

Political Science 585
Techniques of Political Analysis
Summer Quarter, 2006
Instructor: Todd Makse

Class: Monday and Wednesday 10:30-12:18 in Derby 0125
Office Hours: Monday and Wednesday 1:00-2:00
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Course Description:

This course will give students an introduction to the techniques that political scientists use to understand political phenomena. The emphasis in this course is on issues in research design and conceptual understanding and application of statistical and non-statistical techniques of political analysis. Achieving basic competence in probability and statistics *is* a primary goal of this course, and central to student evaluation in the course. However, this will be primarily achieved through application, rather than memorization, of mathematical formulas and proofs. This course assumes no previous college-level mathematics or statistics courses.

Course Objectives (University Mandated Language):

This course also satisfies the GEC quantitative and logical skills requirement, described by the University as follows:

“Courses in quantitative and logical skills develop logical reasoning, including the ability to identify valid arguments, use mathematical models, and draw conclusions based on quantitative language.

Data Analysis. Students understand statistics and probability, comprehend mathematical methods needed to analyze statistical arguments, and recognize the importance of statistical ideas.”

Textbook and Computer Software

The main text for this class will be *Elementary Statistics in Social Research: The Essentials*, by Jack Levin and James Alan Fox. Most of the homework assignments for the class will be taken from *An SPSS Companion to Political Analysis* by Philip Pollock III. Both books will be available at SBX. Additional readings will be available in the Reading Room in the Department of Political Science in Derby Hall, and at the Reserve Desk in the Main Library. I will be giving you a very reasonable amount of reading per class period, so I expect you to complete each day's readings before class.

Hands-on experience with statistical techniques will be provided through two class sessions using SPSS. Three of the homework assignments will also be completed using SPSS. All the computers in our classroom are installed with SPSS, and you are free to use the lab when the room is available. If you have a personal computer, I strongly recommend obtaining a free copy of the software from the Office of Information Technology, either by downloading a copy from this website (<http://osusls.osu.edu/upgrades/stg2wnx.html#anchorspss13>) or by bringing a blank CD-R to the OIT office in Baker Systems 512.

Grading:

Course evaluation will be based on a midterm and final exam, four homework assignments, and participation. The exams are not intended to generate a bell curve, or any other distribution of grades; they should be sufficiently reasonable that conscientious students will do well on them. Thus, it is doubtful that there will be any curve on the exam or in the class generally.

The specific grade breakdown is as follows:

Midterm: 30%

Final Exam: 30%

Homework Assignments 30% (First assignment, 15%, other three assignments, 5% each)

Participation 10%

The grading scale will be no more difficult than the following (subject to caveats below):

93-100 A

90-92 A-

87-89 B+

83-86 B

80-82 B-

77-79 C+

73-76 C

70-72 C-

67-69 D+

60-66 D

59 and below E

Participation and Attendance: The first part of the course will encourage you to develop your own perspectives on social science research, and thus class discussion will be a major component of each session. Your participation grade will be based mostly on the first four weeks of class, during which time the topic matter will be more suitable for discussion. Each day, questions for discussion are listed in the syllabus, which encourage you to think beyond the readings.

The second part of the course is much more lecture-oriented, and you will not be evaluated based on participation during this part of the course, although you are certainly encouraged to ask questions and engage the material as appropriate.

Attendance is required throughout the entire course. You are permitted two absences, no questions asked, without penalty. To avoid subjective judgments, I do not distinguish between “excused” and “unexcused” absences. Thus, it is not necessary to bring in notes for absences. If extreme circumstances arise which will force you to miss multiple classes, please let me know, and I will try to make fair accommodations.

Homework: There will be four homework assignments throughout the quarter. They may be completed in collaboration with other students; however, each student is responsible for completing his/her own write-up, and for expressing prose portions of the assignments in their own words. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** While homework only represents 30% of the final grade, do not take this as license to not turn in one or more of the assignments. If you do not have a passing grade (60% or more) for the homework component of your grade, you will not, by rule, pass the class.

Midterm Exam: The midterm exam will cover material from the first four weeks of the course. It will be a closed-book, in-class exam, and will draw heavily from lecture material. The format of the exam will include multiple-choice questions, short answer questions, and an essay question.

Final Exam: The final will be held during finals week, and will be an open-book, open-notes exam. The exam will focus primarily on the probability and statistics material from the second half of the course, but some questions will require students to synthesize knowledge from the first half of the course with their understanding of statistical methods.

Makeup Exams: I am highly disinclined to offer makeup exams, except in **emergency** situations. If you have non-emergency reasons for missing an exam, please notify me at least one week ahead of time, preferably as soon as possible. If you have a genuine emergency (family or medical), please inform me as soon as you can. Please do not test my goodwill: I will hold class with a minor cold or a headache, and I expect you to take exams under such conditions as well. Also please note that the format of makeup exams may differ from the format of the regularly administered exam.

