

**Macalester College  
Department of Sociology**

**SOCI269.01  
Science and Social Inquiry**

Spring 2011  
MWF 10:50-11:50  
Carnegie Hall, Room 208

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Strong views and serious responsibilities are no guarantee of even passing acquaintance with data. But numbers do not fall ripe into our laps. Someone has to find and fetch them. Far easier, some feel, not to bother and trust their prejudices instead. Too bad that ignorance is an unreliable foundation for forthright opinion, let alone policy. For though much of what can be known through numbers is foggy, policies have been badly conceived, even harmful, for want of looking up obvious numbers. Many of us build passionate beliefs on numbers that are figments of our imagination.

The deepest pitfall with numbers owes nothing to numbers themselves and much to the slack way they are treated, with carelessness all the way to contempt. But numbers, with all the caveats, are potent and persuasive, a versatile tool of understanding and argument. Simply show enough care for numbers' integrity to think them worth treating seriously, and you are well on the way to empowerment.

Michael Blastland and Andrew Dilnot, *The Numbers Game*

**Course Synopsis**

Social science is the study of human behavior. In this, the social sciences enjoy no monopoly. Students of history, language, philosophy, religion, and other disciplines have also established claims to knowledge of how people feel, think, and act both individually and collectively. What often distinguishes sociology from other ways of knowing derives from the logic of scientific inquiry. The supreme, albeit unrealized, objective of doing sociology is to discover and explain variations in social behavior. To wit, sociologists observe certain protocols for gathering empirical evidence and for making inferences from research findings to substantiate this endeavor. This course provides a general introduction to the ends and means of scientific inquiry and to the varieties of methodological approaches so employed in the service of advancing scientific discourse about social phenomena. Specifically, the preeminent focus of the course concerns the dominant mass of social science research: social surveys.

Instruction in methodology is an important part of an undergraduate education. Learning how researchers generate knowledge claims enhances generic analytical skills.

Knowing how to discern between ethical, theoretical, and empirical statements, to evaluate the quality of evidence that substantiates knowledge claims, and to identify fallacies that underlie specious arguments are lasting benefits of methodological literacy.

Having the skills to critically evaluate the findings of this research tradition is also beneficial in a broad spectrum of professional settings. Techniques integral the social survey have the widest influence of any method of social inquiry. Students seeking graduate work in any one of the social sciences will eventually have to master the principles of social survey research and experimental studies. Those going onto graduate work in business and government administration face a similar prospect. The legal and medical professions cannot safely ignore social research: appeals to bodies of knowledge established through social science are increasingly playing a larger role in legal and clinical and legal reasoning/decision-making.

### **Required Text Available for Purchase**

Babbie, Earl. 2009. *The Practice of Social Research*. 12th edition. Belmont, CA: Wadsworth.

### **Exams and Assignments**

	<u>% of Total Grade</u>	<u>Dates/Dates Due</u>
Mid-term Exam	25	Monday, April 7
Final Exam	25	Monday, May 2
Data Analysis Report	25	Monday, April 18
Group Project	25	Friday, May 5

### **Readings/Course Schedule**

#### **Part I. Epistemological and Conceptual Foundations of Research**

##### **Week 1. Science as a Way of Knowing**

January 24, 26, 28

Chapter 1. Human Inquiry and Science

##### **Week 2. Science as Ethics**

January 31, February 2, 4

Chapter 3. The Ethics and Politics of Social Research

##### **Week 3. Science as Theories**

February 7, 9, 11

## Chapter 2. Paradigms, Theory, and Social Research

### **Week 4. Science as Hypothesis Testing**

February 14, 16, 18

Reinard, John. 1997. *Introduction to Communication Research*. New York: McGraw-Hill. pp 26-41.

Tavris, Carol. 2003. "Mind Games: Psychological Warfare Between Therapists and Scientists." *The Chronicle Review* 49 (25): B7.

\*Group Project Research Questions Due Friday, February 18.

