SCIENCE, SOCIETY, AND SOCIAL RESEARCH

LEARNING OBJECTIVES

1. Describe the four common errors in everyday reasoning.

2. Define *social science,* and identify its limitations.

3. Identify the four goals for social research in practice.

4. Define valid knowledge, and indicate the three components of validity.

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How do you contact friends and relatives you don't live with—Direct message? E-mail? Social media like Facebook, Instagram, or Snapchat? Do you call, or do you prefer in-person contact? Is in-person contact better when you need someone to confide in? What do your grandparents, who grew up without the Internet or smartphones, think about digital communication? Do they use them?

In the past few decades, the Internet, cell phones, and all the interrelated forms of communication they support—e-mail, texting, social media, Skype, Zoom, and others—added new forms of social connection across the globe. By December 2017, 54.4% of the total world population of 7,634,758,428 was connected to the Internet—an increase of more than 900% since 2000. Across continents, the percentage connected ranged from highs of 95.0% in North America and 85.2% in Europe to 48.1% in Asia to a low of just 35.2% in Africa (Internet World Statistics 2017). As you can imagine, many social scientists wonder how these developments have affected our lives.

That's where social researchers begin: with questions about the world and a desire to accurately answer them. Social research differs from ordinary thinking in its use of systematic scientific research methods.

In this chapter, we raise questions about Internet use, social networking services, and social ties to suggest how the use of scientific research methods can result in knowledge that's more important, more trustworthy, and more useful than personal opinions or individual experiences. You will learn how social scientists' investigations are helpful in answering questions about social ties and about the impact of the Internet on these ties. You will also learn about the challenges that researchers confront. By the chapter's end, you should know what is "scientific" in social science and appreciate how the methods of science can help us understand the problems of society.

LEARNING ABOUT THE SOCIAL WORLD

We can get a sense of how social scientists investigate the social world by reviewing some questions that social researchers have asked about the Internet and social ties.

1. What percentage of Americans are connected to the Internet?

That's a pretty simple question, with a straightforward answer. The Pew Research Center's surveys have found that Internet use in the United States has risen rapidly from 52% of U.S. adults in 2000 to 84% in 2015 (Perrin and Duggan 2015).

2. How does Internet use vary across social groups?

Internet use is quite high in the United States, but whereas the percentage of U.S. adults who are not online (to flip the question) in 2016 is similar for men and women, and for different races (about 13%), it varied dramatically by age—from a low of 1% of those ages 18 to 29 to a high of 41% among those 65 or older—and by income, education, and location (Anderson and Perrin 2016) (Exhibit 1.1). In other words, older folks are far more likely not to use the Internet.

3. Does Internet use damage other relationships?

This kind of question is a bit harder to answer, but the answer seems to be no. In the United States during the Internet boom years, social isolation—not having anyone to confide in—did not change much from 1985 (8%) to 2008 (12%) (Fischer 2009;

Exhibit 1.1 /// Percentage of Individuals Not Using Internet, by Personal Characteristics
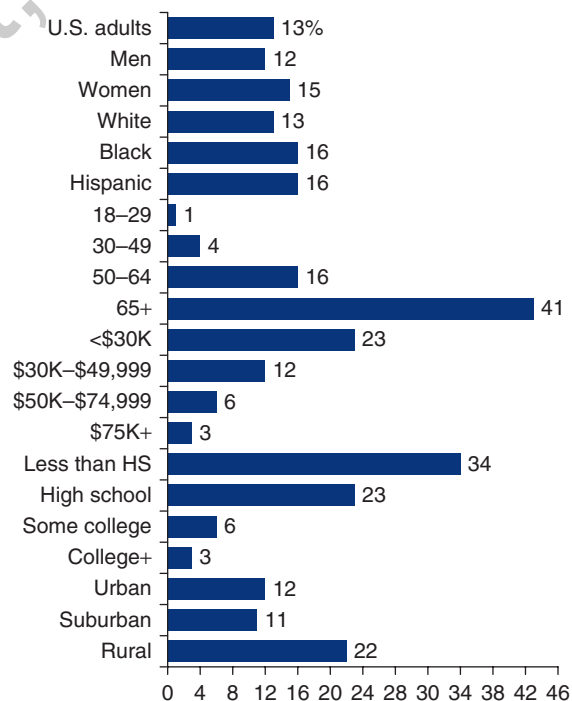
Source: Anderson, Monica, and Andrew W. Perrin. 2016. *13% of Americans don't use the Internet. Who are they?* Pew Research Center, September 7. From http://www.pewresearch.org/fact-tank/2016/09/07/some-americans-dont-use-the-internet-who-are-they/ (accessed July 28, 2017).

Hampton et al. 2009; Marsden 1987; McPherson, Smith-Lovin, and Brashears 2006:358; Paik and Sanchagrin 2013). In fact, Internet users tend to have even larger and more diverse social networks than others, and are just as likely as non-users to participate in community activities (Hampton et al. 2009).

4. Does wireless access (Wi-Fi) in public places such as Starbucks decrease customer interaction?

Hampton and Gupta (2008) observed Internet use in Wi-Fi'd coffee shops in two cities and concluded that there were two types of Wi-Fi users: those who used their Internet connection to create a work space and those who used it as a tool for meeting others in the coffee shop. So among some customers, Wi-Fi was associated with less social interaction, whereas among others, there was more interaction.

5. Do cell phones and smartphones hinder the development of strong social ties?

Based on surveys in Norway and Denmark, Rich Ling and Gitte Stald (2010) concluded that mobile phones increase social ties among close friends and family members, but e-mail communication tends to decrease them. Other research by the Pew Center, however, has identified more positive effects of the Internet and e-mail on social ties (Boase et al. 2006). In some cases, then, answers may be predictable; in others they aren't. This variability should lead you to be cautious about using your own experience as a basis for estimating the behavior of others. Have you heard people question what effect the Internet has on relationships? It turns out that answers are not obvious.

