Political Science 305
Data Analysis
TuTh 10:30 – 11:50

Themes: This course is designed to introduce students to the philosophy and techniques that dominate data analysis in political science. The main focus of this course will be on the process of formulating hypotheses, developing appropriate tests, the relationship between hypothesis testing and theory building, and the collection and analyses of appropriate data. This course is conducted from a positivist standpoint, although some reference will be made to non-positivist standpoints, epistemological criticisms, and methodologies throughout the course. One theme that will be emphasized during the course is that the basic logic of empirical analyses applies both to qualitative and quantitative data analysis. However, the last section of the course will focus on the methods and skills necessary to begin to do preliminary quantitative analysis of one’s data while preparing for additional policiatl science courses in statistical methods.

Prerequisites: There are no formal requirements, although familiarity with algebra and computers is assumed. Computer and statistical skills will be introduced in the class as needed.

Requirements: The requirements for the course include weekly assignments. These assignments will vary and include both “thought experiments” and computer exercises. Students may use either data provided for the class or with the express approval of Brehm their own data. All members of the class will be expected to participate actively in class discussion and the section. Credit will be assigned at 85% for the homework and 15% for class discussion.

Required books (all are at the Seminary Coop bookstore):

- Campbell, Donald and Julian Stanley. 19xx. Experimental and Quasi-Experimental Designs for Research.
- Durkheim, Emile. 1951. Suicide.
Ia. 1 Oct  Introduction

Ib. 3 Oct  Hypotheses
  • Durkheim, Book 2: Chs. 2, 4, 5.
  • Davis, The Logic of Causal Order.
  • KKV, Ch. 3

IIa. 8 Oct  Interpretive Methods (Alex Wendt)
  • von Wright, Georg Henrik. Explanation and Understanding, Ch. 1
  • KKV, Ch. 2
  • Wendt, Alexander. 1998 “On constitution and causation in International Relations.”
  • Hacking, Ian. “Madness: Biological or Constructed?”

IIb. 10 Oct  Critical Tests and Alternative Hypotheses – Brehm is out of town
  • Durkheim, Book 1: Chs. 1–2.

IIIa. 15 Oct  From Theory to Hypothesis
  • Durkheim, Book 3, Ch. 1.
  • New paper by Duncan.

IIIb–IVa. 17 – 22 Oct
  Experiments and Quasi–Experiments (Melissa Harris–Lacewell
  • Campbell and Stanley.

IVb. – Va 24 – 29 Oct
  Surveys
  • Fowler, Ch. 2, 5, 6.

Vb. 31 Oct  Process Tracing / Case Study
  • Tetlock, Philip and Aaron Belkin, Counterfactuals, Ch 1, 2
  • Bates, Robert, et al., Analytical Narratives (and reviews)

VIa. 5 Nov  Case selection
  • KKV, Ch. 4
  • Brehm, John. 1993. The Phantom Respondents, Ch. 5

VIb. 7 Nov  Safe Data Practices
  • Fowler, Ch. 9
  • Milgrom, Stanley. 1969. Obedience to Authority, Ch. 1–3.
VIIa. 12 Nov  Contingency Tables
   • Knake, David and George Bohrnstedt, *Statistics for Social Data Analysis*, Ch. 7
   • Campbell, *et al.* *The American Voter*, Ch. 6

VIIb. 14 Nov  Distributions
     *Sociological Methods and Research*, 18:201–41.
   • Tufte, Edward. *Data Analysis for Politics and Policy*, Ch. 1
     (• King, Gary. *Unifying Political Methodology*, Ch. 3)

VIIIa. 19 Nov  Hypothesis Testing
   • Bohrnstedt and Knake, Ch. 3.

VIIIb. 21 Nov  Inference
     Statistical Association*, 81:945–70.

IX. 26 Nov  Regression
   • Achen, 1–30.

X. 3 – 5 Dec  Multiple Regression
   • Achen, 30–79.
   • Achen, “Measuring Representation.”