Chapter 1  Introduction

The Theory and Practice of Social Research

Social research is the detective work of big questions. Whereas a conventional detective tries to find out who committed a specific crime, the social researcher looks for the causes of crime in general. The logic of social scientific investigation extends beyond crime to include all aspects of social life, such as careers, marriage and family, voting, health, prejudice, environment, and poverty. In fact, anything that is likely to concern you as an individual is the subject of social science research.

Overview

The purpose of this book is to lead you through a series of investigative adventures in social research. We can’t predict exactly where these adventures will lead, because you are going to be the detective. Our purpose is to show you some simple tools (and some truly amazing ones) that you can use in social investigations.

We’ll also provide you with a body of data, collected in a national survey, that is so rich you will have the opportunity to undertake investigations that no one else has ever pursued.

If you have access to a computer that uses XP, Vista, or 7 (also Mac OS X 10.6 or higher), and IBM SPSS (or PASW) Statistics, this book and the website associated with it (http://www.sagepub.com/babbie8estudy/) contain everything you need for a wide range of social investigations. This tool is designed specifically for exploring data. If you are already comfortable with computers, you can jump right in, and you will quickly find yourself in the midst of a fascinating computer game. Instead of fighting off alien attacks or escaping from dank dungeons, you’ll be pitting your abilities and imagination against real life, but you’ll be looking at a side of life that you may not now be aware of. This tool is also well designed for the creation of college term papers.

Throughout the book, we suggest ways to present the data you discover in the context of a typical term paper in the social sciences. Whereas most students are limited in their term...
papers to reporting what other investigators have learned about society, you will be able to offer your own insights and discoveries.

Finally, the data set included here is being analyzed by professional social scientists today. Moreover, the analytical tools that we’ve provided for you are as powerful as those used by many professional researchers. Frankly, there’s no reason you can’t use these materials for original research worthy of publication in a research journal. All it takes is curiosity, imagination, practice, and a healthy obsession with knowing the answers to things. In our experience, what sets professional researchers apart from others is that they have much greater curiosity about the world around them, are able to bring powerful imagination to bear on understanding it, are willing to put in the time required of effective investigation, and are passionately driven to understand it.

Why Use a Computer?

Like physical scientists, social scientists use observations from the empirical world to develop and evaluate theory. Much of the social scientist’s work involves ascertaining whether logically derived relationships expressed in social theories correspond to empirically observed relationships in social data. For instance, a theory may suggest that Catholics are more opposed to abortion than are non-Catholics, but we don’t have scientific evidence until we poll Catholics and non-Catholics and evaluate their differences on abortion. To have confidence in our findings, we must poll a large number of people for their positions on abortion and their religious preferences. And for sure, we probably would feel any explanation of difference was incomplete until other factors such as each respondent’s gender, age, social class, and so forth were included. We don’t have to stretch our imaginations very far to realize that even simple research can soon generate a large mass of data given the number of cases and variables we need to provide credible evidence for or against a theory.

The sheer number of observations commonly made by social scientists requires a computer to make research doable. The full 2010 General Social Survey (GSS) data file we’ve included with this book, for example, contains more than 790 variables for more than 2,000 individuals. Initial analysis of data requires that they be sorted, categorized, and recategorized before statistics may be computed for them. With more than 1.5 million data points, a computer is clearly necessary for us to complete a meaningful analysis this semester!

SPSS Statistics

Today, the two statistical packages most widely used by social scientists are SPSS Statistics (originally known as the Statistical Package for the Social Sciences), temporarily branded as PASW Statistics (Predictive Analytics Software) for version 18, and SAS (Statistical Analysis System). We have selected SPSS Statistics for three reasons. First, early versions of SPSS date back to 1968. The package is well known, and hardly any social scientists who earned a graduate degree in the past 40 years have not had some contact with SPSS. Second, SPSS takes you through all the basic issues of using a statistical package. This knowledge will give you a head start if you learn some other package later.