But the more that you begin to think like a social scientist, the more such questions will come to mind, and that's a good thing! As you've just seen, in our everyday reasoning about the social world, prior experiences and orientations may have a major influence on what we perceive and how we interpret these perceptions. As a result, one person may think that posting messages on Facebook is what's wrong with modern society, but another person may see the same action as helping people get connected. We need to move beyond first impressions and gut reactions to more systematic methods of investigation. That's what social research does.

People misunderstand society and social life for various reasons. It's easy to do, particularly when we are analyzing the world in which we are self-interested participants. We can call some of these mistakes *everyday errors*, because they occur so frequently in the nonscientific, unreflective conversations that we hear on a daily basis.

Consider the case of two timid cats. This comes from a letter sent to Ann Landers, a popular newspaper advice columnist, some years ago. See if you can spot the everyday errors here: The letter was written by a woman who had just moved, with her two pet cats, from an apartment in the city to a house in the country. In the city, she had not let the cats go outside, but she felt guilty about keeping them locked up. Upon arrival at the country house, she opened the door to let the cats outside. The cats tiptoed cautiously to the door, looked outside, then went right back into the living room and lay down!

The woman concluded that people shouldn't feel guilty about keeping cats indoors, because even when cats have the chance, they don't really want to play outside.

Can you spot the woman's errors in reasoning?

- *Overgeneralization*—She observed only two cats, both of which were previously confined indoors. Maybe they aren't like most cats.

- *Selective or inaccurate observation*—She observed the cats at the outside door only once. But maybe if she let them out several times, they would become more comfortable with going out.

- *Resistance to change*—She was quick to conclude that she had no need to change her approach to the cats. But maybe she just didn't want to change her own routines and was eager to believe that she was managing her cats just fine already.

- *Illogical reasoning*—She assumed that other people feel guilty about keeping their cats indoors. But maybe they don't.

You don't have to be a scientist or use sophisticated research techniques to avoid these four errors in reasoning. If you recognize and make a conscious effort to avoid them, you can improve your own reasoning. Along the way, you also will be heeding advice you probably heard from your parents (minister, teacher, adviser) not to stereotype people, to avoid jumping to conclusions, and to look at the big picture. These are all roughly the kinds of mistakes that the methods of social science systematically help us to avoid.

Let's look at each kind of error in turn.

Overgeneralization

Overgeneralization occurs when we unjustifiably conclude that what is true for some cases is true for all cases. We are always drawing conclusions about people and social processes from our own interactions with them, but sometimes we forget that our experiences are limited. The social (and natural) world is, after all, a complex place. Maybe someone made a wisecrack about the ugly shoes you're wearing today, but that doesn't mean that everyone is talking about you. Or there may have been two drunk-driving accidents following fraternity parties this year, but by itself, this doesn't mean that all fraternity brothers are drunk drivers. Or maybe you had a boring teacher in your high school chemistry class, but that doesn't mean all chemistry teachers are boring. We can interact with only a small fraction of the individuals who inhabit the social world, especially in a limited span of time; rarely are they completely typical people. One heavy Internet user found that his online friendships were "much deeper and have better quality" than his other friendships (Parks and Floyd 1996). Would his experiences generalize to yours? To those of others?

Overgeneralization:
Occurs when we unjustifiably conclude that what is true for some cases is true for all cases.

Selective or Inaccurate Observation

We also have to avoid **selective** or **inaccurate observation**—choosing to look only at things that are in line with our preferences or beliefs. When we dislike individuals or institutions, it is all too easy to notice their every failing. For example,

Selective (inaccurate) observation:
Choosing to look only at things that are in line with our preferences or beliefs.

Overgeneralization:
Seeing too few people

Selective Observation:
Seeing the wrong people
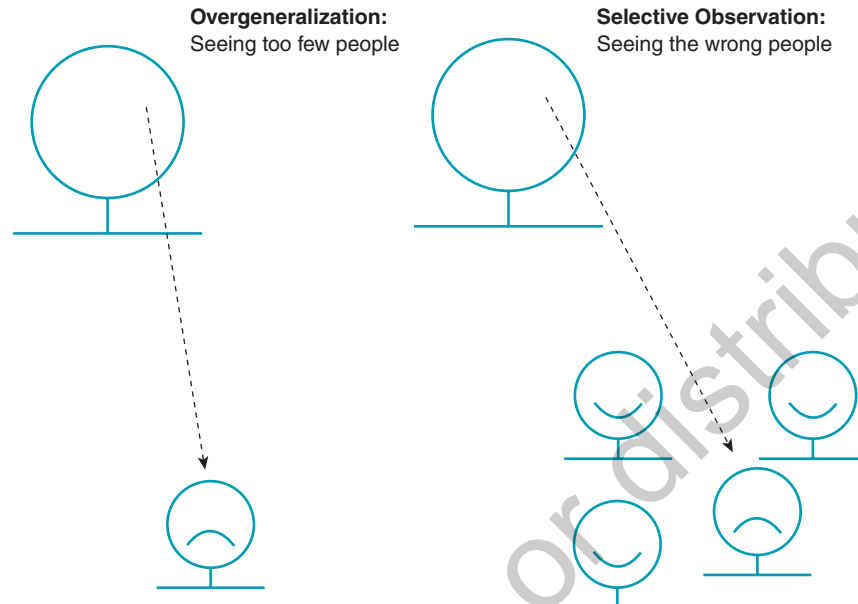
if we are convinced that heavy Internet users are antisocial, we can find many confirming instances. But what about elderly people who serve as Internet pen pals for grade school children or therapists who deliver online counseling? If we acknowledge only the instances that confirm our predispositions, we are victims of our own selective observation. Exhibit 1.2 depicts the difference between selective observation and overgeneralization.

