Chapter 2

Sociological Investigation

I. The Basics of Sociological Investigation.
   A. Sociological investigation begins with two key requirements:
      1. Apply the sociological perspective.
      2. Be curious and ask questions.
   B. Sociology is a type of science, a logical system that bases knowledge on direct, systematic observation. Science is one form of truth. Scientific knowledge is based on empirical evidence, or information we can verify with our senses.
   C. Scientific evidence sometimes contradicts common sense explanations of social behavior.

II. Three Ways to Do Sociology.
   There are three ways to do research in sociology: scientific sociology, interpretive sociology, and critical sociology.
   A. Scientific Sociology.
      1. Scientific sociology is the study of society based on systematic observation of social behavior. The scientific orientation to knowing, called positivism, assumes that an objective reality exists.
      2. Concepts are mental constructs that represent some part of the world, inevitably in a simplified form.
      3. Variables are concepts whose value changes from case to case.
      4. Measurement is the procedure for determining the value of a variable in a specific case.
         a. Statistical measures are frequently used to describe populations as a whole.
         b. This requires that researchers operationalize variables, which means specifying exactly what is to be measured before assigning a value to a variable.
      5. SEEING SOCIOLOGY IN EVERYDAY LIFE BOX (p. 32)—Three Useful (and Simple) Descriptive Statistics.
         a. The mode is the value that occurs most often in a series of numbers.
         b. The mean refers to the arithmetic average of a series of numbers.
         c. The median is the value that occurs midway in a series of numbers arranged from lowest to highest.
      6. For a measurement to be useful, it must be reliable and valid.
         a. Reliability refers to consistency in measurement.
         b. Validity means precision in measuring exactly what one intends to measure.
      7. Relationships among variables.
a. **Cause and effect** is a relationship in which change in one variable causes change in another.
   i. The **independent variable** is the variable that causes the change.
   ii. The **dependent variable** is the variable that changes.
b. Cause-and-effect relationships allow us to predict how one pattern of behavior will produce another.
c. **Correlation** exists when two (or more) variables change together.
   i. **Spurious correlation** means an apparent, although false, association between two (or more) variables caused by some other variable.
   ii. Spurious correlations can be discovered through scientific **control**, the ability to neutralize the effect of one variable in order to assess relationships among other variables.

8. Sociologists strive for **objectivity**, a state of personal neutrality in conducting research, whenever possible following Max Weber’s model of value-free research.
   a. One way to limit distortion caused by personal values is through **replication**, or repetition of research by others in order to assess its accuracy.

9. Some limitations of scientific sociology.
   a. Human behavior is too complex to allow sociologists to predict precisely any individual’s actions.
   b. Because humans respond to their surroundings, the mere presence of a researcher may affect the behavior being studied.
   c. Social patterns change; what is true in one time or place may not hold true in another.
   d. Because sociologists are part of the social world they study, being value-free when conducting social research is difficult.

B. Interpretive Sociology.
   1. Max Weber, who pioneered this framework, argued that the focus of sociology is interpretation. **Interpretive sociology** is the study of society that focuses on the meanings people attach to their social world.
   2. The interpretive sociologist’s job is not just to observe what people do but to share in their world of meaning and come to appreciate why they act as they do.

C. Critical Sociology.
   1. Karl Marx, who founded critical sociology, rejected the idea that society exists as a “natural” system with a fixed order. **Critical sociology** is the study of society that focuses on the need for social change.
   2. The point is not merely to study the world as it is, but to change it.

D. Research is affected by **gender**, the personal traits and social positions that members of a society attach to being female and male, in five ways:
   1. Androcentricity, or approaching an issue from the male perspective only.
   2. Overgeneralizing, or using data drawn from studying only one sex to support conclusions about human behavior in general.
   3. Gender blindness, or not considering the variable of gender at all.
4. Double standards.
5. Interference because a subject reacts to the sex of the researcher.