2While SPSS originally stood for “Statistical Package for the Social Sciences” (and the package is still most commonly referred to in this way), SPSS Inc. recently “updated the meaning of the letters to more accurately reflect the company and its products. Today, SPSS stands for ‘Statistical Product and Service Solutions.’” The PASW acronym stands for “Predictive Analytics Software,” and after SPSS Inc. became part of IBM in 2009, it was determined that the brand would then become IBM SPSS Statistics, referred to as SPSS Statistics for short.
Finally, SPSS Statistics is suitable for computers running Microsoft Windows 98, 2000, ME, XP, Vista, or 7. SPSS version 20 for Windows does require Microsoft Windows XP, Vista, or 7. There are also versions available for Apple Macintosh computers running Mac OS. SPSS Statistics version 20 for Mac does require OS X 10.6 (Snow Leopard) or above.

The SPSS Statistics Base, like a car, is sold as the basic package. Then, if the buyer wishes, it can be “soupèd-up” with powerful statistical accessories, all of which are beyond the scope of this book. Other upgraded “models” include SPSS Professional and the ultimate model, SPSS Premium.

SPSS also offers two packages specifically designed for students: SPSS/PASW Statistics Student Version (last offered for version 18 of PASW Statistics) and the SPSS/PASW Statistics Graduate Pack. Although both versions are available for use with Windows or Macintosh, they differ in terms of their capabilities. Unlike the SPSS Statistics Base system or the SPSS Statistics Graduate Pack, the SPSS Statistics Student Version is limited to 50 variables and 1,500 cases and cannot be upgraded. IBM has not authorized the student version since version 18. The student version has fewer statistical procedures but has most of the procedures that will ever be needed by an undergraduate social science major or master’s-level graduate student.

The SPSS Statistics Graduate Pack contains the SPSS Statistics Base system plus two advanced statistical modules. The graduate pack is commonly available at college and university bookstores. You can learn more about IBM SPSS Statistics and the various versions available by visiting the company’s online store at http://www.spss.com. IBM may change the configurations or offerings of these packages or modules in the future, so be sure to check the website for the latest details.

While having a copy of SPSS Statistics on your personal computer is convenient, you may not need to purchase the software to complete the exercises in this book. Most colleges and universities offer SPSS Statistics to their students, either through all the computers connected to the school’s network or in collegewide or departmental computing labs. More recently, client/server desktop application technology has been adopted at some colleges and universities. With this technology, your school can provide you with client software (e.g., Citrix) and settings to put on your personal Windows or Macintosh computer. You will then be able to run the university’s version of SPSS Statistics from their server through your computer desktop application as though it were directly installed on your computer. Of course, you will need to remain connected to the Internet, and a high-speed connection is required for this software to be useful. Check with your school’s IT (information technology) office to see if they have this capability.

Social Research: A Primer

This book addresses the techniques of social science data analysis. Thus, we’re going to be spending most of our time using SPSS Statistics to analyze data and reach conclusions about the people who answered questions in the GSS, described in more detail in Chapter 3.

Data analysis, however, doesn’t occur in a vacuum. Scientific inquiry is a matter of both observing and reasoning. Consequently, before focusing on SPSS Statistics, let’s take a few minutes to consider some of the central components of social science research. We will begin here by looking at the role of theory in conjunction with the social research process. In the following chapter, we will turn our attention to another fundamental aspect of scientific inquiry—measurement. The goal is not to make you an expert in the social research process

Throughout the book, we suggest various websites you may find useful. Keep in mind, however, that the World Wide Web is constantly changing. For this reason, some websites referred to may no longer be available; online content can change overnight. If particular websites are no longer available, you can use one of the many available search engines to locate the information you need.
but, rather, to give you the background necessary to master the techniques of data analysis presented in the remainder of the book.4

**Theories and Concepts: Deprivation Theory**

Given the variety of topics examined in social science research, no single, established set of procedures is always followed in social scientific inquiry.

