As this text was being sent to the printer, a 20-year-old man named Adam Lanza walked into an elementary school in Newtown, CT, armed with several semiautomatic weapons and killed 20 children and 6 adults. This was not the first school shooting, nor even the first in 2012. On February 27, 2012, 17-year-old T. J. Lane walked up to a cafeteria table at Chardon High School in Ohio and started shooting, killing three of his high school classmates and wounding three others. On March 11, 2009, 17-year-old Tim Kretschmer entered a high school in Winnenden, Germany, and opened fire killing nine students and three teachers. After fleeing, he killed four others before killing himself after a shootout with police. On April 16, 2007, Cho Seung-Hui killed 32 students, faculty, and staff and left over 30 others injured on the campus of Virginia Tech in Blacksburg, Virginia. Cho was armed with two semiautomatic handguns that he had legally purchased and a vest filled with ammunition. As police were closing in on the
The story of just one murderous youth raises many questions. Take a few minutes to read each of the following questions about one of the Columbine shooters and jot down your answers. Don’t ruminate about the questions or worry about your responses. This is not a test; there are no wrong answers.

- How would you describe Eric Harris?
- Why did you think Eric Harris wanted to kill other students?
- Was Eric Harris typical of other murderers under 18 years of age?
- In general, why do people become murderers?
- How have you learned about youth violence?
Now let us consider the possible answers to some of these questions. The information about Eric Harris is somewhat inconsistent (Duggan, Shear, and Fisher 1999). He was the 18-year-old son of middle-class professionals. He had an older brother who attended the University of Colorado. Harris apparently thought of himself as a white supremacist, but he also loved music by antiracist rock bands. On his Web page, he quoted from KMFDM, a German rock band whose song "Waste" includes these lyrics: “What I don’t say I don’t do. What I don’t do I don’t like. What I don’t like I waste.” Online, Harris referred to himself as “Darkness.”

Do you have enough information now to understand why he went on a shooting rampage in his school?

A year before the shootings at Columbine High School, Harris was arrested on a felony count of breaking into a car. A juvenile court put him on probation, required him to perform community service and take criminal justice classes, and sent him to a school counseling program. He was described by one of his probation officers as a “very bright young man who is likely to succeed in life.”

Now can you construct an adequate description of Eric Harris? Can you explain the reason for his murderous rampage? Or do you feel you need to know more about Eric Harris, about his friends and the family he grew up in? How about his experiences in school and with the criminal justice system? We have attempted to investigate just one person’s experiences, and already our investigation is spawning more questions than answers.

**Questions and Answers**

When research questions concern not just one person but many people or general social processes, the possible alternative answers multiply. For example, consider the question of why incidents of school violence occur. Responses to a survey of mothers with children between the ages of 12 and 15 found that the majority of mothers considered the most important factors that contributed to school violence to be parents who did not teach children morals (87%), parents who supported aggressive behavior (78%), and gang or peer pressure (70%) (Kandakai et al. 1999). Compare these answers with the opinion you recorded earlier. Was your idea about the causes of youth violence one of the more popular ones held by this sample of mothers?

We cannot avoid asking questions about the actions and attitudes of others. We all try to make sense of the social world, which is a very complex place, and to make sense of our position in it, in which we have quite a personal stake. In fact, the more that you begin to “think like a social scientist,” the more questions will come to mind.

But why does each question have so many possible answers? Surely our perspective plays a role. One person may see a homicide offender as a victim of circumstance, and another person may see the same individual as inherently evil. Answers to questions we ask in the criminological sciences also vary because individual life experiences and circumstances vary. The study of mothers’ perceptions conducted by Kandakai et al. (1999), summarized in Exhibit 1.1, gives some idea of how opinions about the causes and cures for school violence vary. Even though previous research has found that the general public believes school violence is worse in urban schools than in suburban and rural schools, only 14% of the mothers who had children in urban schools believed their child’s school was more violent than other schools. However, a higher percentage of urban mothers (37%) than suburban mothers (17%) reported that their child had been involved in one or more fights at school. Somewhat surprisingly, even though these mothers perceived parental support for violence as a major contributor to school violence, 4 in 10 of them believed it was acceptable for their child to fight in certain situations.

**Everyday Errors in Reasoning**

People give different answers to research questions for yet another reason: It is simply too easy to make errors in logic, particularly when we are analyzing the social world in which we ourselves are conscious participants. We can call some of these everyday errors because they occur so frequently in the nonscientific, unreflective discourse about the social world that we hear on a daily basis.

For evidence of everyday errors, just listen to your conversations or the conversations of others for one day. At some point in the day, it is inevitable that you or someone you are talking with will say something like “Well, I knew a person
who did X, and Y happened.” From this one piece of information, you therefore draw a conclusion about the likelihood of Y. Four general errors in everyday reasoning can be made: overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change.

**Overgeneralization**

Overgeneralization, an error in reasoning, occurs when we conclude that what we have observed or what we know to be 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. We have the ability (and inclination) to interact with just a small fraction of the individuals who inhabit the social world, especially in a limited span of time.

<table>
<thead>
<tr>
<th><strong>Overgeneralization</strong></th>
<th>An error in reasoning that occurs when we conclude that what we have observed or know to be true for a subset of cases holds true for the entire set.</th>
</tr>
</thead>
</table>

**Selective or Inaccurate Observation**

Selective observation is choosing to look only at things that are in accordance with our preferences or beliefs. When we are inclined to criticize individuals or institutions, it is all too easy to notice their every failing. For example, if we are convinced in advance that all kids who are violent are unlikely to be rehabilitated and will go on to commit violent offenses in adulthood, we will probably find many confirming instances. But what about other youths who have become productive and stable citizens after engaging in violence as adolescents? Or the child who was physically or sexually abused and joined a gang to satisfy the need for a family surrogate? 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.