E. The American Sociological Association has established formal guidelines for conducting research.

III. The Methods of Sociological Research.

A research method is a systematic plan for conducting research. Four commonly used research methods are:

A. An experiment is a research method for investigating cause and effect under highly controlled conditions. Experimental research is explanatory, meaning that it asks not just what happens but why. Typically, researchers conduct experiments to test hypotheses, unverified statements of a relationship between variables. Most experiments are conducted in laboratories and employ experimental and control groups.

THINKING ABOUT DIVERSITY: RACE, CLASS, AND GENDER BOX (p. 40)—Studying the Lives of Hispanics. Gerardo and Barbara Marin (1991) have identified five areas of concern in conducting research with Hispanics:

a. Be careful with terms.
b. Realize that cultural values may differ.
c. Realize that family dynamics may vary.
d. Be aware that attitudes toward time and efficiency may vary.
e. Realize that attitudes toward personal space may vary.

1. The Hawthorne effect is a change in a subject’s behavior caused by the awareness of being studied.
2. The Stanford County Prison study was an experiment conducted by Philip Zimbardo (1972) that supported the notion that the character of prison itself, and not the personalities of prisoners and guards, causes prison violence.

B. A survey is a research method in which subjects respond to a series of statements or questions in a questionnaire or an interview. Survey research is usually descriptive rather than explanatory.

1. Surveys are directed at populations, the people who are the focus of research. Usually we study a sample, a part of a population that represents the whole. Random sampling is commonly used to be sure that the sample is actually representative of the entire population.
2. Surveys may involve questionnaires, a series of written questions a researcher presents to subjects. Questionnaires may be closed-ended or open-ended. Most surveys are self-administered and must be carefully pretested.
3. Surveys may also take the form of interviews, a series of questions administered in person by a researcher to respondents.
4. THINKING ABOUT DIVERSITY: RACE, CLASS, & GENDER BOX—The African American Elite: Reading Data in a Table. A table provides a lot of information in a small amount of space, so learning to read tables can increase your reading efficiency.
a. Lois Benjamin (1991) used interviews and snowball sampling to study one hundred elite African Americans. Benjamin concluded that, despite the improving social standing of African Americans, Blacks in the United States still experience racial hostility.

C. **Participant observation** is a method by which researchers systematically observe people while joining in their routine activities. Participant observation research is descriptive and often exploratory. It is normally qualitative research, inquiry based on subjective impressions.

1. William Whyte (1943) utilized this approach to study social life in a poor neighborhood in Boston. His research, published in the book *Street Corner Society*, illustrates the value of using a key informant in field research.

D. Using available data: Existing sources.

1. Sometimes, sociologists analyze existing sources, data collection by others.
2. E. Digby Baltzell’s (1979b) *Puritan Boston and Quaker Philadelphia* explored reasons for the prominence of New Englanders in national life. This study exemplifies a researcher’s power to analyze the past using historical sources.

E. The interplay of theory and method.

1. **Inductive logical thought** is reasoning that builds specific observations into general theory.
2. **Deductive logical thought** is reasoning that transforms general ideas into specific hypotheses suitable for scientific testing.
3. Most sociological research uses both types of logical thought.

F. CONTROVERSY & DEBATE BOX—Can People Lie with Statistics? The best way not to fall prey to statistical manipulation is to understand how people can mislead with statistics:

1. People select their data.
2. People interpret their data.
3. People use graphs to “spin” the truth.

IV. Putting it all together: Ten steps in sociological investigation:

A. What is your topic?
B. What have others already learned?
C. What, exactly, are your questions?
D. What will you need to carry out research?
E. Are there ethical concerns?
F. What method will you use?
G. How will you record the data?
H. What do the data tell you?
I. What are your conclusions?
J. How can you share what you’ve learned?
**Chapter Objectives**

1) Name the two requirements of sociological investigation.

2) Discuss the advantages of the scientific approach to knowing and examine how scientific evidence challenges our common sense.

3) Define concepts, variables, and measurement.

4) Distinguish between the concepts of reliability and validity.

5) Distinguish between independent and dependent variables.

6) Understand the distinction between a cause-and-effect relationship and a correlational relationship.

7) Examine the ideal of objectivity in sociological research and discuss ways that researchers can be as objective as possible.

8) Identify limitations of scientific sociology.