Nevertheless, data analysis almost always has a bigger purpose than the simple manipulation of numbers. Our larger aim is to learn something of general value about human social behavior. This commitment lies in the realm of theory. A primary goal of social scientific research is to develop theories that help us explain, understand, and make sense of the social world.

A *theory* is a statement or set of statements describing the relationships among concepts. Theories provide explanations about the patterns we find in human social life. American social research has consistently shown, for example, that women are more religious than men. The key concepts in that observed pattern are religiosity and gender. We’ll examine a theory that explains the pattern in a moment. Because concepts are the building blocks of theories, it is important that we focus briefly on what they are.

Concepts are general ideas or understandings that form the basis of social scientific research. Some of the social scientific concepts with which you are familiar might include social class, deviance, political orientations, prejudice, and alienation. The most useful concepts describe variations among people or groups. When thinking about social class, for example, we might distinguish upper class, middle class, and working class, while the concept of prejudice leads us to consider those who are more prejudiced and those who are less prejudiced.

Developing social theories is a matter of discovering concepts that are causally related to one another. We may ask questions such as “Does education reduce prejudice?” “Does gender affect how much people are paid?” or “Are minority group members more liberal than majority group members?” Because one of the subjects we are going to examine in this textbook is religiosity, we will begin with an example of a theory deriving from the sociology of religion.

The sociologists Glock, Ringer, and Babbie developed what they call the “deprivation theory of church involvement.” Having asked why some church members participated more in their churches than others, the researchers’ analyses led them to conclude that those who were deprived of gratification (e.g., money, prestige, power, opportunities, freedom) in the secular society would be more likely to be active in church life than would those who enjoyed the rewards of secular society. In this case, the concepts under examination are deprivation, gratification, and church involvement. Some people are more deprived of gratification than others; some people are more religiously involved than others. The research question is to find out if the degree to which people are deprived is somehow related to their degree of religious involvement.

Deprivation theory offers a plausible explanation as to how the concepts of deprivation and religious involvement are related. It gives us a possible explanation—a theory—to help us make sense of why some people are more religious or more active in church than others.

In this form, however, the concepts are too general to test the theory empirically. Before a theory can be tested, another step has to be taken; namely, we need to create hypotheses. Unlike theories, well-developed hypotheses pose relationships between variables that are specific enough to permit testing.

In short, while theory is an important starting point in social science research, the empirical relationships predicted by the theory must be tested. To do that, we shift our

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4 If you are thinking about designing a research study or just want to learn more about the process and practice of scientific inquiry, you may find the discussion in the last two chapters and accompanying appendices a useful starting point. You may also want to browse through the Reference section on the student study website (http://www.sagepub.com/babbie8estudy/) for citations to texts that focus on the nature of social scientific inquiry, designing a research project, and other important aspects of the research process.
focus from relationships between concepts to relationships between variables, and from theories to hypotheses.

Hypotheses and Variables: Religiosity

A hypothesis is a statement of expectation derived from a theory that proposes a relationship between two or more variables. Specifically, a hypothesis is a tentative statement that proposes that variation in one variable “causes” or leads to variation in the other variable. We put cause in quotes here because more than a simple association is needed to attribute cause. Among other requirements, to be a cause, a related variable must also precede the dependent variable in time and not be related to some other variable that is also related to the dependent variable. We’ll explore this further in a later chapter.

Table 1.1 illustrates the differences between theories and hypotheses. Theories specify relationships between concepts in the world of ideas, while hypotheses specify expected relationships between variables in the world of empirical experiences. Variables are empirical indicators of the concepts we are researching. Variables, as their name implies, have the ability to take on two or more values. For instance, people can be classified in terms of their gender (male or female) or religious involvement (involved or not involved). When we identify empirical indicators for our concepts, they become variables.