### **Part II. Science as Procedures: Operationalization/Designing Research**

### **Week 5. Study Populations and Sampling**

February 21, 23, 25

Chapter 4. Research Design

Chapter 9. Survey Research

Chapter 7. The Logic of Sampling

### **Week 6. Empirical Indicators and Levels of Measurement**

February 28, March 2, 4

Chapter 5. Conceptualization, Operationalization, and Measurement

Chapter 6. Indexes, Scales, and Typologies

\*Group Project Complete Proposal Due Friday, March 4th.

### **Week 7. Midterms**

March 7

\*One hour in-class exam.

March 9

Corrected exams returned and reviewed.

**Midterm Break, March 12-20**

**Part III. Describing and Interpreting Research Findings****Week 8. Univariate and Bivariate Analysis**

March 21, 23, 25

Chapter 14. Quantitative Data Analysis

**Week 9. Multivariate Analysis**

March 28, 30, April 1

Chapter 15. The Elaboration Model

Prospectus for Data Analysis Report Due Monday, March 28.

Research Question(s). Hypotheses. Variable Selections from GSS/AES Data Bases. Plan for Recoding Variables.

**Week 10. Tests of Significance**

April 4, 6, 8

Chapter 16. Statistical Analysis, “Inferential Statistics.”

**Week 11. Data Analysis Labs**

April 11, 13, 15

**Week 12. Presentation and Interpretation of Data Analysis Findings**

April 18, 20, 22

\*Data Analysis Report Due Monday, April 18th

**Week 13. Presentation of Group Project Results**

April 25, 27, 29

**Week 14. Final Exam**

**May 2** One hour in-class exam.

\*Final Group Project Write-up Due Friday, May 5th.

## **Course Topics**

### **Part 1. Framing Research**

#### *The nature of scientific inquiry*

- protected assumptions of science
- understanding variation
- the logic of cause and effect

#### *The wheel of science*

- deductive logic
- inductive logic
- theory
- derivation of hypotheses
- operationalization
- observation
- sample summarization/parameter estimation
- generalization and inference
- tests of hypotheses

#### *Theory*

- theory defined
- axiomatic propositions
- deductive propositions

#### *Modes of explanation*

- nomothetic mode of explanation
- idiographic mode of explanation

#### *The logic of causality*

- independent and dependent variables
- relationships between variables

#### *Derivation of hypotheses*

- the logic of deducing hypotheses
- variable constructs
- nominal definitions

## **Part II. Operationalization: Designing Research**

### *Research designs*

strengths and weaknesses of representative research  
strengths and weaknesses of ethnographic research

### *Sampling*

non-probability samples  
probability samples  
representativeness  
simple random sample  
stratified samples  
multi-stage cluster sample  
proportionate/disproportionate samples

### *Operational definitions*

Rules of correspondence  
    validity  
    reliability  
Levels of measurement  
    nominal variables  
    ordinal variables  
    interval variables  
    ratio variables  
    indexes and scales

## **Part III. Describing and Interpreting Research Findings**

### *Sample summarization and parameter estimation*

parameters  
statistics  
confidence levels  
confidence intervals  
standard errors

### *Tests of hypotheses*

univariate analysis	independence
bivariate analysis	chi-square values
null hypothesis	statistical significance/p-values
alternative hypothesis	measures of association/phi coefficients

**Data Analysis Reports (10 page maximum)**

In the write-up of your data analysis report, incorporate the following headings and discussions.

**Introduction**

Provide a short summary of your research question. Begin with a clear and concise problem statement in which you identify your independent and dependent variables. Underscore briefly the practical significance of your research question.

**Theoretical Perspectives/Literature Review**

Establish a thumbnail literature review of previous research on your topic. Ideally, researchers will seek to compare and contrast two or more theoretical perspectives that explain any given phenomenon. Make sure it applies to your research question and allows you to formulate a set of hypotheses using the General Social Survey/American Election Survey data base.

**Hypotheses**

From the previous discussion, derive and describe the specific hypotheses that you will seek to test. Clearly set out the variable constructs and nominal definitions of your independent and dependent variables. State the kind of the relationship that you expect to observe between your independent and dependent variables.