9) Summarize the three methodological approaches in sociology: scientific, interpretive, and critical.

10) Identify five ways in which gender-based issues may distort sociological research.

11) List ethical guidelines to follow in sociological research.

12) Summarize the four major methods by which sociologists conduct research and discuss the strengths and weaknesses of each method.

13) Understand the basic logic of experimental research.

14) Outline 10 steps in the process of carrying out sociological investigation.

**Essay Topics**

1) What are the advantages of choosing a scientific approach to understanding social reality? What are the disadvantages, if any?

2) The text discusses how sociologists operationalize the concept of social class. How would you operationalize such important concepts as intelligence, aggressiveness, masculinity or level of commitment to religion?

3) In what ways does interpretive sociology differ from scientific sociology?

4) What is the link between the three methodological approaches to sociology and the three theoretical approaches?

5) Suppose you are a sociologist studying alleged police brutality. Construct two arguments, one proposing that you ought to be as objective as possible in your work and the other suggesting that, while striving for accuracy, you should take a stand against any injustices which your research may uncover. Which position do you find more convincing? Why?

6) What are ways that gender can shape sociological research?

7) What steps can researchers take to reduce the bias which results from the Hawthorne effect?
8) Do you think Zimbardo’s Stanford County Prison experiment was ethical, or should he have been prevented from conducting this study? Defend your position.

9) Explain how you would develop a representative sample of students on your campus in order to conduct some survey research.

10) What are the advantages and disadvantages of both open-ended and closed-ended questions in survey research?

11) Develop several criticisms of the research methods employed in Lois Benjamin’s study of elite African Americans.

12) What are three steps in the ideal experiment?

**Student Exercises**

1. Here is an interesting site for you to check out. Go to the Web Center for Social Research Methods at [http://www.socialresearchmethods.net/](http://www.socialresearchmethods.net/) and click on “Selecting Statistics.” Click on the concept on each page that corresponds to the type of variable or statistics you are interested in for your research. We hope you find this site useful.

2. An even more intriguing website is found at [http://www.mcli.dist.maricopa.edu/proj/res_meth/](http://www.mcli.dist.maricopa.edu/proj/res_meth/). Click through the site to enter the “Lab” and have some fun learning about five different research methods used in the social and behavioral science.

3. Locate a copy of the book *More Damned Lies and Statistics* by Joel Best. The author of this book argues that all statistics are “social product” and that one cannot understand a statistic unless something is known about the process through which it was constructed. Pick one of the book’s chapters — “Magic Numbers,” “Confusing Numbers,” “Scary Numbers” etc. and write a two page summary of the examples and insights found therein.


5. Find a recent issue of *Time* or *Newsweek* and locate a graph or figure in one of the articles that you can analyze using the
information presented in the “Controversy and Debate” box entitled “Can People Lie with Statistics?” Make a copy of the figure or graph and bring it to class to discuss in a small group of students who have also brought in a graph or figure. Have a group member summarize for the class what you discovered.

6. Do a statistical analysis of your friends on Facebook. Take a sample of your friends and determine the mean and median for two of the following variables: number of albums, number of pictures, number of groups, number of wall posts on a given day, and number of friends whose Facebook profile picture is not of her or himself. How different are the mean and median from each other? Another idea is to do “content analysis” of the lists of favorite movies, books, and quotes for your friends on Facebook. Compare the patterns you find for male friends and for female friends. Or, compare friends who are freshmen to those who are seniors, or friends who have graduated from college and those who are still attending college.

7. The war in Iraq is obviously a very important social issue. In a group of three-to-five people, construct a five-question questionnaire using Likert-type response options (strongly-agree to strongly-disagree). Compare your group’s questionnaire to that of other groups in the class and discuss the relative strengths and weaknesses of each group’s questionnaire.

8. What are the guidelines for doing research with human subjects at your college or university? Find a copy (perhaps on your college or university’s website) of the formal Institutional Review Board’s guidelines. Write a two-page paper summarizing the basic process involved in doing research with human subjects.

