

## ‡ SIX ‡

# CRIME PATTERNS, EVALUATING CRIME POLICIES, AND CRIMINOLOGICAL THEORIES



*Any set of crime statistics, including those of survey research, involve some evaluative, institutional processing of peoples' reports. Concepts, definitions, quantitative models, and theories must be adjusted to the fact that the data are not some objectively observable universe of "criminal acts," but rather those events defined, captured, and processed as such by some institutional mechanism.*

—Biderman & Reiss (1967, p. 1)

**T**he basic assumption underlying this book has been that accurate crime measurement is essential for describing the social and spatial distribution of crime and for evaluating the effectiveness of various criminological theories and crime control policies. We began the book with a discussion of social measurement more generally, proceeded to a discussion of the history of measuring crime and other social phenomena, and addressed the three major methods of measuring crime. What has not been done in the previous chapters, however, is to synthesize the findings from the three approaches and examine how the reliability and validity of crime statistics related to the evaluation of crime control theory and practice.

Three major issues in crime measurement are addressed in this final chapter. First, we summarize the collective wisdom about crime that derives from police reports, self-reports, and victimization surveys. This involves a description of crime trends and the characteristics of offenses, offenders, and victims. Second, the link between accurate crime statistics and public policy is examined by illustrating how dubious crime measurement has hampered the evaluation of the effectiveness of crime control programs as well as the validation and development of criminological theory. We then discuss an emerging and important issue in official crime data—the collection of data on the race and ethnicity of offenders by law enforcement officers—and follow with an examination of a drug use prevention program that used questionable data to make claims of effectiveness. We conclude the chapter with a discussion and assessment of recent developments in measuring crime.

## CRIME TRENDS

Whatever their limitations and orientation, all three major methods of counting crime provide estimates of its extent and social distribution. Crime trends may exhibit similarities and differences across these different methods and over time. By examining the crime data that derive from these methods collectively, several general conclusions about the prevalence and nature of criminal activity are supported.

### **The Volume of Crime**

By all indications, crime statistics reveal that there is a great deal of crime in industrial societies. Given the limitations in methods discussed in earlier chapters, however, the absolute volume of crime in a particular jurisdiction is anyone's guess. But crime in the United States seems especially high when compared to other Western countries.

According to the most recent UCR data (UCR, 2008), a serious property crime becomes known to the police every 3 seconds in the United States, with a larceny-theft reported every 5 seconds, a burglary about every 15 seconds, and a motor vehicle theft every 29 seconds. Serious violent crimes are reported at a somewhat lower rate of every 22 seconds, with a reported aggravated assault every 37 seconds, a robbery about every minute, a forcible rape every 6 minutes, and a murder every 37 minutes. An estimated total of about 11 million Part I offenses were known to the police in 2008 and recorded in the UCR program. Obviously, for reasons discussed in Chapter 3 (i.e., a majority of crimes are unknown to the police, many are unfounded or downgraded by the police departments that discover them, and the use of the hierarchy rule), these

official counts of crime in the United States grossly underestimate the true volume. Even among serious violent and property crimes, UCR data represent only the tip of the proverbial iceberg.

The volume of crime in the United States based on self-reports of offending and national victimization surveys is equally staggering. Illegal drug and alcohol use are rampant, according to National Youth Surveys (NYS) and other sources, and although they are not Part I offenses, these account for the highest number of arrests in official crime data. In 2008, there were 180,100 arrests of juveniles for drug abuse violations, 131,800 for violation of liquor laws (primarily a minor in possession of alcohol), and 15,400 for drunkenness (Puzzanchera, 2009). When self-report questions focus on more serious property and violent offenses, a large proportion of U.S. youth admit to engaging in these activities.

According to the most recent National Crime Victimization Survey (NCVS, 2008), people in the United States aged 12 or older experienced approximately 21.3 million violent and property victimizations in 2008. If these victimizations were equally dispersed across all persons and households in the country, it would mean that about 2% of all U.S. residents experienced a violent crime and about 13% of U.S. households were victims of property crime in 2008. Given the limitations in reporting both offending and victimization experiences, these unofficial measures of crime in the United States are also likely to severely underestimate the volume of crime.