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### Exhibit 1.1  Mothers’ Perceptions of the Factors Related to School Violence

<table>
<thead>
<tr>
<th>Percentage Who Said Factor Contributed a Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents who do not teach their kids right from wrong</td>
</tr>
<tr>
<td>Parent support for aggressive behavior</td>
</tr>
<tr>
<td>Gang or peer pressure</td>
</tr>
<tr>
<td>Lack of family involvement</td>
</tr>
<tr>
<td>Sale of alcohol or cigarettes to children</td>
</tr>
<tr>
<td>Poor parent-teacher communication</td>
</tr>
<tr>
<td>Seeing violence in the community</td>
</tr>
<tr>
<td>Violent messages in rap music</td>
</tr>
<tr>
<td>Seeing violence in the media</td>
</tr>
<tr>
<td>Lack of a dress code</td>
</tr>
</tbody>
</table>
Recent research on cognitive functioning (how the brain works) helps explain why our feelings so readily shape our perceptions (Seidman 1997). Emotional responses to external stimuli travel a shorter circuit in the brain than do reasoned responses (see Exhibit 1.3). The result, according to some cognitive scientists, is “What something reminds us of can be far more important than what it is” (Goleman 1995:294–95). Our emotions can influence us even before we begin to reason about what we have observed.

Our observations also can simply be inaccurate. If a woman says she is hungry and we think she said she is hunted, we have made an inaccurate observation. If we think five people are standing on a street corner when seven actually are, we have made an inaccurate observation. Such errors occur often in casual conversation and in everyday observation of the world around us. In fact, our perceptions do not provide a direct window onto the world around us, for what we think we have sensed is not necessarily what we 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). For example, when looking at the optical illusion in Exhibit 1.4, your visual system deceives you so that the monster in the background seems larger, even though they are exactly the same size.

**Illogical Reasoning**

When we prematurely jump to conclusions or argue on the basis of invalid assumptions, we are using illogical reasoning. For example, it is not reasonable to propose that depictions of violence in media such as television and movies cause violence if evidence indicates that the majority of those who watch such programs do not become violent. However, it is also illogical to
assume that media depictions of gratuitous violence have no effect on individuals. Of course, logic that seems impeccable to one person can seem twisted to another; the problem usually is reasoning from different assumptions rather than failing to “think straight.”

**Resistance to Change**

Resistance to change, the reluctance to change our ideas in light of new information, may occur for several reasons:

- **Ego-based commitments.** We all learn to greet with some skepticism the claims by leaders of companies, schools, agencies, and so on that people in their organization are happy, that revenues are growing, that services are being delivered in the best possible way, and so forth. We know how tempting it is to make statements about the social world that conform to our own needs rather than to the observable facts. It also can be difficult to admit that we were wrong once we have staked out a position on an issue.

- **Excessive devotion to tradition.** Some degree of devotion to tradition is necessary for the predictable functioning of society. Social life can be richer and more meaningful if it is allowed to flow along the paths charted by those who have preceded us. But too much devotion to tradition can stifle adaptation to changing circumstances. When we distort our observations or alter our reasoning so that we can maintain beliefs that “were good enough for my grandfather, so they’re good enough for me,” we hinder our ability to accept new findings and develop new knowledge.

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Exhibit 1.3 Anatomy of an Emotional Hijacking

**Fight or Flight Response:**

*Heart rate and blood pressure increase. Large muscles prepare for quick action.*

consequences can be deadly, as residents of Hamburg, Germany, might have realized in 1892 (Freedman 1991). Until the last part of the 19th century, people believed that cholera, a potentially lethal disease, was due to minute, inanimate, airborne poison particles (miasmas). In 1850, English researcher John Snow demonstrated that cholera was, in fact, spread by contaminated water. When a cholera epidemic hit Hamburg in 1892, the authorities did what tradition deemed appropriate: digging up and carting away animal carcasses to prevent the generation of more miasmas. Despite their efforts, thousands died. New York City adopted a new approach based on Snow’s discovery, which included boiling drinking water and disinfecting sewage. As a result, the death rate in New York City dropped to a tenth of what it had been in a previous epidemic.

Uncritical agreement with authority. If we do not have the courage to evaluate critically the ideas of those in positions of authority, we will have little basis for complaint if they exercise their authority over us in ways we do not like. And if we do not allow new discoveries to call our beliefs into question, our understanding of the social world will remain limited. As we will see in Chapter 3, an extreme example of this problem is obedience to authority figures that can harm and kill others, including acts of genocide.

Now take just a minute to reexamine the beliefs about youth violence that you recorded earlier. Did you grasp at a simple explanation even though reality was far more complex? Were your beliefs influenced by your own ego and feelings about your similarities to or differences from individuals prone to violence? Are your beliefs perhaps based on depictions of violence in the media or fiction? Did you weigh carefully the opinions of authority figures, including politicians, teachers, and even your parents, or just accept or reject those opinions out of hand? Could knowledge of research methods help improve your own understanding of the factors related to violent behavior? By now, we hope that you will see some of the challenges faced by social scientists studying issues related to crime and the criminal justice system.

You do not have to be a scientist or use sophisticated research techniques to recognize and avoid these four errors in reasoning. If you recognize these errors for what they are and make a conscious effort to avoid them, you can improve your own reasoning. In the process, you will also be heeding the admonishments of your parents (or minister, teacher, or other adviser) to refrain from stereotyping people, to avoid jumping to conclusions, and to look at the big picture. These are the same errors that the methods of social science are designed to help criminologists avoid.

The social science approach to answering questions about the social world is designed to greatly reduce these potential sources of error in everyday reasoning. 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. In the realm of social research, these methods are not so unusual. After all, they involve asking questions, observing social groups, and counting people, which we
often do in our everyday lives. However, social scientists develop, refine, apply, and report their understanding of the social world more systematically, or specifically, than Joanna Q. Public:

- Social science research methods can reduce the likelihood of overgeneralization by using systematic procedures for selecting individuals or groups to study that are representative of the individuals or groups that we wish 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 if these criteria are met in a particular instance.
- Because they require that we base our beliefs on evidence that can be examined and critiqued by others, scientific methods lessen the tendency to develop answers about the social world from ego-based commitments, excessive devotion to tradition, and/or unquestioning respect for authority.