9. In his book The Culture of Fear, Barry Glasner raises some intriguing points, and provides very compelling statistics, that suggest Americans are afraid of the wrong things. Select a chapter in this book, perhaps the one on fear of flying or the one concerning the fear of black men, and write a two-page summary of the data and conclusions drawn by the author. Can you find other “existing sources” of information in support of the author’s claims? Can you find evidence that contradicts his claims?

10. Go to the website of the American Sociological Association at http://www.asanet.org and click on the “Ethics” button in the left-hand column on the screen. Select one of the “General Principles” (A-E) and write a reflection on how you interpret what that principle means. In class, get together with other students who selected the same principle and compare your reflections. Report to the class what your group discovered.

11. Develop a ten-question survey questionnaire concerning some specific topic regarding family life (discipline practices used by parents, amount and type of contact with extended family members, gender roles in the home, etc.) Next, get together with three other students in the class and select one of the questionnaires to work on further. Spend one hour as a group refining the questionnaire. Submit this questionnaire along with the first questionnaire each of you did to your professor.

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**Supplemental Lecture Material**

**Academic Freedom and “Political Correctness”**

James S. Coleman, a highly distinguished scholar and recent president of the American Sociological Association, recently published an intensely controversial article arguing that what conservatives derisively call the “political correctness” movement poses a real threat to academic freedom.
Traditionally, university administrators have been viewed as the principal enemies of academic freedom, but Coleman sees a new and more serious threat resulting from collegial pressure. He writes, “The greatest enemy of academic freedom is the norms that exist about what kinds of questions may be raised in research (and in teaching as well) and what kinds of questions may not be raised.... The taboos that a sociologist is most likely to encounter are those concerning questions of differences between genders or differences among races which might be genetic in origin” (p. 28).

Such taboos are primarily designed to prevent attacks on what Coleman terms “the policies of conspicuous benevolence.” “There are certain policies, certain public activities, that have the property that they stem from benevolent intentions toward others less fortunate or in some way oppressed — policies intended to aid the poor, or to aid blacks or Hispanics or women. Any research that would hinder these policies is subject to much disapproval and attack” (p. 34).

For example, Coleman’s widely reported research into educational opportunity among the races discovered, among other things, that “....teachers’ scores on vocabulary tests were related to the verbal achievements of students....” (p. 30). It is widely known that African-American teachers, “....themselves products of segregated school systems...(are) on the whole less well prepared, less qualified, with lower verbal skills, than their white counterparts” (pp. 30-31).

These observations lead to the disturbing conclusion that African-American students “....would do less well, on average, under black teachers than under white teachers. But the role-modeling or cultural-difference hypotheses implicit in much current theorizing would lead to the opposite conjecture, that they would be doing better, on average, under black teachers. If the first conjecture were right, it would have some disturbing implications. One would be that a major source of inequality of educational opportunity for black students was the fact that they were being taught by black teachers. Another, directly relevant to the policy issue, would be that both black and white students would have greater educational opportunity if they were not taught by these teachers. This potential implication was the cause of our not asking the question that followed naturally from our research” (p. 31). And this, according to Coleman, is the real problem: pressure for “political correctness” muzzles the impulse to ask the crucial questions. Researchers who are afraid to challenge the policies of conspicuous benevolence for fear of censure by their colleagues will be unable to investigate possible negative latent consequences of these policies, with the end result being failure to achieve the very goals promoted by their supporters.

There are several ways out of this dilemma. Coleman suggests an alteration in the hierarchy of values held within the academic community: “If, in the hierarchy of values held by the academic community of which one is a part, the value of freedom of inquiry is higher than the value that gives rise to conspicuous benevolence, then such constraints, such self-suppression of research into inconvenient questions, will no longer be effective” (p. 34).

Source
Discussion Questions

1) What are some other examples of research topics that might challenge what Coleman calls policies of “conspicuous benevolence?”

2) How would sociologists who disagreed with Coleman defend their position?

Supplemental Lecture Material
The False God of Numbers

Many articles have been written about how statistics can be misused in order to accomplish various political goals. In other words, numbers may be employed to support oversimplified conclusions. For example, consider this statement:

“New air quality standards must be enacted because they will prevent precisely 15,000 deaths a year from respiration ailments.” Sounds simple, doesn’t it? Yet the problem is a thorny one. One might ask whether all those respiratory deaths are due only to air pollution. And what about the cost of new standards to industry? How will these affect the economy in the long run?