<table>
<thead>
<tr>
<th>World of Ideas</th>
<th>Concepts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Secular deprivation</td>
<td></td>
</tr>
<tr>
<td>2. Religious involvement</td>
<td></td>
</tr>
<tr>
<td>Theory: The more people experience secular deprivation, the more likely they will be religiously involved.</td>
<td></td>
</tr>
<tr>
<td>Variables representing dimensions of secular deprivation:</td>
<td></td>
</tr>
<tr>
<td>a. Age</td>
<td></td>
</tr>
<tr>
<td>b. Gender</td>
<td></td>
</tr>
<tr>
<td>c. Socioeconomic status</td>
<td></td>
</tr>
<tr>
<td>World of Experiences</td>
<td>Hypotheses:</td>
</tr>
<tr>
<td>a. As people get older, their religious participation increases.</td>
<td>Independent variable: Age</td>
</tr>
<tr>
<td>Dependent variable: Religiosity</td>
<td></td>
</tr>
<tr>
<td>b. Women will have greater religious participation than will men.</td>
<td>Independent variable: Gender/sex</td>
</tr>
<tr>
<td>Dependent variable: Religiosity</td>
<td></td>
</tr>
<tr>
<td>c. The lower your income, the more likely you will be to participate in religious activities.</td>
<td>Independent variable: Income</td>
</tr>
<tr>
<td>Dependent variable: Religiosity</td>
<td></td>
</tr>
</tbody>
</table>
As Table 1.2 demonstrates, each variable contains two or more categories. The categories of the variable “gender,” for instance, are “male” and “female,” while the categories of the variable “social class” may be “upper class,” “middle class,” and “working class.”

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Religious involvement</td>
<td>Involved</td>
</tr>
<tr>
<td></td>
<td>Not involved</td>
</tr>
<tr>
<td>Party identification</td>
<td>Democrat</td>
</tr>
<tr>
<td></td>
<td>Independent</td>
</tr>
<tr>
<td></td>
<td>Republican</td>
</tr>
<tr>
<td>Social class</td>
<td>Upper class</td>
</tr>
<tr>
<td></td>
<td>Middle class</td>
</tr>
<tr>
<td></td>
<td>Working class</td>
</tr>
</tbody>
</table>

The categories of each variable must meet two requirements: They should be both exhaustive and mutually exclusive. By exhaustive, we mean that the categories of each variable must be comprehensive enough that it is possible to categorize every observation. Imagine, for instance, that you are conducting a survey and one of your variables is “religious affiliation.” In order to measure respondents’ religion, you devise a question that asks respondents simply, “What is your religion?” Let’s say you give respondents only three choices: Protestant, Catholic, and Jewish. While most Americans would identify with one of these religious traditions, the categories certainly are not exhaustive. Muslims and Hindus, among others, would not find categories descriptive of their traditions. To correct this problem, we would have to add traditions, add an “other” category, or add both so that all respondents could fit themselves into at least one category. Moreover, we’d want a “none” category for those with no religious affiliation.

Exclusive refers to the requirement that every observation fit into only one category. For instance, if we asked people for their religious affiliation and gave them the choices of Christian, Protestant, Catholic, and Jewish, the categories would not be mutually exclusive. Both Protestants and Catholics would see themselves as also being in the “Christian” category.

Looking back at the deprivation theory, then, you may recall that it was expected that poor people would be more active in the church than would rich people, given that the former would be denied many secular gratifications enjoyed by the latter. Or in a male-dominated society, it was suggested that because women are denied gratifications enjoyed by men, women would be more likely to participate actively in the church. Similarly, in a youth-oriented society, the theory would suggest that older people would be more active in church than would the young.

As Table 1.1 illustrates, one hypothesis that can be derived from the deprivation theory is that women will be more involved in church than will men. This hypothesis proposes a relationship between two variables: a dependent and an independent variable. A dependent
variable is the variable you are trying to explain (in this case, church involvement/religiosity), while an independent variable is the variable hypothesized to “cause,” lead to, or explain variation in another variable (in this case, gender). Again, please note we put the word cause in quotes purposefully. It is a word that must be used with caution, because more than a simple association is needed to attribute causation.

