

**Models & Methods
Preliminary Examination
Spring 2006**

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 I:

Write one (1) of the following essays.

1. In your view, can formal theory apply to any political question, or is it more successful with some topics than with others? Do you perceive “categories” or “boundaries” to the application of formal theory? If so, what are they?
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 II:

Answer a total of two questions.

1. Using Robert Groves' (1989) conceptual structure of sources of error in surveys, describe how you would design as "error proof" of a survey as possible, while keeping in mind time and cost constraints (i.e. don't assume unlimited resources to conduct the survey). Describe each type of error, why it is a problem for surveys, what you would do to reduce the error, and why your approach would be effective (with citation to the survey research literature).
2. It is a truism in social science methodology that "correlation does not imply causation." Yet, a number of correlational techniques are discussed either explicitly or implicitly in causal terms—structural equation modeling, for example. Discuss how the notion of causality interfaces with correlational techniques like ordinary least squares estimation (regression), structural equation modeling and so on. Do the mechanics of these models make causal assumptions, even if they can not assess causality? Moreover, to what extent—and under what conditions—can correlational techniques provide limited evidence in favor of causal conclusions? Provide examples from political science.
3. One of the toughest problems that can undermine the value of data from in-depth, open-ended interviewing and participant-observation is the inevitable influence of the researcher's identity upon subject's responses. Outline the forms this problem can take with concrete examples from published research where possible and discuss the advantages and disadvantages of different techniques for dealing with them.
4. How has the increasing ease and power of computation facilitated scientific progress in the study of politics? Answer both with respect to mathematical modeling and statistical analysis. Which works best demonstrate the value of computation in theory building?