Here are a few other examples begging alternate explanations or further exploration:

U.S. quality of life is diminishing since, according to a 1996 study, the average one-way commute now takes 40 seconds longer than it did in 1986.

High divorce rates attribute to the breakdown of the family and poorer conditions for children.

Because corporations seek to save money by laying off full-time employees, the number of people working part-time or on a contract basis has increased.

All in all, these questions are complex and multidimensional. It is not likely that one answer alone is sufficient. Yet politicians and the media often make it sound simple and straightforward.

Source

Discussion Questions

1) What various elements of science are these statements violating?

2) Why would politicians be tempted to simplify statistics? How should social scientists handle statistics differently? In what way does their responsibility to society differ from that of politicians?

3) Name several alternative conclusions that might be drawn from the numbers quoted above.

Activity: Look through several newspapers for the statistics quoted there. Analyze them using scientific standards. Keep in mind such issues as the difference between cause and effect and correlation, sample size and population, and the way the study was conducted. Also consider interpretations of the data.

Supplemental Lecture Material
The Day America Told the Truth

Public opinion polls have become increasingly common in recent decades. A
1991 best-selling book entitled *The Day America Told the Truth* is packed with examples of the tantalizing bits of information that can be uncovered using this research procedure. The authors, James Patterson and Peter Kim, both executives at the J. Walter Thompson advertising agency, found, among other things:

- “New Englanders lead the country in cheating on their spouses, spying on their neighbors, and giving to charity.”
- “Ninety-five percent of Americans believe in capital punishment; one in three would volunteer to pull the switch for the electric chair.”
- “Twenty-two percent of males and seven percent of females say they had lost their virginity by the age of thirteen.”
- “The profession Americans trust most is that of firefighter.”
- “Fifteen percent of adult Americans would rather watch television than have sex.”
- “One-third of surveyed married men and women confess to having had at least one affair.”
- “One in seven people reports being sexually abused in childhood.”
- “Sixty percent, six hundred percent more than official estimates, say they have been victims of a major crime.”
- “Twenty percent of the women in the survey report having been raped by their dates.”
- “More than seventy percent say they did not have even one hero.”

The survey was given to “...a random sample of 2,000 people, quizzed in 50 different locations over the period of a week. A shorter, mail-in version was sent to 3,500 people.” Respondents were guaranteed total anonymity and repeatedly urged to be completely honest.

The findings reported in *The Day America Told the Truth* are fascinating and could provide the impetus for more theoretically based research efforts by academic sociologists. These findings also suggest that the common suspicion that people answering questionnaires often fail to report unconventional attitudes and odd behavior may not be true — one of Patterson and Kim’s respondents even admitted that he “...made out with two girls and a dog while immersed in hot wax and Jell-O.”

**Source**

**Discussion Questions**

1) Are you always completely honest when you answer questionnaires?

2) How can researchers increase the chances that their respondents will not withhold or distort information?
Researchers commonly encounter behaviors that seem to be related to one another in some way. In the case of the number of miles a car is driven and its gas consumption, there is an obvious and genuine connection. But simply because two behaviors share a significant statistical correlation does not always prove that there is a real relationship between the two variables.

With complex systems, it may be difficult to determine if a statistical correlation is genuine or completely coincidental and spurious. While the continental drift of the West Coast of North America may be highly correlated with the growth of the federal deficit in recent decades, it is unlikely that there is a meaningful connection between the two. Apparently, there is also a strong negative correlation between the number of PhDs and the number of mules in a state. As one commentator remarked, “Are the PhDs created when mules die?” Similarly, a positive correlation exists between ice cream sales and deaths by drowning. The same researcher humorously asked if “people buy more ice cream when they hear of a drowning?” Even when a connection exists, it may be trivial or misleading. In the end, correlation is worthless without interpretation, and that interpretation should be as well-grounded as possible. Consider the following examples:

- My favorite spurious correlation is between shoe size and the ability to solve mathematical equations (or any other task requiring schooling). The students usually express a lot of puzzlement over that one, until you point out that children’s feet tend to grow as they go through school. (Wuensch, p. 3)

- One . . . [example of a spurious connection] is the strong positive correlation between places of worship in a locale and the number of bars in the same vicinity. The explanation is obvious: Religion drives people to drink. (Beins, p. 3)

In most research problems, however, the spurious nature of the correlation may not be immediately clear, requiring additional information and careful interpretation to establish the real nature of the connection between the variables. Indeed, important issues may be riding on correctly evaluating and understanding the correlation.