Also, please note that relationships such as the one predicted in the hypotheses in Table 1.1 are probabilistic. The hypothesis says that women, as a group, will have a higher average level of church involvement than men will as a group. This does not mean that all women are more involved than any men. It does mean, for example, that if we asked men and women whether they attend church every week, a higher percentage of women than of men would say yes, even though some men would say yes and some women would say no. That is the nature of probabilistic relationships.

Social Research Strategies: Inductive and Deductive

After developing a hypothesis, a researcher may decide to design and conduct a scientific study to test whether there is a relationship such as the one proposed between gender and church involvement. Social scientists generally approach research in one of two ways: inductively or deductively.

In the study by Glock, Ringer, and Babbie mentioned previously, the researchers employed an inductive research strategy. First, they collected data regarding people’s religious involvement and gender. After they completed their observations, they examined the data and constructed a theory to explain the relationships found among the variables.

An alternative and somewhat more common approach is deductive research. Unlike inductive research, which begins with data collection, deductive research begins with social theory. A specific hypothesis is then deduced from the theory and tested to discover whether there is evidence to support it. Most generally, the deprivation theory suggests that people who lack secular gratification will be more involved in religious activities. From that, we could derive the hypothesis that persons of lower socioeconomic status will attend church more often than will those of higher socioeconomic status. We could then collect data about people’s socioeconomic status and church attendance. The data could then be examined to see if lower-status people really did attend church more than higher-status people. This would be considered deductive research because we began with the theory and tested a hypothesis with data.

Perhaps the simplest way to distinguish between inductive and deductive research approaches is by where they begin. While inductive research begins with data analysis and then moves to theory, deductive research begins with theory and then proceeds to data analysis and back to theory again. More simply, deduction can be seen as reasoning from general understandings to specific expectations, whereas induction can be seen as reasoning from specific observations to general explanations.

You can see, then, that there are many steps or stages in the social research process. When conducting deductive research, social scientists proceed from the general (theory) to the specific (data collection) and back to theory again:

1. Theory
2. Deduce hypotheses to test theory
3. Collect data
4. Analyze data
5. Evaluate hypotheses
In the case of inductive research, researchers move from the specific (data collection) to
the general (theory):

1. Collect data
2. Analyze data
3. *Induce* a theory to account for data

While in practice the process of social research is not nearly as linear as these steps sug-
gest, you can see that whether a researcher employs a deductive or inductive strategy, the
goal is always the same: to develop theories that help us explain, make sense of, and under-
stand human social behavior.

The possible topics for exploration are, as you can imagine, endless. Whereas some social
researchers are interested in understanding religiosity, others are interested in issues such as
spousal abuse, child abuse, violence in schools, unemployment, political party identification,
poverty, alcoholism, drug addiction, health care, crime, starvation, overpopulation, govern-
mental corruption, and so on. The problems and issues of concern to social scientists are as
manifold and complicated as human beings themselves. Despite the diversity in questions
and concerns, what connects social scientists is the belief that if used properly, the techniques
and process of social science research can help us examine and begin to understand these
complicated issues. Only when we understand what causes these problems, how they come
about, and why they persist will we be able to solve them.

While the primary focus of this book is on one stage in the social research process, data
analysis, we hope you take some time to reflect on which of the many problems in contem-
porary life interest you. What issues or questions are you passionate about? What social
problems or issues would you like to examine, understand, and potentially address?

**Theory and Research in Practice**

Now that we have focused a little on the relationship between theory and the social research
process, let’s examine some of the theoretical work that informs two of the many subjects we
are going to analyze together in this book: political orientations and attitudes toward abortion.

**Example 1: Political Orientations**

One of the more familiar variables in social science is political orientation, which typically
ranges from liberal to conservative. Political orientation lies at the heart of much voting
behavior, and it also relates to a number of nonpolitical variables, which you are going to
discover for yourself shortly.

There are several *dimensions* of political orientations, and it will be useful to distinguish
them here. Three commonly examined dimensions are (1) social attitudes, (2) economic atti-
dutes, and (3) foreign policy attitudes. Let’s examine each dimension briefly.