### Science Versus Pseudoscience

In philosophical terms, the scientific method represents an epistemology, that is, a way of knowing that relies on objective, empirical investigation. Its techniques must be transparent so that the methods, procedures, and data analyses of any study can be replicated. This transparency allows other researchers to see if the same results can be reproduced. If findings can be replicated, we have greater confidence that the finding is real and not based on bias. Transparency also relies on peer review, the process by which other independent researchers evaluate the scientific merit of the study (you will learn more about this in Chapter 14).

In contrast, if we relied on findings based on intuition, gut reactions, or our own experience, we would be open to the errors we just covered above. If we based findings on these, it would not be science, but instead, it would fall under the classification of pseudoscience. Pseudoscientific beliefs are not based on the scientific method but rather on claims that may be touted as “scientifically proven,” only bolstered by testimonials of believers who have experienced firsthand or who have claimed to have witnessed the phenomenon (Nester and Schutt 2012).

Of course, today’s pseudoscience could be yesterday’s science. In criminological research, phrenology is a good example. In the 19th century, phrenology was the belief that bumps and fissures of the skull determined the character and personality of a person. Doctors doing entry examinations at American prisons would examine a new inmate’s head for bumps or cavities to develop a criminal profile. Advances in cognitive psychology neurology have largely discredited phrenology and placed it within the domain of pseudoscience. It didn’t take a genius to question phrenology, but just a group of researchers adhering to the scientific method. When inmate’s heads were compared to with individual heads in the general population, they were essentially the same!
Motives for Criminological Research

Like you, social scientists read stories about incidents of violence committed by youth, observe this violence occasionally in their lives, and try to make sense of what they see. For most, that is the end of it. But for some social scientists, the problem of youth violence has become a major research focus. The motivations for selecting this particular research focus, as with any social science topic, can be any one or some combination of the following:

**Policy motivations.** Many social service agencies and elected officials seek better assessments and descriptions of youth violence so they can identify needs and allocate responsibility among agencies that could meet these needs. For example, federal agencies such as the U.S. Department of Justice and the Centers for Disease Control and Prevention want to identify the magnitude of youth violence, and many state and local officials use social research to guide development of their social service budgets. Programs designed to rehabilitate young offenders often use research to learn more about the needs of their clientele. These policy guidance and program management needs have resulted in numerous research projects.

**Academic motivations.** Young offenders have been a logical focus for researchers interested in a number of questions ranging from how an individual’s connection to parents and peers influences his or her behavior to how the social conditions under which an individual lives, such as poverty, affect his or her behavior. For example, social scientists have long been concerned with the impact that social disorganization has on individual behavior. Early in this century, researchers at the University of Chicago were interested in the effects that residential mobility and immigration had on levels of crime and delinquency in urban neighborhoods. Today researchers are exploring similar questions concerning the impact of disintegrating economic bases in central cities and their relationship to crime and violence. Other researchers have focused on individual-level explanations such as neurological damage. Those who study social policy also have sought to determine whether correctional programs such as boot camps and other forms of shock incarcera
tion serve to decrease the probability of juveniles reoffending in the future.

**Personal motivations.** Many who conduct research on youth violence feel that by doing so they can help prevent it and/or ameliorate the consequences of this violence when it occurs. Some social scientists first volunteered with at-risk youth in such organizations as Big Brothers Big Sisters and only later began to develop a research agenda based on their experiences.

Social Criminological Research in Practice

Of course, youth violence is not a new phenomenon in the United States. It has always been a popular topic of social science research. However, the sharp increase in this violence in the United States that began in the late 1980s was unprecedented. Predictably, whenever a phenomenon is perceived as an epidemic, numerous explanations emerge to explain it. Unfortunately, most of these explanations are based on the media and popular culture, not on empirical research. Unlike the anecdotal information floating around in the mass media, social scientists interested in this phenomenon have amassed a substantial body of findings that have refined knowledge about the factors related to the problem and shaped social policy (Tonry and Moore 1998). These studies fall into the four categories of purposes for social scientific research:

**Descriptive research.** Defining and describing social phenomena of interest is a part of almost any research investigation, but descriptive research is the primary focus of many studies of youth crime and violence. Some of the central questions used in these studies were “How many people are victims of youth violence?” “How many youth are offenders?” “What are the most common crimes committed by youthful offenders?” and “How many youth are arrested and incarcerated each year for crime?” Measurement (see Chapter 4) and sampling (see Chapter 5) are central concerns in descriptive research.
**Exploratory research.** 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. The goal is to answer the question “What is going on here?” and to investigate social phenomena without expectations. This purpose is associated with the use of methods that capture large amounts of relatively unstructured information. For example, researchers investigating the emergence of youth gangs in the 1980s were encountering a phenomenon with which they had no direct experience. Thus, an early goal was to find out what it was like to be a gang member and how gang members made sense of their situation. Exploratory research like this frequently involves qualitative methods (see Chapter 9).

**Explanatory research.** Many people consider explanation to be the premier goal of any science. Explanatory research seeks to identify causes and effects of social phenomena, to predict how one phenomenon will change or vary in response to variation in some other phenomenon. Researchers adopted explanation as a goal when they began to ask such questions as “Why do people become offenders?” and “Does the unemployment rate influence the frequency of youth crime?” Methods with which to identify causes and effects are the focus of Chapter 6.

**Evaluation research.** Evaluation research seeks to determine the effects of a social program or other types of intervention. It is a type of explanatory research because it deals with cause and effect. However, evaluation research differs from other forms of explanatory research because evaluation research considers the implementation and effects of social policies and programs. These issues may not be relevant in other types of explanatory research. The increase of youth violence in the 1990s spawned many new government programs and, with them, evaluation research to assess the impact of these programs. Some of these studies are reviewed in Chapter 7, which covers experimental design, and in Chapter 11, which covers evaluation research.