Exhibit 1.3 /// An Optical Illusion

Our observations can also simply be inaccurate. When you were in high school, maybe your mother complained that you were "always" staying out late with your friends. Perhaps that was inaccurate; perhaps you stayed out late only occasionally. And when you complained that she "yelled" at you, even though her voice never actually increased in volume, that, too, was an inaccurate observation. In social science, we try to be more precise than that.

Such errors often occur in casual conversation and in everyday observation of the world around us. What we think we have seen is not necessarily what we really have seen (or heard, smelled, felt, or tasted). Even when our senses are functioning fully, our minds have to interpret what we have sensed (Humphrey 1992). The optical illusion in Exhibit 1.3, which can be viewed as either two faces or a vase, should help you realize that even simple visual perception requires interpretation.

Illogical Reasoning

When we prematurely jump to conclusions or argue on the basis of invalid assumptions, we are using **illogical reasoning**. For example, we might think that people who don't have many social ties just aren't friendly, even if we know they have just moved into a community and started a new job. Obviously, that's not logical. Conversely, an unquestioned assumption that everyone seeks social ties or benefits from them overlooks some important considerations, such as the impact of childhood difficulties on social trust and the exclusionary character of many tightly knit social groups. Logic that seems impeccable to one person can seem twisted to another—but people having different assumptions, rather than just failing to "think straight," usually causes the problem.

Resistance to Change

Resistance to change, the reluctance to change our ideas in light of new information, is a common problem. After all, we know how tempting it is to make statements that conform to our own needs rather than to the observable facts ("I can't live on that salary!"). It can also be difficult to admit that we were wrong once we have staked out a position on an issue ("I don't want to discuss this anymore"). Excessive devotion to tradition can stifle adaptation to changing circumstances ("This is how we've always done it, that's why"). People often accept the recommendations of those in positions of authority without question ("Only the president has all the facts"). In all of these ways, we often close our eyes to what's actually happening in the world.

Research That Matters

Are face-to-face contacts between people being displaced by modern indirect ("mediated") contact through texting, Skype, social media, e-mails, or cell phones? And if so, does it matter? Do people feel less supported when they communicate indirectly compared to when their social contacts are physically present? Since the spread of cell phones and the development of the Internet in the 1980s, social scientists have been concerned with the impact of these new forms of mediated connections on the quantity and quality of social interaction. Professor Roger Patulny and PhD candidate Claire Seaman at the University of Wollongong in Australia investigated these questions with data collected in the Australian Bureau of Statistics' (ABS's) General Social Survey

(GSS). The procedures for the ABS-GSS involve in-person interviews with more than 10,000 Australians selected from throughout Australia so that they are very similar to the total population. In the years studied by Patulny and Seaman (2002, 2006, and 2010), the GSS included questions about frequency and methods of contacting family or friends (who respondents were not living with). There were also survey questions about feelings of social support, as well as personal characteristics like age and education. The researchers found that face-to-face contact had declined and use of the new "mediated" forms of social contact had increased, but there had been no general decline in feelings of having social support. However, there were some disadvantages in

(Continued)

frequency of contact and feelings of social support among older men and in relation to having less education or less income.

In this chapter, you will learn more about the methods that Patulny and Seaman used as well as about other studies of social interaction and mediated forms of communication. By the end of the chapter, you will have a good overview of the approach that researchers use to study social issues like these and others. As you read the chapter, you can check details about this in the 2017 *Journal of Sociology* article by Roger Patulny and Claire Seaman at the *Making Sense of the Social World* study site for Chapter 1: **edge.sagepub.com/ chamblissmssw6e**.

CAN SOCIAL SCIENTISTS SEE THE SOCIAL WORLD MORE CLEARLY?

Science:
A set of logical, systematic, documented methods for investigating nature and natural processes; the knowledge produced by these investigations.

Social science:
The use of scientific methods to investigate individuals, societies, and social processes; the knowledge produced by these investigations.

Can social science do any better? Can we see the social world more clearly if we use the methods of social science? **Science** relies on logical and systematic methods to answer questions, and it does so in a way that allows others to inspect and evaluate its methods. So social scientists develop, refine, apply, and report their understanding of the social world more systematically, or "scientifically," than the general public does.

- **Social science** research methods reduce the likelihood of overgeneralization by using systematic procedures for selecting individuals or groups to study so that the study subjects are representative of the individuals or groups to which we want to generalize.

- Social science methods can reduce the risk of selective or inaccurate observation by requiring that we measure and sample phenomena systematically.

- To avoid illogical reasoning, social researchers use explicit criteria for identifying causes and for determining whether these criteria are met in a particular instance.

- Scientific methods lessen the tendency to answer questions about the social world from ego-based commitments, excessive devotion to tradition, or unquestioning respect for authority. Social scientists insist, "Show us the evidence!"

Social Research in Practice

Although all social science research seeks to minimize errors in reasoning, different projects may have different goals. The four most important goals of social research are (1) description, (2) exploration, (3) explanation, and (4) evaluation. Let's look at examples of each.

Description: How Often Do Americans "Neighbor"?

During the last quarter of the 20th century, the annual (biennial since 1996) General Social Survey (GSS) investigated a wide range of characteristics, attitudes,

