

DEPARTMENT OF SOCIOLOGY
 UNIVERSITY OF COLORADO AT BOULDER
 COMPREHENSIVE EXAM
 METHODS
 AUGUST 1999

Please answer **three** questions. There are choices in each question -- you should answer **either** Question 1a or Question 1b; **either** Question 2a or Question 2b; and **either** Question 3a or Question 3b. Our recommended time allocations for each question are in parentheses.

Please read the **entire exam** before you begin. Also, books have been written on at least some of these questions. Please write a succinct and brief answer that encompasses some of the major points.

1. Answer one of the following two questions (about 60 minutes).

1a. The regression model below treats a scale of **support for abortion rights** as the dependent variable. The scale varies from a low of 1 (extreme pro-life) to a high of 10 (extreme pro-choice). The model includes five independent variables:

Age	measured in years from 25 to 75;
Education	measured in years from 0 to 20;
Political beliefs	measured from 1 (extremely liberal) to 10 (extremely conservative);
Gender	measured as a dummy variable with females coded 1 and males 0; and
Catholic	measured as a dummy variable with Catholics coded 1 and others 0.

<u>Variable</u>	<u>b</u>	<u>beta</u>	<u>t</u>
Age	.02	.15	3.2
Age ²	-.01	-.09	-2.6
Education	.06	.07	1.5
Political Beliefs	-.20	-.25	-2.3
Gender	2.4	.15	5.1
Catholic	-.40	-.09	-1.3
Gender x Pol. Beliefs	.19	.22	2.2
R ²		.37	
df		479	

Interpret the direction and form of the influence of each of the variables on the dependent variable. Make reference to all relevant coefficients, and interpret the coefficients in terms of the units of measurement, noting the special meanings of the squared term, dummy variables, and interaction term. Make sure you include a theoretical (or verbal) interpretation of the results rather than merely listing the coefficients. Summarize the overall conclusions from your interpretations of the coefficients.

What might you do further to revise and improve this model in terms of 1) adding other variables and 2) checking the model assumptions.

1b. Although sociological theory often posits the existence of causal relationships, we face difficult problems in our ability to identify causality in empirical studies. One criterion for causality is that the association between two variables is not due to extraneous forces or other variables. Describe in general how statistical methods and survey data differ from experimental methods and lab data in establishing causality. Then, to explore the use of statistical methods more specifically, choose two variables that would likely be associated with survey data (e.g., time spent watching television and school grades, parental divorce and early sexual involvement of adolescents, or religious attendance and physical health). Present a theoretical argument that specifies a causal relationship between the two variables, and then describe the sample, measures, and statistical model (including control variables) that you would use to test for the causal relationship. What evidence would you expect from the model to support the theoretical argument?

2. Answer one of the following two questions (about 60 minutes).

2a. According to Charles Ragin, historical-comparative research allows for the integration of qualitative and quantitative research strategies. Describe the advantages and disadvantages of 1) case-based qualitative comparative-historical research (also making reference, if possible, to the arguments of Feagin et al. and Glaser and Strauss) and 2) variable-based quantitative comparative-historical research. Then describe Ragin's integrative strategy of comparative research. In answering the question, choose one of the examples below, and explain how it might be studied using all three approaches.

- a) economic deprivation and revolution
- b) foreign investment and income inequality
- c) state centralization and the emergence of social security programs

2b. Many studies in sociology derive their hypotheses from theoretical formulations and frameworks, i.e. they use a deductive method to devise their hypotheses which are, in turn, tested empirically. Another approach common to many disciplines is based on induction. Describe the inductive approach as it can be or is used in sociology. Discuss its strengths and weaknesses. Design a study intended to elucidate violence among youth that uses, at least in part, an inductive approach.

3. Answer one of the following two questions (about 90 minutes).

3a. You have decided to take an ethnographic approach to studying a particular topic. Please select your topic with realism in mind: participant observation requires YOU to be in the field establishing REAL relationships with setting members and making them your closest friends for a period of years. In planning this research, discuss the following questions:

3a.1. How will you select a setting (what are some of the criteria to consider) and how will you judge whether it is a good one for your purposes or not?

3a.2. What kind of role will you carve out in this setting? How will it fit you particularly and this setting particularly?

3a.3. What types of groups might you find in this setting? To which might you more naturally gravitate and how might you establish relations with members of the other groups?

3a.4. What might be some of the main issues or questions that you would like to find out about in this setting?

3a.5. What kinds of information might you obtain about this setting were you using pre-collected data (official statistics, archival data), and what kind might you obtain were you doing survey research? How would these types of information differ from that obtained from participant-observation methods?

Question 3a.6. What advantages would the ethnographic approach bring to gaining knowledge about your topic? What drawbacks would it bring?

3b. Select a topic appropriate for a quantitative/survey research investigation. Construct, elaborate in detail, and defend the quantitative study to carry out the investigation. Be sure to address at least the following items in your answer: the unit of analysis, the population to be studied, sampling, study design (cohort, cross-sectional, longitudinal; prospective or retrospective), maximizing participation of subjects, data collection, data analysis, and generalizability of the findings.

You may reply to this question using a topic of your choice or consider the following: women are more likely to be battered in intimate relationships than men. Does this mean that domestic violence is more likely to be initiated by men than women? How would you go about a study to answer this question? What questions would you want to ask regarding the incidence and prevalence of violence in intimate relations and their differentials? What would you want to ask about the factors related to escalation of violence to battering? Design your study based on the questions you raise, taking into account the issues raised in the paragraph above.