We will now summarize one study in each of these four areas to give you a feel for the projects motivated by those different concerns.

**Description: How Prevalent Is Youth Violence?**

**Police reports.** One of the most enduring sources of information on lethal violence in the United States is the Federal Bureau of Investigation’s (FBI) Supplementary Homicide Reports (SHR). Homicide victimization rates indicate that for those under the age of 24, vulnerability to murder increased dramatically during the mid-1980s through about 1994 when rates began a steady decline. With some annual fluctuations from year to year, rates of homicide victimization for this age group leveled off after 2000 through 2008 (the most recent data available) (Cooper and Smith 2011). What accounted for this unprecedented rise in youth violence during the late 1980s and early 1990s? To answer this question, explanatory research is necessary. After their in-depth descriptive analysis of youth violence during this time, Cook and Laub (1998) contend that the increasing homicide rates began with the introduction of crack cocaine and the conflict that surrounded its marketing. However, the primary factor, they believe, was the increased easy availability of firepower: “All of the increase in homicide rates was with guns, and it appears to be changing access [to] and use of guns, rather than a change in the character of the youths, that best accounts for their increased involvement in lethal violence” (p. 60).

Data measuring the prevalence of nonlethal forms of violence such as robbery and assaults are a bit more complicated. How do we know how many young people assault victims each year? People who report their victimizations to police represent one avenue for these calculations. The FBI compiles these numbers in its Uniform Crime Reporting system, which is slowly being replaced by the National Incident-Based Reporting System (NIBRS). Both of these data sources rely on state, county, and city law enforcement agencies across the United States to voluntarily participate in
the reporting program. Can you imagine why relying on these data sources may be problematic for estimating prevalence rates of violent victimizations? If victimizations are never reported to police, they are not counted. This is especially problematic for victimizations between intimate partners and other offenses like rape in which only a fraction of incidents are ever reported to police.

**Surveys.** Instead, most social scientists believe the best way to determine the magnitude of violent victimization is through random sample surveys. While we will discuss survey methodology in greater detail in Chapter 8, this basically means randomly selecting individuals in the population of interest and asking them about their victimization experiences. The only ongoing survey to do this on an annual basis is the National Crime Victimization Survey (NCVS), which is sponsored by the U.S. Department of Justice's Bureau of Justice Statistics. Among other questions, the NCVS asks questions like “Has anyone attacked or threatened you with a weapon, for instance, a gun or knife; by something thrown, such as a rock or bottle, include any grabbing, punching, or choking?” Estimates indicate that youth aged 12 to 24 all have the highest rates of violent victimization, which have been declining steadily since the highs witnessed in the early 1990s, despite the recent increases observed in homicide rates for this age group in some locations.

Another large research survey that estimates the magnitude of youth violence (along with other risk-taking behavior such as taking drugs and smoking) is called the Youth Risk Behavior Survey (YRBS), which has been conducted every 2 years in the United States since 1990. Respondents to this survey are a national sample of approximately 16,000 high school students in Grades 9 through 12. To measure the extent of youth violence, students are asked the following questions: “During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?” “During the past 12 months, how many times were you in a physical fight?” “During the past 12 months, how many times were you in a physical fight in which you were injured and had to be seen by a doctor or nurse?” “During the past 30 days, how many times did you carry a weapon such as a gun, knife, or club on school property?” “During the past 12 months, how many times were you in a physical fight on school property?” and “During the past 12 months, how many times did someone threaten or injure you with a gun, knife, or club on school property?”

Of course, another way to measure violence would be to ask respondents about their offending behaviors. Some surveys do this, including the National Youth Survey (NYS) and the Rochester Youth Development Study (RYDS). The RYDS sample consists of 1,000 students who were in the seventh and eighth grades of the Rochester, New York, public schools during the spring semester of the 1988 school year. This project has interviewed the original respondents at 12 different times (we will discuss longitudinal research of this kind in Chapter 6) including the last interview that took place in 1997 when respondents were in their early 20s (Thornberry et al. 2008). As you can imagine, respondents are typically more reluctant to reveal offending behavior compared to their victimization experiences. However, these surveys have been a useful tool for examining the factors related to violent offending and other delinquency. We should also point out that although this discussion has been specific to violence, the measures we have discussed in this section, along with their strengths and weaknesses, apply to measuring all crime in general.

**Exploration: How Do Schools Respond to Gun Violence?**

Research that is exploratory in nature is generally concerned with uncovering detailed information about a given phenomenon, learning as much as possible about particular people and/or events. Asmussen and Creswell (1995) were interested in the responses to school shooting incidents. Because school shootings are relatively rare and there was virtually no empirical literature that addressed the topic, Asmussen and Creswell performed an in-depth qualitative case study of a shooting incident that occurred at a large public university. The incident occurred in a senior-level actuarial science class when a male graduate student arrived early for the class one Monday morning armed with a vintage Korean War semiautomatic military rifle loaded with a 30-round clip of .30-caliber ammunition. He carried another 30-round clip in his pocket. Twenty of the 34 students in the class were already there, and most of them were quietly reading the student newspaper. The instructor was on route to class. The gunman pointed the rifle at the students, swept it across the room, and pulled the trigger. The gun jammed. Trying to unlock the rifle, he hit the butt of it on the desk and quickly tried firing it again. Again it did not fire. By this time, most students had realized what was happening and dropped to the floor,
overturned their desks, and tried to hide behind them. After about 20 seconds, one of the students shoved a desk into the
gunman, and students ran past him out into the hall and out of the building. The gunman hastily left the room and went
out of the building to his parked car, which he had left running. He was captured by police within the hour.