**Data and Methods**

Provide a brief description of the General Social Survey/American Election Survey's study population and sampling methodology. Specify the empirical indicators that represent your theoretical constructs. Describe the methods used for scaling (establishing levels of measurements for) your indicators and provide a rationale for recoding variables.

**Findings**

Describe the parameter estimates of your independent and dependent variables (univariate analysis). Interpret the statistical tests of your hypotheses. Describe the existence and strength of the measures of association between the independent and dependent variables in your bivariate and multivariate analysis. Acknowledge and interpret the row percentages of your crosstabulations.

**Conclusion**

Draw the appropriate empirical generalizations and inferences from your statistical analysis, whether or not the theoretical speculations of your paper find support in your data analysis. If not, offer suggestions on why your theoretical model fails, how a different theoretical approach might better explain your findings, or, how another research design might provide a better way of operationalizing your research question.

And so, the completed term paper will exhibit the following headings:

**Introduction****Theoretical Perspectives, or Literature Review****Hypotheses****Data and Methods****Findings****Conclusion****Bibliography**

Append printouts of your data analysis to the end of your paper. Do not reproduce these results in the text of the paper.



## **Group Project Reports (15 page maximum)**

### **Title**

Give the shortest possible, preferably lyrical, description of your study.

### **Abstract**

In 150-200 words, state your research questions, give a précis of your research design, and summarize your main arguments and findings.

### **Introduction**

Announce clearly your problem statement/research questions at great length.

Offer a *prima facie* rationale for the importance of your study that underscores the broader implications and significance of your research efforts.

Imagine your audience. Assume perhaps that your reader has a passing, but not detailed, familiarity with your topic. Establish a brief context for your research that will inform and refresh your readers understanding of your subject and provide enough background so that you can generate curiosity, excitement, and suspense in your reader's mind about the unresolved questions that you propose to explore in your research.

Give an overview of your main arguments and how you conducted your research.

### **Literature Review**

Where appropriate, situate your study within broader, ongoing debates among differing theoretical perspectives on your object of inquiry and briefly surveys previous findings of relevance to your research agenda.

Your summary of existing studies should demonstrate to your reader that you have the depth and breadth of knowledge to research intelligently your topic.

It should also focus and guide your empirical research, that is, allow you to make difficult choices about planning your research design – what to observe and how to observe.

## Research Design

### *Choice of Method*

Detail and substantiate your choice of method(s) for generating evidence on your subject: Case Study, Ethnographic Interviewing, Field Research, Content Analysis, or Social Survey, etc. Identify and briefly discuss the strengths and limitations of your choice of method. How does your methodology hold out the prospect of creating new findings that overcome the limitations of previous research on your topic and producing new insight into your topic?

### *Study Population and Sampling*

**Study Population.** Your reader will want to know what group, class, collection, or population of social things, or cases, into which you will provide a window of insight. Your study population may consist of . . .

human artifacts: musical scores, roads and bridges, housing tracts, books, etc.

events: elections, revolutions, births, marriages, and deaths, insurrections, social movements, wars, public policies, etc.

individuals: voters, students, peasants, workers, religious adherents, etc.

social institutions or organizations: schools, sports teams, governments, social clubs, charities, families, etc.

Social things have temporal and spatial dimensions. Time and place are parameters of these populations. Be specific about these attributes, e.g. democratic revolutions in Latin America in the 1980s and 1990s, contemporary student protests on liberal arts campuses in the US, St. Paul public housing developments in the 1950s, Chinese peasants in the 1970s, mental health agencies in MN before WWII, voters in the 2004 federal election, articles in the New York Times in 2005, etc.

**Unit of Analysis.** Define and describe your unit(s) of analysis – in other words – what elements of these social things will you observe and describe?

**Sampling.** How will you select the cases that wish to observe? Representative-probability or purposive sample?

### *Operational Definitions*

Having described your choice of research design, study population, and sampling methodology, identify what kinds of evidence are you looking for and how will you record and order your observations. Detail your variable constructs and hypotheses. Detail your choice of empirical indicators for your variable constructs and the levels of measurement created for them – that is, the specific questions asked of respondents and the choice of answers allowed them. Describe how you recoded responses if it was required, or, how you created any new variables from the raw data.