### **Changes in Crime Rates Over Time**

Police statistics on known offenders and victimization surveys reveal different patterns with respect to changes in crime rates over time. Crime rates based on police data in the United States increased dramatically between 1960 and 1990, and they have declined noticeably since the mid-1990s. These official crime trends are similar for both violent and property crimes. Victimization surveys in the United States, however, indicate crime trends that are qualitatively different from those based on police data. Specifically, violent victimization rates remained fairly stable between the early 1970s and mid-1990s, before declining in a fashion similar to the trend revealed in the UCR data. Contrary to the pattern of a rise and fall in property crimes shown in the UCR data, victimization surveys indicate that property crime has exhibited a rather continuous decline since the mid-1970s.

The contradictions in crime trends based on UCR and NCVS data are explained in large part by differences across these methods in their coverage of crimes, rules for counting crime incidents, and the population base from which rates are computed. Unfortunately, the limitations that surround both these measures of crime make it difficult to have strong confidence in either of the apparent trends. Under these conditions, it is unclear whether, or in what way, crime rates in the United States have actually changed in the last four decades.

## The Nature of Criminal Offenses

The convergence in findings across the various methods of measurement is more pronounced in regard to the nature of criminal offenses. By all accounts, most crime in the United States involves relatively minor property offenses that occur with some frequency. Larceny-theft is by far the most frequently reported offense under the UCR classification, and thefts from in and around the household are the most common victimization experience reported in the NCVS data. Although these property offenses may generate fear and concerns about the effectiveness of law enforcement and other crime control efforts, the direct, objective harm to the victim from these property offenses is often minimal. Likewise, the vast majority of violent offenses in the United States are attempts or threats that involve little or no injury to the victim. These offenses are classified as either simple or common assaults under various jurisdictions. Although less than 5% of individuals responding to victimization surveys report being the victim of an assault in the previous six months, these offenses are grossly underreported in both victimization and police data, especially when they involve no physical injury, mutual combat and arguments among peers, and domestic violence situations.

Another common pattern with respect to the nature of crime involves the victim-offender relationship in violent offenses. Specifically, the UCR data indicate that most homicides occur among known parties (especially acquaintances), and a similar pattern is found for simple assaults and rapes in the NCVS data. The actual proportion of violent crimes occurring among known parties is probably even greater when one considers the underreporting of crimes among intimates in police data and the typical exclusion of violent crimes by intimates in victimization surveys.

Although it is certainly true that the majority of homicides committed in the United States involve the use of firearms, contrary to the popular image of the nature of violent crime, the vast majority of violent offenses do not involve the use of deadly weapons. No external instrument (e.g., gun, knife, club) was used in more than two thirds of assaults and rapes reported in NCVS data. In official data, robbery was the only offense other than homicide in which most of the incidents involved a lethal weapon. Almost 4 out of every 10 robberies identified in UCR data involved the use of a firearm, compared to only about 25% of the robberies reported in victimization surveys.

Several other characteristics are also associated with incidents of crime. For example, the majority of violent crimes involve situations of single victims and single offenders. More than 90% of violent crimes identified in victimization surveys involve an attack on a sole victim, and about three fourths of these offenses involve one offender. Multiple offenders are most prevalent in cases of robbery victimization. Contrary to popular images of interracial conflict, the vast majority of violent offenses involve victims and offenders who are of the same race.

## **Profile of Criminal Offenders**

Police arrest statistics, self-reports of criminal activity, and victims' reports on the characteristics of their attackers provide somewhat different perspectives on the profile of criminal offenders. Nonetheless, these data sources yield a comparable image of the sociodemographic characteristics of criminal offenders.

Across all three methods of counting crime, offenders are disproportionately young, male, and members of ethnic or racial minority groups. UCR data indicate that approximately 15% of those arrested are under the age of 18, 76% are male, and about 28% are black. A higher proportion of arrests for property offenses in the UCR involve juveniles (26%), whereas the overrepresentation of both males (65%) and blacks (30%) in property offenses is less dramatic than is true for violent crime (UCR 2008).

Although the differences across some groups are less pronounced and the accuracy of victims' accounts of the characteristics of offenders must be considered, victims in the NCVS also perceive their assailants to be disproportionately young, male, and black. Smaller differences by age, sex, and race are found in studies of self-reported criminal behavior.