Asmussen and Creswell (1995) were surprised to find that instead of seeking safety after leaving the classroom,
all the students had stood together just outside the building. Although a few were openly emotional and crying, many
were kidding about the incident, as if it had posed no real danger. This denial response is noted by the mental health
literature, which finds that feelings of fear and anger usually follow an initial response of denial and disbelief. The
researchers found that many people in addition to the students who witnessed it were traumatized by the incident. In
fact, three distinct groups of people sought counseling services during the weeks following the event. The first group
had some direct involvement with the assailant, either by seeing him the day of the gun incident or because they had
known him personally. The second group was the “silent connection,” comprising individuals who were indirectly
involved and yet emotionally traumatized. A large number in this group were parents. The third group included people
who had previously experienced a trauma and whose fears were retriggered by this incident.

Because the assailant’s future was in the hands of the criminal justice system, the importance of information from
this system became critical to feelings of safety. Two combined debriefing sessions by mental health counselors, the
campus police chief, and two county attorneys were held for all those interested.

Another phenomenon observed on the campus was an increase in the number of professors and staff who were
concerned with disruptive students or students who exhibited aberrant behavior in class. To manage this, the Student
Judiciary Office advised departments on various methods of dealing with students who exhibited abnormal behavior
in class. In addition, plainclothes police officers were sent to sit outside classrooms and offices whenever faculty and
staff indicated concerns.

To their surprise, Asmussen and Creswell (1995) found that the campus did not establish a special unit to manage
future incidents. The only structural change made was the installation of emergency phones throughout the campus.
In addition, no discussion was reported about formal linkages with community agencies that might assist in the event
of a future tragedy. In the end, Asmussen and Creswell’s exploratory research illustrates the complexity involved in
responding to a campus shooting.

Explanation: What Factors Are Related to Youth Delinquency and Violence?

What are some of the factors related to youth violence? Using the South Carolina YRBS, MacDonald et al. (2005) exam-
ined the efficacy of General Strain Theory (GST) (Agnew 1992) and Gottfredson and Hirschi’s General Theory of Crime
(1990) in predicting youth violence. GST generally contends that strain, such as disjunction between expectations
and aspirations (e.g., wanting a good job but not being able to get one), increases the likelihood that individuals will
experience negative emotions, which in turn increases the likelihood of antisocial or violent behavior. These negative
emotions include anger, anxiety, dissatisfaction, and so on. The general theory of crime claims that self-control, which
is primarily formed by the relationship children have with their parents and/or guardians, is the motivating factor for
all crime. Individuals with low self-control, the theory predicts, will be more likely to pursue immediate gratification,
be impulsive, prefer simple tasks, engage in risky behavior, have volatile tempers, and so on.

To measure violent behavior, the YRBS asks respondents how many times in the past 30 days they carried a weapon
and how many times they were in a physical fight. To measure life satisfaction, MacDonald et al. (2005) used six ques-
tions that asked respondents to report on general satisfaction or the degree to which they felt “terrible” or “delighted”
about family life, friendships, school, self, residential location, and overall life. To measure self-control, the authors used
the indicators of smoking and sexual behavior to represent risky behaviors that are not illegal since they “reflect impul-
sivity and short-run hedonism” (p. 1502). When predicting violent behavior, they also controlled for a number of other
factors like employment, drug use, family structure, and religious participation, along with age, race, and gender.

Consistent with the general theory of crime, MacDonald et al. (2005) found that high school students who
reported more impulsive behaviors, indicative of low self-control, also reported greater participation in violent
behavior. In addition, results indicated that students who were more satisfied with life were significantly less likely to
have engaged in violence compared to their less satisfied peers.
Evaluation: Do Violence Prevention Programs in Schools Work?

To reduce violence and create a safer atmosphere at schools across the country, literally thousands of schools have adopted some form of violence prevention training (Powell, Muir-McClain, and Halasyamani 1995). These programs generally provide cognitive-behavioral and social skills training on various topics using a variety of methods. Such programs are commonly referred to as conflict resolution and peer mediation training. Many of these prevention programs are designed to improve interpersonal problem-solving skills among children and adolescents by training children in cognitive processing, such as identifying the interpersonal problem and generating nonaggressive solutions. There is limited evidence, however, that such programs are actually effective in reducing violence.

Grossman et al. (1997) assessed the efficacy of one such program for children in elementary school called “Second Step: A Violence Prevention Curriculum.” The program involved 30 lessons, each lasting about 35 minutes, taught once or twice a week. Each lesson consisted of a photograph accompanied by a social scenario that formed the basis for discussion, role-playing, and conceptual activities. Lessons were arranged in three units: (1) empathy training, in which students identified their own feelings and those of others; (2) impulse control, in which students were presented with a problem-solving strategy and behavioral skills for affecting solutions (e.g., apologizing or dealing with peer pressure); and (3) anger management, in which students were presented with a coping strategy and behavioral skills for tense situations.

Twelve elementary schools in King County, Washington, were paired according to three criteria: the school district, the proportion of students receiving free or reduced-cost lunch, and the proportion of minority enrollment. After pairing, schools in each pair were randomly assigned either to receive the Second Step program (experimental groups) or to receive no violence prevention curriculum (control groups). Random assignment was necessary so the researchers could be more confident that any differences observed in aggression and violent behavior between the two groups after the program could be attributed to the program alone and not to some other factor. Violent and aggressive behavior was measured in three ways: teacher ratings of each child’s behavior, parent ratings, and direct observation of students by trained observers in the classroom, on the playground, and in the cafeteria. Measures of aggression were taken at three time periods: before the start of the curriculum (baseline), 2 weeks after the conclusion of the curriculum, and 6 months after the curriculum.

To determine the effectiveness of the Second Step program, researchers examined the change in aggression between scores measured at baseline and those from the second and third periods of data collection. Grossman et al. (1997) found encouraging results: Observed physically aggressive behavior decreased significantly more among children who engaged in the curriculum than among children in the control group who were not exposed to the Second Step program. Moreover, prosocial behavior increased significantly among children in the Second Step program compared to the control group. Grossman et al. concluded, “This violence prevention curriculum appears to lead to modest reductions in levels of aggressive behavior and increases in neutral/prosocial behavior in school among second and third graders” (p. 1608).