## **Findings**

Use your research questions to frame the presentations of your findings. Your analysis of your findings should correspond to the interpretive frameworks discussed in your literature review and the operationalization described in your research design.

Summarize and interpret your sample statistics. Do not estimate the population parameters of your study population – unless you can establish them in some other way apart from your sample (i.e. information on the student body of Macalester derived from other sources such as the Office of Institutional Research). Do not report confidence intervals and confidence levels. The small population sizes and sample sizes of your studies will permit/require tests of statistical significance.

## **Conclusion**

In your conclusion, accomplish three things: state your main points, qualify your arguments, and explain how your findings might inform future research.

Recapitulate your research question, the principal arguments, and the findings of your paper.

Acknowledge significant gaps in what is known about your topic. Briefly elaborate on information and evidence that you would have wanted to, but could not, generate or discover that might provide more convincing support for some aspects of your argument.

Alert the reader to important new directions in research on your topic that grow out of your study.

## Formatting Essays and Papers

Please observe the following formats in the write-ups of your essays.

### 1. Type

#### *Double Spacing*

Double-space your sentences.

#### *Extra Spacing Between Paragraphs*

Hit the carriage return twice, not once, between the last sentence and first sentence of consecutive paragraphs.

#### *Indenting*

Indent the beginning of each paragraph.

#### *Justifying*

Justify both left and right margins.

e.g.

You write a term paper by doing whatever reading or research is required throughout the term and working out the paper in your head as you go along. But you only write one draft, usually the night before handing it in. College students have no time for rewriting, since they often have several papers due at the same time. Teachers know all this. If they aren't aware of the mechanics, they know the typical results and don't expect papers more coherent or highly polished than such a method can produce.

As opposed to left justified only:

As long as that document is kept confidential, in the conventionally private teacher-undergraduate relationship, it won't embarrass the author too much. But the social organization of writing and reputation changes in graduate school. Teachers talk about your papers, for good or bad, to their colleagues and to other students. With luck, the papers grow into qualifying papers or dissertations, read by several faculty members.

### *Footnotes/Endnotes*

Do not use footnotes or endnotes. Use parenthetical references consistent with the author-date citation format described in further detail below.

### *Page Numbers*

Page numbers should appear in the top right-hand corner of each page beginning with 1 at the first page.

### *Tables*

Place tables, diagrams, and figures at the end of the bibliography.

## **2. Headings**

### *First-level Headings*

Use bold type for first-level, or major, headings. Left justified. Do not indent.

e.g.

**Introduction**

**Literature Review/Previous Research/Theoretical Perspectives**

**Data and Methods**

**Findings**

**Conclusion**

**Bibliography**

### *Second-level Headings*

For second-level headings, or sub-headings, use italics. Left justified. Do not indent.

e.g.

**Theoretical Considerations**

(first-level or major heading)

*Socioeconomic Backgrounds*

*Pre-adult Integrative Experiences*

*Ethnic and Racial Identification*

*Summary*

(second-level or sub-headings)

### 3. Style

Proof read your paper. Revise for clarity and conciseness. Keep the prose simple, direct and concrete. If researchers whose work you cite use excessive jargon to make their point, don't simply copy it. Take it as an invitation to translate their writing into accessible language if you can do it without losing any essential meanings.

### 4. Author Citations

When citing other research and authors in your paper, use the standard referencing practices of sociology journals and books.

#### *Author-Date-Page Number Citations*

In the text, cite in parentheses the name of the author, the year of publication of the work and the page number from which the reference is drawn.

e.g.

People often perform rituals to influence the result of some process over which they have no rational means of control (Malinowski 1948: 25-36).

Theoretical works on the economics of nonprofit institutions only began to appear in the early 1970s (Newhouse 1970; Feldstein 1971; Pauly and Redisch 1973).

#### *Date-Page Number Citations*

When you mention the author's name in the text, cite only the year and page numbers in parentheses at the end of the sentence.

e.g.

We also need to interpret rules so that the result we get is reasonable, not some foolishness resulting from blind rule-following. Harold Garfinkel describes this practice, which he calls *ad hocing*, as a fundamental feature of all human activity (1967: 21-24).