Communication:

Students should feel free to contact me by email with any concerns about the class or course material. I will make every effort to respond to all messages within 24 hours. In addition, if my office hours are inconvenient for your schedule, email me and I will be happy to set up an appointment to the extent that my schedule allows.

Academic Misconduct:

Academic misconduct is defined by Ohio State University Rules as “any activity that tends to compromise the academic integrity of the institution, or subvert the educational process. (Rule 3335-31-02).” Examples include violation of program or course rules stated in the syllabus, cheating on tests, plagiarism, dishonesty in reporting research results, and alteration of grades or forms.

Disability Services:

Students with disabilities who feel they may need special assistance should inform me of their needs in a timely manner. These discussions will remain confidential. Course materials are available in alternative formats upon request. For such materials, please contact Mr. Wayne DeYoung, 2140 Derby Hall, 154 North Oval Mall, 292-2880.

Class Topics and Reading Schedule:

Key for non-textbook readings:

*Reading is available online from JSTOR, or can easily be located on Google (these readings will also be available in the reading room/reserve desk)

Reading is only available in the reading room/reserve desk

June 19: Introduction to the course; broad overview of research methods

Readings: None

Questions for Discussion:

What should the goal(s) of political science be? What do we do with the knowledge we gain from political science? And is answering the “what do we do with it” question part of political science too?

Is there a difference between “explaining” a social phenomenon and “understanding” a social phenomenon? If so, how does this distinction relate to the difference between the social and natural sciences?

June 21: Scientific progress and social science; political science as a discipline

Readings:

#Wilson, Edward O. 1998. *Consilience*. Chapter 9, pp. 197-228

*Fiorina, Morris and Ian Shapiro. 2000. "Political Scientists Debate Rational Choice." *New York Times*, February 26, 2000.

*Alford, John R. and John R. Hibbing. 2004. The Origin of Politics: An Evolutionary Theory of Political Behavior, *Perspectives on Politics*, pp. 707-724.

Questions for Discussion:

Do you agree with Wilson assessment of the progress that has been made in the social sciences? Do you agree with his proposed solution? Or, is the problem, as others have argued, that political science borrows too heavily from other disciplines, and needs to rely more on solutions from within?

All three readings touch in some way on the strengths and weakness of rational choice theory. How do you think Wilson would respond to the dialogue between Fiorina and Shapiro? What do you think of Alford and Hibbing's claim that evolutionary theory may render this debate "obsolete"?

June 26: Theory building and data; types of research designs; levels of measurement

Readings:

#Chapter 2, "Theory Building" from Manheim, Jarol B., Richard C. Rich, Lars Willnat and Craig Leonard Brians, *Empirical Political Analysis*, pp. 13-31

Levin and Fox, Chapter 1, "Why the Social Researcher Uses Statistics," pp. 1-14

Questions for Discussion:

Manheim et al list five characteristics of good social science theories. Do you agree with this list? Which ones are more or less important? How does Popper's concept of falsification relate to these criteria? Do you know of any social science theories which fail one or more of these criteria?

Think separately about each of the following three concepts: economic development, party competition, or international tension. List one or more variables that might be used to represent each concept adequately. Do you need more than one variable to fully capture the full meaning? Be prepared to defend your variable choice and reasoning.

June 28: Game theory and social choice theory

Readings:

#Downs, Anthony. *An Economic Theory of Democracy*, pp. 3-20, 36-50

#Morrow, James. *Game Theory for Political Scientists*, pp.73-81, 101-104
(Do not worry if you don't fully understand these concepts and examples. We will go through them fully in class.)

Questions for Discussion:

In the previous class, we discussed criteria for good theories. Which of these criteria does Downs' theory satisfy? Which does it fail to satisfy? Why? If you believe it fails one or more criteria, do you see any way to remedy the problem you see?

Downs exemplifies the instrumentalist epistemology that we discussed two classes ago. What changes might you make to the basics of his theory in order to make it more consistent with a realist epistemology?

July 3: Experimental and non-experimental designs; reliability and validity

Readings:

#Chapter 6, "Working From A Plan" from Manheim, Jarol B., Richard C. Rich, Lars Willnat and Craig Leonard Brians, *Empirical Political Analysis*, pp. 87-107

*Dunning, Thad. 2005. "Improving Causal Inference: Strengths and Limitations of Natural Experiments." Working Paper, pp. 1-22.

*Gerber, Alan S. and Donald P. Green. 2000. "The Effect of a Nonpartisan Get-Out-the-Vote Drive: An Experimental Study of Leafletting." *The Journal of Politics*, 62(3): pp. 846-857.

*Lau, Richard R. and David P. Redlawsk. 1997. "Voting Correctly." *The American Political Science Review*, 91(3): pp.585-598.