and behaviors. Each year, more than 1,000 adults in the United States completed GSS phone interviews; many questions repeated from year to year so that trends could be identified. Robert Putnam often used GSS data in his famous *Bowling Alone* investigation of social ties in America.
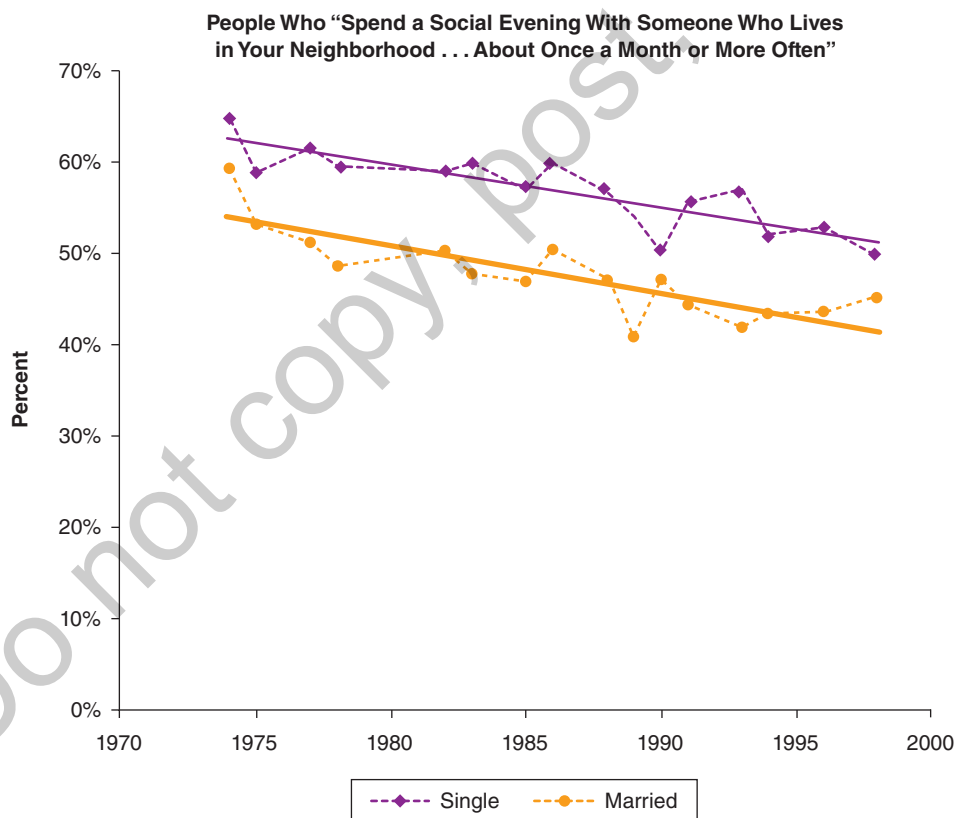
Survey responses indicated that "neighboring" declined throughout this period. As indicated in Exhibit 1.4 (Putnam 2000: 106), the percentage of GSS respondents who reported spending "a social evening with someone who lives in your neighborhood . . . about once a month or more often" was 60% for married people in 1975 and about 65% for singles. By 1998, the comparable percentages were 45% for married people and 50% for singles. This is **descriptive research** because the findings simply describe differences or variations in social phenomena.

Descriptive research: Research in which social phenomena are defined and described.

Exploration: How Do Athletic Teams Build Player Loyalty?

Organizations such as combat units, surgical teams, and athletic teams must develop intense organizational loyalty among participants if organizations are to maximize their performance. How do they do it? This question motivated Patricia and Peter Adler (2000) to study college athletics. They wanted to explore this topic

Exhibit 1.4 /// The Decline of Neighboring 1974–1998

People Who "Spend a Social Evening With Someone Who Lives in Your Neighborhood . . . About Once a Month or More Often"

Source: Reprinted with permission of Simon & Schuster, Inc. from *Bowling Alone* by Robert D. Putnam. Copyright © 2000 Robert D. Putnam.

without preconceptions or fixed hypotheses. So Peter Adler joined his college basketball team as a "team sociologist," while Patti participated in some team activities as his wife and as a professor at the school. They recorded observations and comments at the end of each day for a period of 5 years. They also interviewed at length the coaches and all 38 basketball team members during that period.

Careful and systematic review of their notes led Adler and Adler (2000) to conclude that intense organizational loyalty emerged from five processes: (1) domination, (2) identification, (3) commitment, (4) integration, and (5) goal alignment. We won't review each of these processes here, but the following quote indicates how they found the process of integration into a cohesive group to work:

> By the time the three months were over [the summer before they started classes] I felt like I was there a year already. I felt so connected to the guys. You've played with them, it's been 130 degrees in the gym, you've elbowed each other, knocked each other around. Now you've felt a relationship, it's a team, a brotherhood type of thing. Everybody's got to eat the same rotten food, go through the same thing, and all you have is each other. So you've got a shared bond, a camaraderie. It's a whole houseful of brothers. And that's home to everybody in the dorm, not your parents' house. (p. 43)

Participating in and observing the team over this long period enabled Adler and Adler (2000) to identify and to distinguish particular aspects of such loyalty-building processes, such as identifying three modes of integration into the group: (1) unification in opposition to others, (2) development of group solidarity, and (3) sponsorship by older players. Adler and Adler also identified negative consequences of failures in group loyalty, such as the emergence of an atmosphere of jealousy and mistrust, and the disruption of group cohesion, as when one team member focused only on maximizing his own scoring statistics.

In this project, Adler and Adler did more than simply describe what people did—they tried to explore the different elements of organizational loyalty and the processes by which loyalty was built. **Exploratory research** seeks to find out how people get along in the setting under question, what meanings they give to their actions, and what issues concern them. You might say the goal is to learn "what's going on here?"

Exploratory research: Seeks to find out how people get along in the setting under question, what meanings they give to their actions, and what issues concern them.

Explanation: Does Social Context Influence Adolescent Outcomes?

Often, social scientists want to explain social phenomena, usually by identifying causes and effects. Bruce Rankin at Koç University in Turkey and James Quane at Harvard University (Rankin and Quane 2002) analyzed data collected in a large survey of African American mothers and their adolescent children to test the effect of social context on adolescent outcomes. The source of data was a study funded by the MacArthur Foundation, Youth Achievement and the Structure of Inner City Communities, in which face-to-face interviews were conducted with more than 636 youth living in 62 poor and mixed-income urban Chicago neighborhoods.

Explanatory research: Seeks to identify causes and effects of social phenomena and to predict how one phenomenon will change or vary in response to variation in another phenomenon.