It is important to consider these demographic differences in offending in the context of the limitations of the particular data sources. Specifically, the largest differences are revealed in police reports, but these official data are also the most vulnerable to selective reporting and recording practices, and they may be the product of bias on the part of law enforcement. Self-report studies, in contrast, often measure involvement in less serious crimes and elicit the smallest differences across demographic categories. Under these conditions, one of the most serious mistakes in criminological theory and crime control policy may be placing too much emphasis on these presumed differences in criminal involvement by age, sex, and race. The safest strategy is to recognize these differential risks of involvement in criminal offending while at the same time acknowledging that criminal offending is a phenomenon that occurs across all social groups.

## **Profile of Crime Victims**

The dominant conclusion from victimization surveys in the United States is that the risk of being a crime victim is not uniform across persons, places, or time. Individuals who have the greatest risk of violent crime victimization are males, members of racial or ethnic minority groups, the young, those who have never married, the poor, and inner-city residents. Risks of property victimization are also highest for members of each of these groups. The most notable exception to these trends is the higher risk for women in the case of rape or sexual assault.

Considering the most dangerous places and times for criminal acts to occur, risks of violent victimization in the United States are substantially higher in urban areas (especially inner cities) and for residents of the western United States. The most common location for a violent crime to occur is in or near the victim's home. Weekends and evening hours are the most frequent times for violent victimization. Property crime victimization rates are also higher in urban areas and in western states.

## USING CRIME DATA TO EVALUATE CRIME POLICIES

In a science-oriented society that has entered the information age, the public appetite for empirical data about every aspect of life has emerged as a complementary and sometimes competing way of understanding the world and, particularly, government decisions. But if policy-relevant data are widely available, the capacity to effectively analyze and fully comprehend the data is more limited. (Cosby & Jones, 2010)

Accurate measurement of crime has always been important as the basis for evaluating criminological theory and the effectiveness of various crime control policies. However, over the last three decades, a growing climate of accountability and validation has placed greater pressure on crime measurement to verify the empirical accuracy of competing crime theories and the success of various programs. Decisions about the success or failure of crime policies and attempts to control crime depend on the accuracy of crime measurement. The following examples illustrate this important connection.

### **Community-Oriented Policing**

One of the major changes in the nature of policing over the last few decades has been the dramatic growth in community-oriented policing (COP). Under this model of policing, law enforcement works closely with local neighborhoods to identify their crime problems, and the community helps shoulder the burden of crime detection by increasing community surveillance and monitoring. The implementation of COP programs has involved such activities as the development of bike patrol teams, block watch and neighborhood watch programs, property identification procedures, regular community meetings on crime prevention strategies, community support networks, and the sponsorship of social gatherings to enhance residents' sense of neighborhood solidarity (see Green & Mastrofski, 1988; Oliver, 2001).

The primary research design for evaluating COP programs involves the comparison of neighborhood crime rates and calls for police service before and after the implementation of COP. More rigorous designs also involve comparisons

with a control neighborhood that is similar in population characteristics and criminal history but has not implemented a COP program. By examining changes over time in criminal activity in the control neighborhood, researchers are better able to determine whether changes over time in the COP neighborhood are due to changes that resulted from the program itself rather than simply changes in the level of crime that occurred in the wider jurisdiction, which could be due to larger structural and unmeasured factors.

Contrary to expectations based on the presumed effectiveness of these programs, it is not uncommon in evaluations of COP to observe an increase in crime reports and calls for police service after program implementation. Proponents of COP attribute such increases to the greater public sensitivity to the variety of suspicious activities and greater public awareness of criminal opportunities. However, it is just as probable that such an increase is due to the general ineffectiveness of COP in reducing neighborhood crime levels. Given these issues, volatility in crime measurement that may derive from changes in crime reporting makes it impossible to isolate the true impact of COP on criminal activities in the targeted neighborhood.

### **Specific Deterrence and Mandatory Arrest Policies in Domestic Violence Cases**

After years of neglect and the questionable use of police discretion in domestic violence cases, mandatory arrest policies have been implemented in numerous jurisdictions as the appropriate response to such incidents. These mandatory arrest policies are based on the assumption that the temporary removal of the perpetrators of domestic violence through arrest will immediately defuse the domestic violence situation and serve as a specific deterrent by reducing the individual's potential subsequent abusive behavior.