[A] story I sometimes use is based on a *Nova* television show from a few years back. Chinese medical researchers had found a correlation between incidence of human esophageal cancer and the incidence of tumors in chickens. Were the chickens the source of the human cancers? Were the humans giving the chickens their tumors? What they eventually found was that regional preferences for a fermented cabbage dish and minerals in the soil in which the cabbage was grown gave both the humans, who ate the cabbage, and the chickens, who ate the scraps, their tumors. (Street, p. 3)

Source
Discussion Questions

1) What steps can individual researchers adopt to prevent spurious correlations? What can the community of researchers do?

2) What spurious correlations have you come across in your own thinking?

3) Can you think of spurious correlations that have had important effects upon history?

Census 2000

The 2000 census provided an example of some of the issues that must be addressed when designing a survey, particularly one that could accurately measure a diversified population that included many subgroups spread over a widespread geographic area. The challenge that faced the U.S. Census Bureau was to reach every resident of the United States, regardless of citizenship or residency status, criminal history, or age, and to put them in the right place.

Response rate is a key factor in the success of any survey and particularly a census. In 1970, 78 percent of households on the Census Bureau’s address list returned their forms voluntarily. By 1990, that rate had dropped to 65 percent (far worse than the Census Bureau’s initial 70 percent estimate). It’s hard to exaggerate the importance of the mail response rate to the success of the census. Cost estimates for the entire undertaking hinge largely on the number of households the Bureau projects will mail back their forms. Census enumerators must visit all households that do not respond voluntarily during the 'non-response follow-up' phase of the count, this fieldwork accounts for the largest portion of census costs. If mail response fails to meet expectations, the Census Bureau may run short of workers and money during the most difficult phase of the census. Conversely, a higher mail-back rate not only reduces the field workload, it saves millions of dollars that can be redirected to the hardest-to-count neighborhoods.

Beginning in March 2000, census forms were mailed to 96 million addresses and another 24 million forms were hand delivered in remote areas and on Indian reservations.

Complacency is often the Census Bureau’s worst enemy. To combat this, the Bureau partnered with more than 20,000 national, state, and local organizations across the country.

The 2000 census redesign included:

1) simpler and clearer questionnaires;
2) new partnerships with local officials in an effort to improve the accuracy and completeness of the count;
3) new computer technology for linking questionnaires to weed out duplicate census questionnaires;
4) supplementing mailed questionnaires by placing them in public places (e.g., post offices) for mail return. (This was intended to reduce the under-count of traditionally hard to enumerate groups);
5) $100 million dollars spent on paid advertising to encourage public participation in the 2000 census; and
6) the opportunity for respondents to check more than one race group, unlike previous censuses when people of multiple racial backgrounds needed to check “other” and then write in a response. (This allowed the 2000 census to collect direct information on
the specific backgrounds for people of multiple racial ancestry).

Goals established by the Census Bureau for the 2000 census were to reduce costs and improve accuracy, and to reduce the persistent differential undercounts of minorities and the poor. For all the Bureau’s efforts, only time will tell if they have been successful in achieving these goals.

**Sources**

American Sociological Association

**Discussion Questions**

1) In addition to respondent apathy, what are some other factors that might contribute to a nonresponse to a census?

2) What factors may contribute to distortions in the responses of persons contacted by U.S. Census Bureau personnel during follow-up interviews?

3) What changes have occurred in American society that make census questions on race and ethnicity a controversial topic?

4) Discuss the potential for manipulation of statistical methods so that census counts might favor one political party over another.