marketplace," *AJPS*, 58(2): 367–387.

*Hare, et. al. 2015. "Using Bayesian Aldrich-McKelvey Scaling to Study Citizens' Ideological Preferences and Perceptions," *AJPS*, 59(3), 759-774.

Oct 21 **Theory: Multidimensional Voting & the Core**

*Hinich and Munger, *Analytical Politics*, Chapter 3, "Two Dimensions: Elusive Equilbrium," **DB**.

Oct 28 **Application: Stopping Rules in Committees**

*Ordeshook. 1986. *Game Theory and Political Theory*, sections 8.1 & 8.2 – focus on how to calculate the core in a spatial voting game. Skip alpha core and beta core.

*Dougherty et al., 2018. "Stopping Rules for Majority Voting: A Public Choice Experiment," *Journal of Economic Behavior and Organization*, **DB**.

Nov 4 **Theory: Bargaining Theory**

*Gehlbach, Scott. 2013. *Formal Models of Domestic Politics*, Ch 6, "Coalitions," **DB**.

*Banks, Jeffrey S. and John Duggan. 2000. "A Bargaining Model of Collective Choice." *APSR*, 94(1): 73-88, **DB**.

Nov 11 **Estimation: Multiple Dimensions**

*Poole. 2005. *SMPV*, chapter 2 (pp. 30-41 only), chapter 3 (pp. 60-85 only), and chapter 4.

Nov 18 **Theory: SPE, the Uncovered Set, and the Banks Set**

*Dougherty and Edward. 2012. "Voting for Pareto Optimality," *Public Choice*, 151: 655-78, **DB**.

*Shepsle and Weingast. 1984. "Uncovered Sets and Sophisticated Voting Outcomes with Implications for Agenda Institutions," *AJPS*, 28(1): 49-74, **DB**.

*Feld et al. 2013. "In Quest of the Banks Set in Spatial Voting Games," *SCW*, 41:43-71, **DB**.

*Bianco et al. 2008. "The Constrained Instability of Majority Rule: Experiments on the Robustness of the Uncovered Set," *Political Analysis*, 16: 115-137, **DB**.

Nov 25 NO CLASS: THANKSGIVING

Dec 2 **Application: Immigration Policy & Selection of Ministers**

*Jeong et al. 2011. "Cracks in the Opposition: Partisan Realignment in the U.S. Senate Negotiations over Immigration Policy," *AJPS*, 55(3): 511-525, **DB**.

*Kam et al. 2010. "Ministerial Selection and Intra-Party Organization in the Contemporary British Parliament." *APSR* 104(2):289-306, **DB**.