Previous evaluations of the specific deterrent effect of mandatory arrest policies in Minneapolis and other jurisdictions have yielded mixed results (Berk & Newman, 1985; Sherman & Cohn, 1985). The original Minneapolis study found that mandatory arrest was more effective than other responses to domestic violence, but these results have not been replicated in other settings.

One of the major problems in evaluating mandatory arrest policies concerns how best to measure recidivism or rearrest. The private nature of much domestic violence places severe limitations on the accuracy of subsequent police reports of arrest as a valid measure of reoffending behavior. Self-reports of abusive behavior are equally problematic because of the lack of any reason for such offenders to tell the truth. Surveying the victims of domestic violence some time after the initial arrest would seem to be a more defensible strategy, but such surveys are likely to involve sampling bias in that those victims who participate in the survey will be qualitatively different from those who refuse to participate. For example, nonrespondents may be more prone to experience

repeat victimization but refuse to cooperate in the survey because of fear of retaliation, whereas survey participants may provide a distorted success rate because this group may consist of a larger proportion of women who had fewer physical opportunities to be abused as a result of moving away from their partners. Unfortunately, the lack of a reliable and valid measure of reoffending behavior makes it difficult to ascertain the true effectiveness of mandatory arrest policies for domestic violence.

### **Measuring Recidivism**

More generally, criminologists, criminal justice practitioners, and legislators rely on measures of recidivism or revocation of probation or parole to evaluate the effectiveness of a variety of criminal justice policies and correctional practices. But as Clear, Cole, and Reisig (2006) noted, "the concept of recidivism means different things to different people" (p. 424), making comparisons of correctional programs problematic. A perusal of the literature reveals reported recidivism rates ranging from zero to more than 80%, depending on how recidivism is measured (revocation of probation or parole, rearrest, reconviction, or reincarceration [Silverman, 2001]) and the period of time for which offenders are tracked or followed (which can range from six months to several years).

Offenders can have their probation or parole revoked for a violation of conditions, which may include, for example, an inability or refusal to maintain employment. Offenders can also be subject to revocation for violating conditions mandating that they abstain from the use of alcohol and illegal drugs, and revocations for such violations have increased significantly with the growing number of offenders who are subject to urinalysis or other types of drug tests (Austin & Irwin, 2001). As Silverman (2001) noted, community corrections officers' exercise of discretion will also have an impact on revocation, with service-oriented officers being more likely to overlook relatively minor violations because they believe that the beneficial effects of the offender remaining in the community outweigh those of having them returned to prison. Law-enforcement oriented officers, on the other hand, may be more likely to revoke offenders for relatively minor violations of conditions.

There are also problems associated with using rearrest as a measure of recidivism. The offender may be rearrested for a relatively minor violation, such as driving while his or her license is suspended or non-payment of fines; this situation is obviously qualitatively different from being rearrested for the commission of a serious offense, such as murder or robbery. It is also possible that the offender is not guilty of the offense for which he or she has been rearrested.

While reconviction or reincarceration are perhaps better measures of recidivism, studies using these measures should ideally distinguish between felony and misdemeanor offenses. On the other hand, it is also important to note that officially recorded criminal justice events such as reconviction or



reincarceration (as well as rearrest) are less than perfect measures because a significant number of crimes are committed that are not detected.

A sample of articles on sex offender recidivism published recently in criminological journals reveals the range of measures and follow-up periods used. In a study of 166 sexual homicide perpetrators in Germany, Hill, Habermann, Klusmann, Berner, and Briken (2008) separated offenses into three categories (violent sexual reoffenses, nonsexual violent offenses, and nonviolent offenses) and followed offenders for an average of 20 years. Harkins and Beech (2008) used reconviction data to study sex offenders in the United Kingdom, with an average follow-up period of 9.3 years. Langton et al. (2008), in a study that followed 436 sex offenders in Canada for a period of approximately five years, used a more specific measure of recidivism—defining it as whether or not the offenders had a new conviction for a “contact offense in which a clear sexual element was evident” (p. 81).