### 5. Quotations

#### *Block Quotations*

Long, or block, quotations (4 lines or more) in your essays should appear 1.5 spaced, set apart from the other text with a double carriage return, left and right justified, and indented. Do not use quotation marks for block quotations. Do not italicize them.

e.g.

The letter I got was four double-spaced pages, and I won't quote all of it or quote it in sequence because Rosanna was thinking out loud when she wrote it and the order is not crucial. She began by remarking,

Somewhere along the line, probably in college, I picked up on the fact that articulate people used big words, which impressed me. I remember taking two classes from a philosophy professor simply because I figured he must really be smart since I didn't know the meaning of the words he used in class. I spent class time writing down the words he used that I didn't know, going home and looking them up. He sounded so smart to me simply because I didn't understand him. The way someone writes – the more difficult the writing style – the more intellectual they sound.

### *Embedded Quotations*

Short, or embedded, quotations (under 4 lines) appear in the text delineated with quotation marks.

e.g.

Academic writers commonly develop arcane vocabularies to overcome their status insecurities. They could just as easily describe in plain English their observations and insights. Jargon serves the purpose of erecting and maintaining status boundaries that exclude most people from academic discourse. "The lack of ready intelligibility in scholarly writing," asserts C. Wright Mills, "usually has nothing to do with the subject matter. The desire for status is one reason why academics slip so easily into unintelligibility . . . To overcome the academic prose you have to overcome the academic pose" (1959: 218-19).

## **6. Constructing Bibliographies**

Construct your bibliographies according to standard social science notations.

### **A. Books**

#### *Single author*

Author's last name, first name and middle initial. Year of publication. *Title of Book in Italics*. Edition. City, or, City and State of publishing company: Publisher's name.

e.g.

Babbie, Earl. 2009. *The Practice of Social Research*. 12<sup>th</sup> edition. Belmont, CA: Wadsworth.

Starr, Paul E. 1982. *The Social Transformation of American Medicine*. New York: Basic Books.

*Multiple authors*

Author's last name, first name and middle initial. and second author' first name middle initial. last name. Year of publication. *Title of Book in Italics*. City, or, City and State of publishing company: Publisher's name.

e.g.

Kamerman, Sheila B. and Alfred J. Kahn. 1989. *Privatization and the Welfare State*. Princeton, NJ: Princeton University Press.

*More than three authors*

e.g.

Kramer, Ralph M. et al. 1993. *Privatization in Four European Countries: Comparative Studies in Government-Third Sector Relationships*. Armonk, NY: M.E. Sharpe.

*Edited volumes*

Editor's last name, first name and middle initial. ed. Year of publication. *Title of Book in Italics*. City, or, City and State of publishing company: Publisher's name.

e.g.

James, Estelle. ed. 1989. *The Nonprofit Sector in International Perspective: Studies in Comparative Culture and Policy*. New York: Oxford University Press.

Katz, Michael B. and Christoph Sachbe. eds. 1996. *The Mixed Economy of Social Welfare: Public-Private Relations in England, Germany and the United States, the 1870s to the 1930s*. Baden-Baden, Germany: Nomos Verlagsgesellschaft.

**B. Articles**

*In journals*

Author's last name, first name and middle initial. Year of publication. "Title of article in quotation marks." *Title of Journal in Italics*. Volume number (Issue number): page numbers.

e.g.

Hall, Peter Dobkin. 1995. "Theories and Institutions." *Nonprofit and Voluntary Sector Quarterly* 24 (1): 5-13.



*In edited volumes*

Author's last name, first name and middle initial. Year of publication. "Title of article in quotation marks." List page numbers in *Title of Book in Italics*. Edited by editor's first name middle initial. and last name. City, or, City and State of publishing company: Publisher's name.

e.g.

Simon, John G. 1987. "The Tax Treatment of Nonprofit Organizations: A Review of Federal and State Policy." Pp. 67-98 in *The Nonprofit Sector: A Research Handbook*. Edited by Walter W. Powell. New Haven, CT: Yale University Press.