Explanatory research like this seeks to identify causes and effects of social phenomena and to predict how one phenomenon will change or vary in response to variation in another phenomenon. Rankin and Quane (2002) were most concerned

Research in the News

Social Media and Political Polarization?

Is the growing importance of social media responsible for increasing political polarization in the United States? After all, social media help people restrict their information to news with the slant they prefer and their social connections to like-minded partisans. But using data from the American National Election Studies, economics professors at Brown and Stanford Universities found that polarization has been most extreme among older Americans—the age group that is least likely to use social media. So it seems that at least there is more to the story of polarization than the use of social media.

For Further Thought

1. What else do you think might explain increasing political polarization?

2. In addition to surveys, what data sources could you use to study political polarization?

Sources: Bromwich, Jonah Engel. 2017. Social media is not contributing significantly to political polarization, paper says. *New York Times*, April 13; Crawford, Susan P. 2011. The new digital divide. *New York Times,* December 4: A1.

with determining the relative importance of three different aspects of social context—neighborhoods, families, and peers—on adolescent outcomes (both positive and negative). To make this determination, they had to conduct their analysis in a way that allowed them to separate the effects of neighborhood characteristics, such as residential stability and economic disadvantage, from parental involvement in child rearing and other family features, as well as from peer influence. They found that neighborhood characteristics affect youth outcomes primarily by influencing the extent of parental monitoring and the quality of peer groups.

Evaluation: Does More Social Capital Result in More Community Participation?

The "It's Our Neighbourhood's Turn" project (Onze Buurt aan Zet, or OBAZ) in the city of Enschede, the Netherlands, was one of a series of projects initiated by the Dutch Interior and Kingdom Relations ministry to increase the quality of life and safety of individuals in the most deprived neighborhoods in the Netherlands. In the fall of 2001, residents in three of the city's poorest neighborhoods were informed that their communities had received funds to use for community improvement and that residents had to be actively involved in formulating and implementing the improvement plans (Lelieveldt 2003: 1). Political scientist Herman Lelieveldt (2004: 537) at the University of Twente, the Netherlands, and others then surveyed community residents to learn about their social relations and their level of local political participation; a second survey was conducted 1 year after the project began.

Lelieveldt wanted to evaluate the impact of the OBAZ project—to see whether the "livability and safety of the neighborhood" could be improved by taking steps like those Putnam (2000: 408) recommended to increase "social capital," meaning that citizens would spend more time connecting with their neighbors.

It turned out that residents who had higher levels of social capital participated more in community political processes. However, not every form of social capital made much of a difference. Neighborliness—the extent to which citizens are engaged in networks with their neighbors—was an important predictor of political participation, as was a feeling of obligation to participate. By contrast, a sense of trust in others (something that Putnam emphasizes) was not consistently important (Lelieveldt 2004: 535, 547–548): Those who got more involved in the OBAZ political process tended to distrust their neighbors. When researchers focus their attention on social programs such as the OBAZ project, they are conducting **evaluation research**—research that describes or identifies the impact of social policies and programs.

Certainly many research studies have more than one such goal—all studies include some description, for instance. But clarifying your primary goal can often help when deciding how to do your research.

HOW WELL HAVE WE DONE OUR RESEARCH?

Social scientists want validity in their research findings—they want to find the truth. The goal of social science is not to reach conclusions that other people will like or that suit our personal preferences. We shouldn't start our research determined to "prove" that our college's writing program is successful, or that women are portrayed unfairly in advertisements, or that the last presidential election was

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Careers and Research

Jessica LeBlanc, Research Assistant

Jessica LeBlanc majored in sociology at the University of New Hampshire, but she didn't really know what kind of career it would lead to. Then she took an undergraduate statistics course and found she really enjoyed it. She took additional methods courses—survey research and an individual research project course—and really liked those also.

By the time she graduated, LeBlanc knew she wanted a job in social research. She looked online for research positions in marketing, health care, and other areas. She noticed an opening at a university-based research center and thought their work sounded fascinating. As a research assistant, LeBlanc designed survey questions, transcribed focus group audiotapes, programmed web surveys, and managed incoming data. She also conducted interviews, programmed computer-assisted telephone surveys, and helped conduct focus groups.

The knowledge that LeBlanc gained in her methods courses about research designs, statistics, question construction, and survey procedures prepared her well for her position. Her advice to aspiring researchers: Pay attention in your first methods class!

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rigged, or that homeless people are badly treated. We may learn that all of these are true, or aren't, but our goal as social scientists should be to learn the truth, even if it's sometimes disagreeable to us. The goal is to figure out how and why some part of the social world operates as it does and to reach valid conclusions. We reach the goal of **validity** when our statements or conclusions about empirical reality are correct. In *Making Sense of the Social World: Methods of Investigation*, we will be concerned with three kinds of validity: (1) measurement validity, (2) generalizability, and (3) causal validity (also known as internal validity). We will learn that invalid measures, invalid generalizations, or invalid causal inferences result in invalid conclusions.

Validity:
The state that exists when statements or conclusions about empirical reality are correct.

Measurement Validity

Measurement validity is our first concern because without having measured what we think we've measured, we don't even know what we're talking about. So when Putnam (2000: 291) introduces a measure of "social capital" that has such components as number of club meetings attended and number of times worked on a community project, we have to stop and consider the validity of this measure. Measurement validity is the focus of Chapter 4.

Measurement validity:
Exists when an indicator measures what we think it measures.

Problems with measurement validity can occur for many reasons. In studies of Internet forums, for instance, researchers have found that some participants use fictitious identities, even pretending to be a different gender (men posing as women, for instance) (Donath 1999). Therefore, it's difficult to measure gender in these forums, and researchers could not rely on gender as disclosed in the forums when identifying differences in usage patterns between men and women. Similarly, if you ask people, "Are you an alcoholic?" they probably won't say yes, even if they are; the question elicits less valid information than would be forthcoming by asking them how many drinks they consume, on average, each day. Some college students may be hesitant to admit they binge-watch *The Walking Dead* on television 6 hours a day, so researchers use electronic monitoring devices on TV sets to measure what programs people watch and how often.