Strengths and Limitations of Social Research

These case studies are only four of the dozens of studies investigating youth violence, but they illustrate some of the questions criminological research can address, several different methods social scientists studying these issues can use, and ways criminological research can inform public policy. Notice how each of the four studies was designed to reduce the errors common in everyday reasoning:

- The clear definition of the population of interest in each study and the selection of a broad, representative sample of that population in two studies increased the researchers’ ability to draw conclusions without overgeneralizing findings to groups to which they did not apply.
• The use of surveys in which each respondent was asked the same set of questions reduced the risk of selective or inaccurate observation.

• The risk of illogical reasoning was reduced by carefully describing each stage of the research, clearly presenting the findings, and carefully testing the basis for cause-and-effect conclusions.

• Resistance to change was reduced by using an experimental design that randomly assigned classes to an experimental treatment (the Second Step program) and a control group to fairly evaluate the efficacy of the program.

Nevertheless, we would be less than honest if we implied that you enter the realm of beauty, truth, and light whenever you engage in research or whenever you base your opinions only on the best available social research. Research always has some limitations and some flaws (as does any human endeavor), and findings are always subject to differing interpretations. Social research permits you to see more, to observe with fewer distortions, and to describe more clearly to others what your opinions are based on, but it will not settle all arguments. Other people will always have differing opinions, and some of those others will be social scientists who have conducted their own studies and drawn different conclusions. Do other programs similar to Second Step reduce levels of aggression among students? Only a handful of studies have used randomized controlled designs to examine these programs, and the results of these studies have been mixed. Like the Grossman et al. (1997) study, some researchers have found a reduction in aggressive behavior by children exposed to such social skills training programs, whereas others have not. Until more scientific research is conducted to evaluate these programs, it is difficult to determine whether the money poured into such programs by school districts is well spent.

But even in areas of research that are fraught with controversy, where social scientists differ in their interpretations of the evidence, the quest for new and more sophisticated research has value. What is most important for improving understanding of the social world and issues in criminology is not the result of any particular study but the accumulation of evidence from different studies of related issues. By designing new studies that focus on the weak points or controversial conclusions of prior research, social scientists contribute to a body of findings that gradually expands our knowledge about the social world and resolves some of the disagreements about it.

Social researchers investigating issues in criminal justice and criminology will always disagree somewhat because of their differing research opportunities, methodological approaches, and policy preferences. There are many heated debates in the criminological literature. For example, one issue that has recently received increased attention is how the availability of guns is related to overall levels of violence. Some research has found that greater gun availability is associated with more robberies, home burglaries, assaults, and homicides with guns. However, others have argued that gun ownership for self-defense can reduce robbery and home burglary completion rates, thus theoretically decreasing the rewards for these crimes and increasing the perceived risks to offenders. According to yet another view, someone who is planning an attack and fears that potential robbery and/or burglary victims are armed may simply decide to acquire superior firepower and carry out the attack regardless (for review, see Reiss and Roth 1993). As you can see, much more research is required using a variety of methods to resolve this debate.

Whether you plan to conduct your own research projects, read others’ research reports, or just think about and act in the social world, knowing about research methods has many benefits. This knowledge will give you greater confidence in your own opinions, improve your ability to evaluate others’ opinions, and encourage you to refine your questions, answers, and methods of inquiry about the social world.

Of course, the methods of social science, as careful as they may be, cannot answer all questions of interest to criminologists. Should we do unto others what we would have them do unto us? That is a very important question that has been asked throughout history, but we must turn to religion or philosophy to answer questions about values. Social research on the consequences of forgiveness or the sources of interpersonal conflict may help us understand and implement our values, but even the best research cannot tell us which values should guide our lives.
Chapter 1  Science, Society, and Criminological Research  15

**Types of Research Methods**

As you will see in this book, the data we utilize in criminological research are derived from many different sources, and the research methods we employ in criminology and criminal justice are very diverse.

An **experimental approach** is used in criminological research, particularly when the efficacy of a program or policy is being evaluated. As we will see in Chapter 6, true experiments must have three things: two groups (one receiving the treatment or intervention and the other receiving no treatment or another form thereof), random assignment to these two groups, and an assessment of change in the outcome variable after the treatment or policy has been received. Quasi-experimental designs, experiments that lack one of these three ingredients, also are used in our discipline. Chapter 11 focuses exclusively on research designs used in evaluation research.

Asking people questions on **surveys** or **questionnaires**, as we highlighted above, is another popular method used by criminological researchers and is probably the most versatile. Most concepts about individuals can be defined in such a way that measurement with one or more questions becomes an option. These surveys can be self-administered by respondents (e.g., through the mail) or can be read by an interviewer (e.g., through a telephone survey).

Although in principle survey questions can be a straightforward and efficient means to measure individual characteristics, facts about events, level of knowledge, and opinions of any sort, in practice survey questions can result in misleading or inappropriate answers. All questions proposed for a survey must be screened carefully for their adherence to basic guidelines and then tested and revised until the researcher feels some confidence that they will be clear to the intended respondents (Fowler 1995). Some variables may prove to be inappropriate for measurement with any type of question. We have to recognize that memories and perceptions of the events about which we might like to ask can be limited. Specific guidelines for writing questions and developing surveys are presented in Chapter 8.

In other cases, a researcher may want to make her presence known and directly participate in the activity being observed. Included in this type of research design is **participant observation**, which involves developing a sustained and intensive relationship with people while they go about their normal activities. In other instances, the subject matter of interest may not be amenable to a survey, or perhaps we want more detailed and in-depth information than questions with fixed formats can answer. In these cases, we turn to research techniques such as participant observation and **intensive interviewing**. These methods are preferred when we seek in-depth information on an individual’s feelings, experiences, and perceptions. Chapter 9 shows how these methods and other field research techniques can uncover aspects of the social world that we are likely to miss in experiments and surveys.