Some specific social attitudes and related behaviors might include abortion, premarital
sex, and capital punishment. Let’s see where liberals and conservatives generally stand on
these issues:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Liberals</th>
<th>Conservatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion</td>
<td>Permissive</td>
<td>Restrictive</td>
</tr>
<tr>
<td>Premarital sex</td>
<td>Permissive</td>
<td>Restrictive</td>
</tr>
<tr>
<td>Capital punishment</td>
<td>Opposed</td>
<td>In favor of</td>
</tr>
</tbody>
</table>
In terms of economic issues, liberals are generally more supportive than conservatives of
government programs such as unemployment insurance, welfare, and Medicare and of gov-
ernment economic regulation such as progressive taxation (the rich taxed at higher rates),
minimum-wage laws, and regulation of industry. By the same token, liberals are likely to be
more supportive of labor unions than are conservatives.

**Example 2: Attitudes Toward Abortion**

Abortion is a social issue that has figured importantly in religious and political debates
for years. The GSS contains several variables dealing with attitudes toward abortion. Each
asks whether a woman should be allowed to get an abortion for a variety of reasons. The
following list shows these reasons, along with the *abbreviated variable names* you’ll be
using for them in your analyses later on.

<table>
<thead>
<tr>
<th>Abbreviated Variable Name</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABDEFEAT</td>
<td>Because there is a strong chance of a serious defect</td>
</tr>
<tr>
<td>ABNOMORE</td>
<td>Because a family wants no more children</td>
</tr>
<tr>
<td>ABHLTH</td>
<td>Because the woman’s health would be seriously endangered</td>
</tr>
<tr>
<td>ABPOOR</td>
<td>Because a family is too poor to afford more children</td>
</tr>
<tr>
<td>ABRAPE</td>
<td>Because the pregnancy resulted from rape</td>
</tr>
<tr>
<td>ABSINGLE</td>
<td>Because the woman is unmarried</td>
</tr>
<tr>
<td>ABANY</td>
<td>Because the woman wants it, for any reason</td>
</tr>
</tbody>
</table>

Before we begin examining answers to the abortion attitude questions, it is worth taking
a moment to reflect on their logical implications. Which of these items do you suppose would
receive the least support? That is, which will have the smallest percentage of respondents
agreeing with it? Think about that before continuing.

Logically, we should expect the smallest percentage to support ABANY, because it con-
tains all the others. For example, those who would support abortion in the case of rape might
not support it for other reasons, such as the family’s poverty. Those who support ABANY,
however, would have to agree with both of those more specific items.

Three of the items tap into reasons that would seem to excuse the pregnant woman from
responsibility:

<table>
<thead>
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<th>Abbreviated Variable Name</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABDEFEAT</td>
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<td>ABHLTH</td>
<td>Because the woman’s health would be seriously endangered</td>
</tr>
<tr>
<td>ABRAPE</td>
<td>Because the pregnancy resulted from rape</td>
</tr>
</tbody>
</table>

We might expect the highest percentages to agree with these items. We’ll come back to this
issue later to find out whether our expectations are correct.
When we analyze this topic with data, we will discover useful ways of measuring overall attitudes toward abortion. Once we’ve done that, we’ll be in a position to find out why some people are generally supportive and why others are generally opposed.

Conclusion

This book has two educational aims. First, we want to share with you the excitement of social scientific research. You are going to learn that a table of numerical data, which may seem pretty boring on the face of it, can hold within it the answers to many questions about why people think and act the way they do. Finding those answers requires that you learn some skills of logical inquiry. Second, we will show you how to use a computer program that is popular among social scientists. SPSS Statistics is the tool you will use to unlock the mysteries of society, just as a biologist might use a microscope or an astronomer a telescope.

Before getting started using SPSS Statistics, however, it is important that you have at least an initial appreciation for social research. In this chapter, we focused in particular on the relationship between theory and the social research process. This examination will continue throughout the book. While most of our attention will focus on the skills of analyzing data, we will always want to make logical sense out of what we learn from our manipulations of the numbers. Measurement is a fundamental topic that bridges theory and research. We turn our attention to that topic next.