Generalizability

The **generalizability** of a study is the extent to which it can inform us about persons, places, or events that were not directly studied. For instance, if we ask our favorite students how much they enjoyed our Research Methods course, can we assume that other students (perhaps not as favored) would give the same answers? Maybe they would, but probably not. Achieving generalizability through correct sampling is the focus of Chapter 5.

Generalizability:
Exists when a conclusion holds true for the population, group, setting, or event that we say it does, given the conditions that we specify; it is the extent to which a study can inform us about persons, places, or events that were not directly studied.

Generalizability is always an important consideration when you review social science research. Even the huge, international National Geographic Society (2000) survey of Internet users had some limitations in generalizability. Only certain people were included in the sample: people who were connected to the Internet, who had heard about the survey, and who actually chose to participate. This meant that many more respondents came from wealthier countries, which had higher rates of computer and Internet use, than from poorer countries. However, the inclusion of individuals from 178 countries and territories does allow some interesting comparisons among countries.

There are two kinds of generalizability: sample and cross-population.

Sample generalizability is a key concern in survey research. Political polls, such as the Gallup Poll or Zogby International, may study a sample of 1,400 likely voters, for example, and then generalize the findings to the entire American population of 120 million likely voters. No one would be interested in the results of political polls if they represented only the tiny sample that actually was surveyed rather than the entire population.

Cross-population generalizability occurs to the extent that the results of a study hold true for multiple populations; these populations may not all have been sampled, or they may be represented as subgroups within the sample studied (Exhibit 1.5). We can only wonder about the cross-population generalizability of Putnam's findings about social ties in the United States. Has the same decline occurred in Mexico, Argentina, Britain, or Thailand?

Sample generalizability:
Exists when a conclusion based on a sample, or subset, of a larger population holds true for that population.
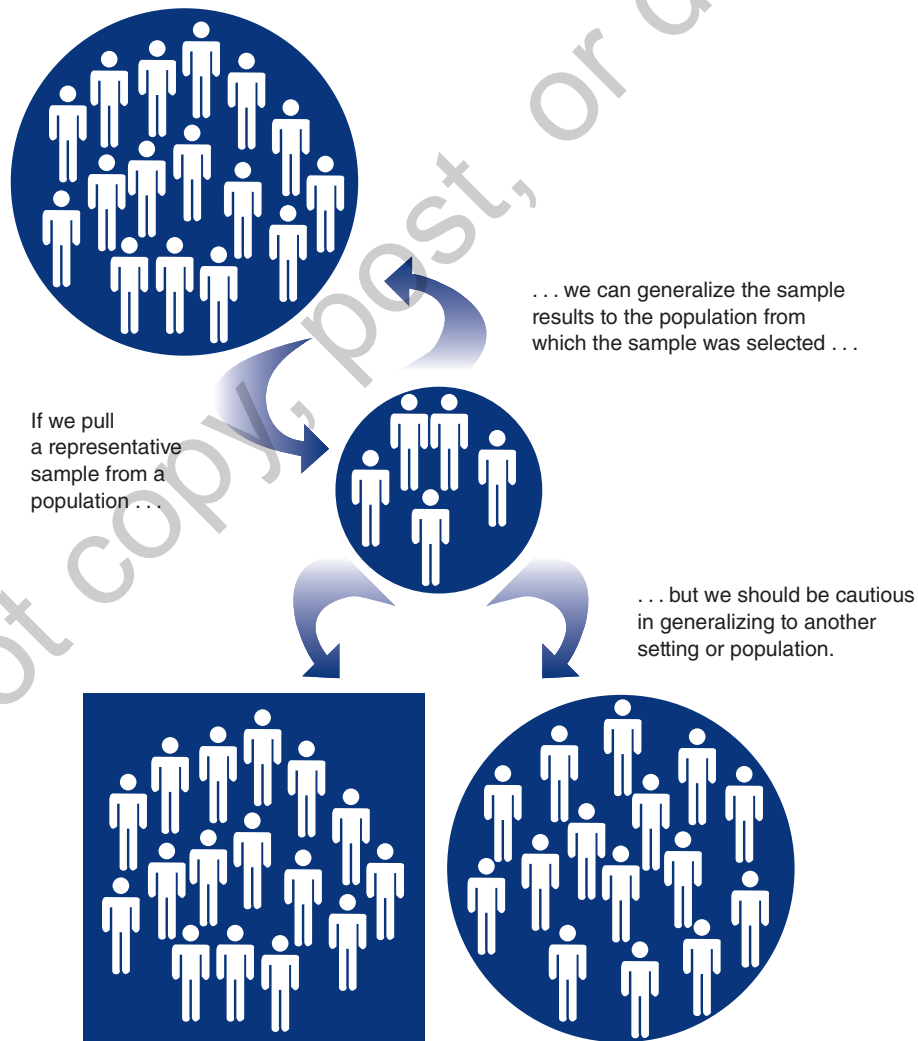
Cross-population generalizability (external validity):
Exists when findings about one group, population, or setting hold true for other groups, populations, or settings.

Exhibit 1.5 /// Sample and Cross-Population Generalizability

If we pull a representative sample from a population . . .

. . . we can generalize the sample results to the population from which the sample was selected . . .

. . . but we should be cautious in generalizing to another setting or population.

Causal Validity

Causal validity, also known as **internal validity**, refers to the truthfulness of an assertion that A causes B. It is the focus of Chapter 6.