**Secondary data analysis** (Riedel 2000), which is the reanalysis of already existing data, is another method used by researchers. These data usually come from one of two places: from official sources such as local or federal agencies (e.g., rates of crime reported to police, information on incarcerated offenders from state correctional authorities, adjudication data from the courts) or from surveys sponsored by government agencies or conducted by other researchers. Virtually all the data

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**Experimental approach** An approach in which the researcher assigns individuals to two or more groups in a way that equates the characteristics of individuals in the groups (with a certain chance of error), except for variation in the groups’ exposure to the independent variable.

**Surveys** Popular and versatile research instruments using a question format. Surveys can either be self-administered or read by an interviewer.

**Questionnaire** The instrument containing the questions on a self-administered survey.

**Participant observation** A type of field research in which a researcher develops a sustained and intensive relationship with people while they go about their normal activities.

**Intensive interviewing** Open-ended, relatively unstructured questioning in which the interviewer seeks in-depth information on the interviewee’s feelings, experiences, and/or perceptions.
collected by government agencies and a great deal of survey data collected by independent researchers are made available to the public through the Inter-University Consortium for Political and Social Research (ICPSR), which is located at the University of Michigan. When documents from the past, such as correspondence, newspaper accounts, and trial transcripts, are analyzed, the research is generally termed **historical events research**. Another type of indirect measurement is called **content analysis**. In this type of study, a researcher studies representations of the research topic in such media forms as news articles, TV shows, and radio talk shows. An investigation of the drinking climate on campuses might examine the amount of space devoted to ads for alcoholic beverages in a sample of issues of the student newspaper. Campus publications also might be coded to indicate the number of times that statements discouraging substance abuse appear. Content analysis techniques also can be applied to legal opinions, historical documents, novels, songs, or other cultural productions. With the advent of computer technology, **crime mapping** also has become a popular method for examining the relationship between criminal behavior and other social indicators. Chapter 10 covers each of these methodologies and illustrates the importance of these unobtrusive research techniques in criminology and criminal justice. Increasingly, researchers are combining methods to more reliably answer a single research question. Although examples of mixed methods research are highlighted in several chapters, Chapter 12 provides an overview of the philosophy and motivation for combining methods, along with the various techniques for doing so.

## Quantitative and Qualitative Methods

In general, research methods can be divided into two somewhat different domains called quantitative research methods and qualitative research methods. Did you notice the difference between the types of data the case studies discussed at the beginning of the chapter used? The data collected in the YRBS were counts of the responses students gave on the survey. These data were numerical, so we say that this study used **quantitative methods**. MacDonald et al. (2005) looked at the extent to which impulsivity and life satisfaction affected students’ participation in violence; they examined this relationship with statistical methods like correlations and regression coefficients. This, too, represents quantitative methods. In contrast, Asmussen and Creswell’s (1995) exploratory study used in-depth interviews with people who had experienced the attempted school shooting. This methodology was designed to capture the social reality of the participants as they experienced it, in their own words rather than in predetermined categories. Because the researchers focused on the participants’ words rather than counts and numbers, we say that this study used **qualitative methods**.

The distinction between quantitative and qualitative methods involves more than just the type of data collected. Quantitative methods are most often used when the motives for research are explanation, description, or evaluation. Exploration is the most common motive for using qualitative methods, although researchers also use these methods for descriptive and evaluative purposes. The goals of quantitative and qualitative researchers also may differ. Whereas quantitative researchers
generally accept the goal of developing an understanding that correctly reflects what is actually happening in the real world, some qualitative researchers instead emphasize the goal of developing an “authentic” understanding of a social process or social setting (Gubrium and Holstein 1997). An authentic understanding is one that reflects fairly the various perspectives of participants in that setting.

As important as it is, we do not want to place too much emphasis on the distinction between qualitative and quantitative methods because social scientists often combine these methods in order to enrich their research. For example, “qualitative knowing” about social settings can be essential for understanding patterns in quantitative data (Campbell and Russo 1999:141). Qualitative data can be converted to quantitative data, for example, when we count the frequency of particular words or phrases in a text or measure the time elapsed between different behaviors that we have observed. Surveys that collect primarily quantitative data also may include questions asking for written responses, and these responses may be used in a qualitative, textual analysis. Researchers using quantitative methods may engage in some exploration in order to find unexpected patterns in their data. Qualitative researchers may test explicit explanations of social phenomena using textual or observational data.

As noted above, the use of multiple methods to study one research question is called *triangulation*. The term suggests that a researcher can get a clearer picture of the social reality being studied by viewing it from several different perspectives. Each will have some liabilities in a specific research application, and all can benefit from a combination of one or more other methods (Brewer and Hunter 1989; Sechrest and Sidani 1995).

As you will see in the chapters that follow, the distinction between quantitative and qualitative data is not always sharp. We’ll examine such “mixed method” possibilities in each of the chapters that review specific methods of data collection.

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**Conclusion**

We hope this first chapter has given you an idea of what to expect in the rest of this book. Our aim is to introduce you to social research methods by describing what social scientists have learned about issues in criminology and criminal justice as well as how they learned it. The substance of social science inevitably is more interesting than its methods, but the methods also become more interesting when they are not taught as isolated techniques. We have focused attention on research on youth violence and delinquency in this chapter; in subsequent chapters, we will introduce research examples from other areas.

Chapter 2 continues to build the foundation for our study of social research by reviewing the types of problems that criminologists study, the role of theory, the major steps in the research process, and other sources of information that may be used in social research. We stress the importance of considering scientific standards in social research and review generally accepted ethical guidelines. Throughout the chapter, we use several studies of domestic violence to illustrate the research process.