Questions for Discussion:

Experimentation has a dual meaning, as it refers to both a question of theory-building and a question of research design. How are these two meanings related? Is this distinction specific to social science, and if so, why?

Think about a question that you would like to answer in political science. Could you answer this question using a true experimental design? If not, what quasi-experimental design or natural experiment could you utilize instead? What would be the potential criticisms of this alternative research design?

July 5: Survey research; ethics in social research

Readings:

*Brady, Henry. 2000. "Contributions of Survey Research to Political Science." *P.S.: Political Science and Politics*, pp. 47-57.

*Kuklinski, James H., Paul M. Sniderman et al. 1997. "Racial Prejudice and Attitudes Toward Affirmative Action." *American Journal of Political Science*, pp. 402-419.

#Chapter 19, "Social Responsibility and Ethics in Social Research" in Crano, William D, and Marilynn B. Brewer. 2002. *Principles and Methods of Social Research*, pp. 344-357.

Questions for Discussion:

Find a short survey on the Internet (preferably one that is related to politics) and think carefully about the language used in the questions. Which question wording would you consider problematic? Is it problematic because it presents issues of validity or reliability?

How is survey research data different from standard "observational" data? What additional problems might this present to the researcher? How does the approach taken by Kuklinski, Sniderman et al address this?

July 10: Comparative methods

Readings:

#Chapter 12, "Comparative Research" from Manheim, Jarol B., Richard C. Rich, Lars Willnat and Craig Leonard Brians, *Empirical Political Analysis*, pp. 205-216.

#Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics" *Political Analysis*, 1990, pp. 131-150.

#Hamm, Keith and Peverill Squire. 2005. *101 Chambers: Congress, State Legislatures and the Future of Legislative Studies*. Introduction, Chapters 3 and 6, pp. 67-98, 146-153

#Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. Chapters 1 and 5, pp. 1-8, 62-89.

Questions for Discussion:

Are there any questions in the Hamm/Squire and Lijphart readings that introduce questions that do not “travel” well? Is this primarily a problem when comparing more disparate cases, or can you think of reasons why this problem might apply to state politics or comparative democratic politics as well?

Do either the Hamm/Squire and Lijphart readings do what Geddes describes as “selecting on the dependent variable”? If so, on what variable do they select, and how might this affect their analysis?

July 12: Qualitative research methods; competing views on social science research

Readings:

*Fenno, Richard. 1986. “Observation, Context, and Sequence.” *The American Political Science Review*, pp. 3-15.

#Fenno, Richard. 1978. *Home Style: House Members in their Districts*. Introduction and Chapter 1, pp. 1-30.

*Farr, James. 1982. “Historical Concepts in Political Science: The Case of ‘Revolution.’” *American Journal of Political Science*, 26(4): pp. 688-708.

Questions for Discussion:

How does Fenno apply the recommendations made in “Observation, Context, and Sequence” in Home Style? How are Fenno and Farr’s recommendations similar and different? How might Fenno examine the concept of revolution, and how might Farr explore legislator-constituent relations?

July 17: Midterm Exam

July 19: Introduction to probability and statistics; measures of central tendency

Readings:

Levin and Fox, Chapter 2, "Organizing the Data" and Chapter 3, "Measures of Central Tendency," pp. 21-66.

July 24: Measures of variability; introduction to probability theory

Readings:

Levin and Fox, Chapter 4, "Measures of Variability," pp. 67-83.

#Bain, Lee and Max Engelhardt. 1987. *Introduction to Probability and Mathematical Statistics*. Chapter 1, pp.1-41. (This reading is optional. You are only responsible for the material covered in class on this topic, but perusing this beforehand will be helpful.)

Homework Assignment #1 Due (to be distributed to class on July 3)

July 26: Probability theory, continued; samples and populations

Readings:

Levin and Fox, Chapter 5, "Probability and the Normal Curve" and Chapter 6, "Samples and Populations," pp. 87-141.

July 31: Hypothesis testing; Difference of means tests

Readings:

Levin and Fox, Chapter 7, "Testing Differences between Means," pp. 143-182.

August 2: Analysis of variance; Non-parametric tests of significance

Readings:

Levin and Fox, Chapter 8, "Analysis of Variance" and Chapter 9, "Nonparametric Tests of Significance," pp. 183-235.

Homework #2 Due: (to be distributed to class on July 24)

August 7: SPSS Session #1

August 9: Correlation

Readings:

Levin and Fox, Chapter 10, "Correlation," pp. 239-257.

August 14: Bivariate regression

Readings:

Levin and Fox, Chapter 11, "Regression Analysis," pp.258-274.

Homework #3 Due: (to be distributed to class on August 2)

August 16: Multivariate regression

Readings: To be announced

August 21: SPSS Session #2

August 24, 11:30 am: Final Exam

Homework #4 Due: (to be distributed to class on August 14)