Most research seeks to determine what causes what, so social scientists frequently must be concerned with causal validity. For example, Gary Cohen and Barbara Kerr (1998) asked whether computer-mediated counseling could be as effective as face-to-face counseling for mental health problems—that is, whether one type of counseling leads to better results than the other. Cohen and Kerr could have compared people who had voluntarily experienced one of these types of treatment, but it's quite likely that individuals who sought out a live person for counseling would differ, in important ways, from those who sought computer-mediated counseling. Younger people tend to use computers more; so do more educated people. Or maybe less sociable people would be more drawn to computer-mediated counseling. Normally, it would be hard to tell if different results from the two therapies were caused by the therapies themselves or by different kinds of people going to each.

So Cohen and Kerr (1998) designed an experiment in which students seeking counseling were assigned randomly (by a procedure somewhat like flipping a coin) to either computer-mediated or face-to-face counseling. In effect, people going to one kind of counseling were just like people going to the other; as it happens, their anxiety scores afterward were roughly the same. There seemed to be no difference (Exhibit 1.6). By using the random assignment procedure, Cohen and Kerr strengthened the causal validity of this conclusion.

Causal validity (internal validity): Exists when a conclusion that A leads to, or results in, B is correct.

Exhibit 1.6 /// Partial Evidence of Causality

Precounseling Anxiety Score	Type of Counseling	Postcounseling Anxiety Score
35	Computer-mediated	28
35	Face-to-face	29

Precounseling anxiety score: 35 — Computer-mediated counseling → Postcounseling anxiety score: 28

Precounseling anxiety score: 35 — Face-to-face counseling → Postcounseling anxiety score: 29

Conversely, even in properly randomized experiments, causal findings can be mistaken because of some factor that was not recognized during planning for the study. If the computer-mediated counseling sessions were conducted in a modern building with all the latest amenities, but face-to-face counseling was delivered in a run-down building, this difference might have led to different outcomes for reasons quite apart from the type of counseling. Also, Cohen and Kerr didn't have a group that received no counseling. Maybe just a little quiet time or getting older would provide the same benefits as therapy.

So establishing causal validity can be quite difficult. In subsequent chapters, you will learn in more detail how experimental designs and statistics can help us evaluate causal propositions, but the solutions are neither easy nor perfect. We always have to consider critically the validity of causal statements that we hear or read.

CONCLUSION

This first chapter should have given you an idea of what to expect in the rest of the book. Social science provides us with a variety of methods for avoiding everyday errors in reasoning and for coming to valid conclusions about the social world. We will explore different kinds of research, using different techniques, in the chapters to come, always asking, is this answer likely to be correct? The techniques are fairly simple, but they are powerful nonetheless if properly executed. You will also learn some interesting facts about social life. We have already seen, for instance, some evidence that

- The Internet and social media may have surprising effects on our relationships with others.

- Organizational processes that build loyalty, as happens on athletic teams, can strengthen social ties.

- Neighborhoods in which social ties are weaker may result in less effective forms of parenting, but both parenting and peer group quality have stronger effects than neighborhood social ties on adolescent outcomes.

- Government programs to increase social capital in neighborhoods can increase local political participation.

- Students may benefit as much from computer-mediated counseling as from face-to-face counseling.

Remember, you must ask a direct question of each research project you examine: How valid are its conclusions? The theme of validity ties the chapters in this book together. Each technique will be evaluated for its ability to help us with measurement validity, generalizability, and causal validity.

To illustrate the process of doing research, in Chapter 2, we describe studies of domestic violence, community disaster, student experience of college, and other topics. We review the types of research questions that social scientists ask, the role of theory, the major steps in the research process, and other sources of information that may be used in social research. In Chapter 3, we set out the general

principles of ethical research that social scientists try to follow. As well, examples of ethical challenges to good research will be presented in many of the chapters that follow.

Then, in Chapters 4, 5, and 6, we return to the subject of validity—the three kinds of validity and the specific techniques used to maximize the validity of our measures, our generalizations from a sample, and our causal assertions. Chapter 6 also introduces experimental studies, one of the best methods for establishing causal relationships.

Other methods of data collection and analysis are introduced in Chapters 7, 8, 9, and 10. Survey research is the most common method of data collection in sociology, and in Chapter 7, we devote attention to the different types of surveys. Chapter 8 is not a substitute for an entire course in statistics, but it gives you a good idea of how to use statistics honestly in reporting the results of your own studies using quantitative methods, in interpreting the results of research reported by others, and in analyzing secondary data sources. Chapter 9 shows how qualitative methods such as participant observation, intensive interviewing, and focus groups can uncover aspects of the social world that we are likely to miss in experiments and surveys, and Chapter 10, on qualitative data analysis, illustrates several approaches that researchers can take to the analysis of the data they collect in qualitative projects.

Chapter 11 introduces a range of unobtrusive measures that aren't experienced by the people being studied; these include historical and comparative methods, content analysis, and a variety of creative techniques. Chapter 12 explains the role of evaluation research in investigating social programs and how to design evaluation research studies. Finally, Chapter 13 focuses on how to review prior research, how to propose new research, and how to report original research. We give special attention to how to formulate research proposals and how to critique, or evaluate, reports of research that you encounter.

Throughout these chapters, we will try to make the ideas interesting and useful to you, both as a consumer of research (e.g., as reported in newspapers) and as a potential producer (if, say, you do a survey in your college, neighborhood, or business). Each chapter ends with several helpful learning tools. Lists of key terms and chapter highlights will help you review, and exercises will help you apply your knowledge. Social research isn't rocket science, but it does take some clear thinking, and these exercises should give you a chance to practice.

Here is a closing thought: Vince Lombardi, legendary coach of the Green Bay Packers of the National Football League during the 1960s, used to say that championship football was basically a matter of "four yards and a cloud of dust." Nothing too fancy, no razzle-dazzle plays, no phenomenally talented players doing it all alone—just solid, hard-working, straight-ahead fundamentals. This may sound strange, but excellent social research can be done—can "win games"—in the same way. We'll show you how to design and conduct surveys that get the right answers, interviews that discover people's true feelings, and experiments that pinpoint what causes what. And we'll show you how to avoid getting taken in by every "Studies Show . . . We're Committing More Crimes!" article you read on the Internet. It takes a little effort initially, but we think you will find it worthwhile and even enjoyable.

