

**Models & Methods**  
**Preliminary Examination**  
**Fall 2007**

**RULES AND DIRECTIONS:** You will have eight hours in which to answer the required questions. **The exam must be handed in no later than 4:00 p.m.** Be sure to save some of your time for putting your answers into an organized, typed or legibly written version in good English. Also be sure that you answer all the parts of each question and that you refer to the appropriate scholarly literature in each answer. This is a closed-book exam. Students may not use notes or books, nor may they discuss the examination with anyone while taking it.

**Important:** Be sure that you choose your questions in order to demonstrate the breadth as well as the depth of your knowledge. It is your responsibility to ensure that your selection of questions and answers to them are distinctive and do not contain undue overlap and repetition.

Please answer one question from Part I, and two questions from Part II.

**THEMATIC QUESTIONS**

**PART ONE**

Write one of the following questions:

1. Critically evaluate the application of rational choice models to politics.
2. What are the key assumptions of the regression model. Which of these assumptions is most often violated in actual research, or in research in given subfields? Are these violations serious? Why? Why not?
3. Evaluate the claim that the greatest barrier to scientific progress in the study of politics is our inability to conduct controlled experiments. Is this barrier equally serious in all subfields? Are quasi-experimental techniques sufficiently developed to allow sound scientific inference? How so?

## SEMINAR QUESTIONS

### PART TWO

Write *TWO* of the following essays.

1. Many studies in political science utilize a model of choice. In the context of electoral choice present the motivation for a statistical model of utility maximization by voters. Describe the assumptions on which the model rests, detailing the instances in which these assumptions are likely to be violated in political research. Finally, explain the logic behind the estimation of the model and tests of hypotheses regarding its parameters.
2. It is a truism in political science methodology that “correlation does not imply causation.” Yet a number of correlational techniques are discussed in causal terms—structural equation modeling, for example. Explain how the notion of causality is embodied in correlational techniques like OLS regression, structural equation modeling, and other methods used by political scientists. Do these methods rest on causal assumptions, even if they don’t expressly test for causality? Under what conditions and to what extent can correlational methods in particular provide evidence supporting causal inference? Explain giving examples from literatures in political science.
3. Social choice theorists such as Kenneth Arrow and William Riker have demonstrated that voting by majority rule is inherently unstable. Yet, empirical investigations rarely find the voting cycles (“chaos”) that these and other theorists predict. Describe the arguments of Arrow, Riker and other proponents of the view that voting is unstable. Review the empirical work on this topic in legislative politics and related fields. Then explain *why* we see so much voting stability.
4. Discuss the issues of reliability and validity in empirical political analysis. Explain how measurement error can affect the substantive conclusions we draw and statistical inferences we make. What specific steps can research make to maximize reliability and validity?