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**Key Terms**

- Content analysis  16
- Crime mapping  16
- Descriptive research  9
- Epistemology  8
- Evaluation research  10
- Experimental approach  15
- Explanatory research  10
- Exploratory research  10
- Historical events research  16
- Illogical reasoning  5
- Inaccurate observation  5
- Intensive interviewing  15
- Overgeneralization  4
- Participant observation  15
- Peer review  8
Criminological research cannot resolve value questions or provide answers that will convince everyone and remain settled for all time.

All empirically based methods of investigation are based on either direct experience or others' statements.

Four common errors in reasoning are overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change. Illogical reasoning is due to the complexity of the social world, self-interestedness, and human subjectivity. Resistance to change may be due to unquestioning acceptance of tradition or of those in positions of authority or to self-interested resistance to admitting the need to change one's beliefs.

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

Pseudoscience are claims based on beliefs and/or public testi monials, not on the scientific method.

Criminological research can be motivated by policy guidance and program management needs, academic concerns, and charitable impulses.

Criminological research can be descriptive, exploratory, explanatory, evaluative, or some combination of these.

Quantitative methods record variation in social life in terms of categories that vary in amount. Qualitative methods are designed to capture social life as participants experience it, rather than in categories predetermined by the researcher.

Triangulation is the use of multiple research methods to study a single research question.

Research in the News

Are Youth Desensitized to Violence?

Oakland, California, had several shootings in 2011 that resulted in very young victims. For example, 5-year-old Gabriel Martinez, Jr. was shot as he played near his father’s business. After several years of declining violent crime, shootings in Oakland increased rapidly, with about five people shot or shot at a day. In an article in the New York Times, the experts interviewed gave their perceptions of the reasons for the increased violence. For example, Anthony Del Toro of California Youth Outreach said, “To secure a gun in Oakland is like looking for some candy.” Another youth worker believed that kids were too desensitized to violence because “Young people see it all the time.” The police department appeared to blame the budget cuts they have sustained that has resulted in officer layoffs. How could these beliefs translate into more scientifically based facts?


Exercises

1. What criminological topic or issue would you focus on if you could design a research project without any concern for costs? What are your motives for studying this topic? List at least four of your beliefs about this phenomenon. Try to identify the sources of each belief (e.g., television, newspaper, parental influence).
Develop four research questions related to your chosen topic or issue, one for each of the four types of research (descriptive, exploratory, explanatory, and evaluative). Be specific.

Read the abstracts of each article in a recent issue of a major criminological journal. Identify the type of research conducted for each study.

Find a report of social science research in an article in a daily newspaper. What are the motives for the research? How much information is provided about the research design? What were the major findings? What additional evidence would you like to see in the article to increase your findings in the research conclusions?

Developing a Research Proposal

Will you develop a research proposal in this course? If so, you should begin to consider your alternatives.

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 motive: description, exploration, explanation, or evaluation. Be specific.
3. Which question most interests you? Would you prefer to attempt to answer that question with quantitative or qualitative methods? Why?

Log on to the Web-based student study site at www.sagepub.com/bachmanprccj5e for additional study tools including eFlashcards, Web quizzes, links to SAGE journal articles, podcasts, videos, data sets and codebooks, Web exercises, Web resources, and additional appendices.

Web Exercises

1. You have been asked to prepare a brief presentation on a criminological topic or issue of interest to you. Go to the Bureau of Justice Statistics (BJS) Web site at www.ojp.usdoj.gov/bjs/. Browse the BJS publications for a topic that interests you. Write a short outline for a 5- to 10-minute presentation regarding your topic, including how the data were collected, statistics, and other relevant information.
2. Go to the Federal Bureau of Investigation (FBI) Web site at www.fbi.gov. Explore the types of programs and initiatives sponsored by the FBI. Discuss at least three of these programs or initiatives in terms of their purposes and goals. For each program or initiative examined, do you believe the program or initiative is effective? What are the major weaknesses? What changes would you propose the FBI make to more effectively meet the goals of the program or initiative?
3. Go to the Web site of a major newspaper and find an article that talks about the causes of violence. What conclusions does the article draw and what research methods does the author discuss to back up his or her claims?

Ethics Exercises

Throughout the book, we will be discussing the ethical challenges that arise in research on crime and criminal justice. At the end of each chapter, we will 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 will begin here with some questions for you to ponder.

1. You have now learned about Asmussen and Creswell’s (1995) qualitative study of a school shooting incident. We think it provided important information for policymakers about the social dynamics in these tragedies. But what would you do if you were conducting a similar study in a high school and you learned that another student was planning to bring a gun to school to kill some other students? What if he was only thinking about it? Or just talking with his friends about how “neat” it would be? Can you suggest some guidelines for researchers?

2. Grossman et al. (1997) found that the Second Step program reduced aggressive behavior in schools and increased pro-social behavior. If you were David Grossman, would you announce your findings in a press conference and encourage schools to adopt this program? If you were a school principal who heard about this research, would you agree to let another researcher replicate (repeat) the Grossman et al. study in your school, with some classrooms assigned to receive the Second Step program randomly (on the basis of the toss of a coin) and others not allowed to receive the program for the duration of the study?

SPSS or Excel Exercises

The SPSS exercises at the end of each chapter use the data sets included on the companion Web site. In NCVS.ASSAULT.POR, a sample of assault incidents from the National Crime Victimization Survey for 1992–2005, variable V2089, identifies the metropolitan statistical area (MSA) status (urban, suburban, or rural) of each assault incident included in the data set.

1. Create a bar chart of V2089 using the graph procedure to show the percentage of assault incidents occurring in urban, suburban, and rural areas. Be sure to leave out the missing values. What do you conclude about the distribution of assaults by geographic location?

2. Write four research questions, one for each type of social research (descriptive, exploratory, explanatory, and evaluative), regarding the distribution of assault incidents by MSA status.

3. Discuss the possible reasons (policy, academic, or personal) for conducting research on the location of assault incidents.

4. Now find the variable that indicates the relationship between the victim and the offender. After reviewing the frequency distribution for this variable (remember to make sure the missing cases are coded missing), by whom are we most likely to be attacked?