/// KEY TERMS

Causal validity (internal validity)   13

Cross-population generalizability (external validity)   12

Descriptive research   7

Evaluation research   10

Explanatory research   8

Exploratory research   8

Generalizability   11

Illogical reasoning   5

Measurement validity   11

Overgeneralization   3

Resistance to change   5

Sample generalizability   12

Science   6

Selective (inaccurate) observation   3

Social science   6

Validity   11

/// HIGHLIGHTS

- Four common errors in everyday reasoning are overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change. These errors result from the complexity of the social world, subjective processes that affect the reasoning of researchers and those they study, researchers' self-interestedness, and unquestioning acceptance of tradition or of those in positions of authority.

- Social science is the use of logical, systematic, documented methods to investigate individuals, societies, and social processes, as well as the knowledge these investigations produce.

- Social research can be descriptive, exploratory, explanatory, or evaluative—or some combination of these.

- Valid knowledge is the central concern of scientific research. The three components of validity are measurement validity, generalizability (both from the sample to the population from which it was selected and from the sample to other populations), and causal (internal) validity.

/// STUDENT STUDY SITE

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The Student Study Site, available at **edge.sagepub.com/chamblissmssw6e**, includes useful study materials including practice quizzes, eFlashcards, videos, audio resources, journal articles, and more.

/// EXERCISES

Discussing Research

1. Select a social issue that interests you, such as Internet use or crime. List at least four of your beliefs about this phenomenon. Try to identify the sources of each of these beliefs.

2. Does the academic motivation to do the best possible job of understanding how the social world works conflict with policy or personal motivations? How could personal experiences with social isolation or with Internet use shape research motivations? In what ways might the goal of influencing policy about social relations shape how a researcher approaches this issue?

3. Pick a contemporary social issue of interest to you. List descriptive, exploratory, explanatory, and evaluative questions that you could investigate about this issue.

4. Review each of the three sets of research alternatives. Which alternatives are most appealing to you? Which combination of alternatives makes the most sense to you (one possibility, for example, is quantitative research with a basic science orientation)? Discuss the possible bases of your research preferences relative to your academic interests, personal experiences, and policy orientations.

Finding Research

1. Read the abstracts (initial summaries) of each article in a recent issue of a major social science journal. (Ask your instructor for some good journal titles.) On the basis of the abstract only, classify each research project represented in the articles as primarily descriptive, exploratory, explanatory, or evaluative. Note any indications that the research focused on other types of research questions.

2. From the news, record statements of politicians or other leaders about some social phenomenon. Which statements do you think are likely to be in error? What evidence could the speakers provide to demonstrate the validity of these statements?

3. Check out Robert Putnam's website (robertdputnam.com) and review survey findings about social ties in several cities. Prepare a 5- to 10-minute class presentation on what you found about social ties and the ongoing research-based efforts to understand them.

Critiquing Research

1. Scan one of the publications about the Internet and society at the Berkman Klein Center for Internet & Society website (http://cyber.law.harvard.edu/). Describe one of the projects discussed: its goals, methods, and major findings. What do the researchers conclude about the impact of the Internet on social life in the United States? Next, repeat this process with a report from the Pew Internet Project (www.pewinternet.org), or with the Digital Future report from the University of Southern California's Center for the Digital Future site (www.digitalcenter.org). What aspects of the methods, questions, or findings might explain differences in their conclusions? Do you think the researchers approached their studies with different perspectives at the outset? If so, what might these perspectives have been?

2. Research on social ties was publicized in a *Washington Post* article that also included comments by other sociologists (http://www.washingtonpost.com/wp-dyn/content/article/2006/06/22/AR2006062201763.html). Read the article, and continue the commentary. Do your own experiences suggest that there is a problem with social ties in your community? Does it seem, as Barry Wellman suggests in the *Washington Post* article, that a larger number of social ties can make up for the decline in intimate social ties that McPherson et al. (2006: 358) found?

Doing Research

1. What topic would you focus on if you could design a social research project without any concern for costs? What are your motives for studying this topic?

2. Develop four questions that you might investigate about the topic you just selected. Each question should reflect a different research goal: description, exploration, explanation, or evaluation. Be specific. Which question most interests you? Why?

Ethics Questions

Throughout the book, we will discuss the ethical challenges that arise in social research. At the end of each chapter, we ask you to consider some questions about ethical issues related to that chapter's focus. We introduce this critical topic formally in Chapter 3, but we begin here with some questions for you to ponder.

1. The chapter began with a brief description of research on social media and Internet use. What would you do if you were interviewing college students who spent lots of time online and found that some were very isolated and depressed or even suicidal, apparently as a result of the isolation? Do you believe that social researchers have an obligation to take action in a situation like this? What if you discovered a similar problem with a child? What guidelines would you suggest for researchers?

2. Would you encourage social researchers to announce their findings about problems such as social isolation in press conferences and to encourage relevant agencies to adopt policies encouraged to lessen social isolation? Should policies regarding attempts to garner publicity and shape policy depend on the strength of

the research evidence? Do you think there is a fundamental conflict between academic and policy motivations? Do social researchers have an ethical obligation to recommend policies that their research suggests would help other people?

Video Interview Questions

Listen to the researcher interview for Chapter 1 at edge .sagepub.com/chamblissmssw6e, found in the Video and Multimedia Section.

1. What are the benefits to breaking down questions in text-based interview structure?

2. As Janet Salmons mentions, one can enhance his or her research by deciding carefully on the various kinds of technology to be used. What are some of the considerations Salmons mentions in deciding whether to use text-based interviews or video conference calls?