**Main Points**

- The main purpose of this text is to introduce you to the logic and practice of social scientific research by showing you some simple tools you can use to analyze real-life data.
- Social and behavioral scientists’ use of computing machinery has evolved over many years because of the need to analyze large amounts of data.
- SPSS Statistics is a widely used state-of-the-art statistical software program that will take you through all the basics of using any sophisticated statistical package.
- A theory is a general statement or set of statements that describes and explains how concepts are related to one another.
- A hypothesis is a tentative statement of expectation derived from a theory.
- A hypothesis proposes a relationship between two or more variables (the independent and dependent variables) that can be tested by researchers employing scientific methods.
- The categories of variables must be both exhaustive and mutually exclusive.
- When a social scientist proceeds from theory to hypotheses development, data collection, and data analysis, the process is called deductive research.
- When a social scientist moves from data collection to data analysis and then induces a general theory based on those observations, the process is called inductive research.
- Theoretical work informs all the subjects we are going to analyze in this book and, indeed, all questions and issues of relevance to social scientists.

**Key Terms**

<table>
<thead>
<tr>
<th>Theory</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaustive</td>
<td>Dimensions</td>
</tr>
<tr>
<td>Inductive research</td>
<td>Variables</td>
</tr>
<tr>
<td>Concepts</td>
<td>Independent variable</td>
</tr>
<tr>
<td>Exclusive</td>
<td>Abbreviated variable names</td>
</tr>
<tr>
<td>Deductive research</td>
<td>Categories</td>
</tr>
</tbody>
</table>
Review Questions

1. What are the two statistical packages most widely used by social scientists today?

2. Which of the versions of SPSS Statistics described is the least powerful in terms of the number of cases and variables it can handle? (Hint: It was last made available for SPSS/PASW version 18.)

3. Which version of SPSS Statistics is the most powerful in this regard?

4. What version (or versions) of SPSS Statistics are you using?

5. Name two tasks for which a statistical package such as SPSS Statistics can be used.

6. What is the primary goal of social scientific research?

7. Name two social scientific concepts.

8. What is the relationship between theories and hypotheses?

9. Complete the following statement: Theories are to concepts as hypotheses are to ________.

10. Does a hypothesis propose a relationship between dimensions or variables?

11. The categories of each variable should meet what two requirements?

12. What, if anything, is the problem with the following categories of the variable “political views”: liberal and moderate? If there is a problem, how might you correct it?

13. What, if anything, is the problem with the following categories of the variable “political perspective”: liberal, Democrat, Republican, and conservative? If there is a problem, how might you correct it?

14. Construct a hypothesis based on the deprivation theory of church involvement using level of education as your independent variable.

15. List the categories of the variables you used to construct your hypothesis in response to the previous question (#14).

16. Construct potential hypotheses to relate the following concepts, and identify the independent and dependent variable in each hypothesis. In addition, list the categories of each variable.
   a. Age and health
   b. Race and attitude toward affirmative action
   c. Gender and income

17. Which of the following is not a dependent variable: grade point average, church attendance, age, number of children?

18. Which of the following is not a variable: occupation, amount of television viewing, female, education level?

19. Consider the following hypothesis: People who earn more than $50,000 a year are more likely to vote Republican than people who earn less than $50,000 a year. Does this mean that all people who earn more than $50,000 a year vote Republican? Why or why not?
20. Is the following statement T (true) or F (false)? A researcher who begins by collecting data and then develops a theory to explain his or her findings is engaged in deductive research.

21. A researcher formulates a hypothesis based on the “magic bullet theory” and then selects independent and dependent variables to test this hypothesis. What process is the researcher engaged in?

22. A researcher collects data on the spread of AIDS in the United States and then, based on his or her findings, develops a theory to explain why the rate of exposure and infection to the disease is higher among certain racial and ethnic groups than among others. In what process is the researcher engaged?