In considering the larger literature on sex offender recidivism, it is important to note that contrary to popular belief, sex offenders are among the least likely groups of offenders to commit new offenses and are no more likely to be specialists than non sex offenders (see Barnoski, 2006; Lucken & Bales, 2008; Miethe, Olson, & Mitchell, 2006). The flurry of legislative activity designed to control sex offenders in several jurisdictions in the United States over the last two decades, including sex offender registration, community notification, residential restrictions, and civil commitment laws, indicate that legislators are similarly uninformed about the empirical data on sex offenders.

### **Zero Tolerance Policies**

The preceding paragraphs highlighted problems associated with policies based on questionable data. Similar hazards are encountered when policies are enacted without sufficient consideration of available data—one such example is *zero tolerance* policies. In 1989, school districts in California, New York, and Kentucky implemented the first zero tolerance policies and mandated expulsion of students for drug possession, fighting, and gang-related activity; and by 1993, such policies had been passed in every state and the District of Columbia (Skiba & Rausch, 2006). A report from Harvard University (The Civil Rights Project, 2000) estimated that in 1998, more than 3.1 million students were suspended and another 87,000 were expelled from schools. The data on school suspensions and expulsions from local jurisdictions are even more striking. For example, in Baltimore, approximately 10,000 students, fully 12% of the total student enrollment, were suspended during the 2006–2007 school year; in Milwaukee, school officials reported that 40% of 9th-grade students were suspended at least once during the 2006–2007 school year (Urbina, 2009). These policies also appear to be disproportionately

applied to minority students: Although African American children represent 17% of public school enrollment, they constitute 32% of school suspensions. Data from 2006 indicated that nationally, approximately 15% of black students in grades k–12 are suspended at least briefly each year, compared with 4.8% of white students; in the same year, expulsions were meted out to 1 in 200 black students compared to 1 in 1,000 white students (Eckholm, 2010). There is no evidence that African American overrepresentation in these data are due to higher rates of misbehavior, and Skiba and Raush (2006) asserted that “it may be that African-American students are suspended and punished for behavior that is less serious than other students” (p. 1074).

Examples of the “lunacy” (Taranto, 2001) of zero tolerance policies abound. In Manalapan, New Jersey, a 10-year-old girl who stated “I could kill her” after she wet her pants because a teacher refused to let her go to the bathroom was suspended for three days (Zernike, 2001). Elementary school students in Texas and Louisiana have been suspended for pointing pencils at each other and saying “Pow!” and for drawing pictures of soldiers (Lott, 2001). A six-year-old boy in Pittsburgh, Pennsylvania, was suspended for carrying a plastic ax as part of a fireman’s costume for Halloween (Leland, 2001). In Newark, Delaware, a six-year-old student took a camping utensil that could serve as a knife, fork, and spoon to school and was required to spend 45 days in the Christina School District’s reform school. Earlier, in that same district, a 3rd-grade girl was expelled for a year because her grandmother sent a birthday cake, along with a knife to cut it, to school (Urbina, 2009). In Ohio, a 7th-grade student was suspended for nine days for allegedly sniffing white out. Although white out is not a drug, the student’s school records indicate that she was suspended for drug abuse (The Civil Rights Project, 2000). At Hunts Point elementary school in the Bronx, a girl and boy were playing and each drew a line on the other’s desk with an erasable marker. The teacher told them to erase the lines, and the children went to get tissues to do so. However, school safety officers eventually became involved, apprehended the two students, handcuffed them, and transported them to the local police precinct (Herbert, 2010). More generally, under zero tolerance policies, aspirin, Midol, cough drops, and mints have been treated as drugs and paper clips, nail files, and scissors have been considered weapons.

Of even greater concern than the punishment meted out in schools as a result of these policies is the tracking of youth into the juvenile justice system for incidents of minor misconduct (The Civil Rights Project, 2000). In an incident in Mississippi, for example, five African American males were arrested for felony assault after one of the peanuts they were playfully throwing at each other hit their school bus driver. The sheriff responsible for making the arrest of these youth commented to a newspaper reporter, “This time it was peanuts, but if we don’t get a handle on it, the next time it could be bodies” (The Civil Rights Project, 2000).

Fear and concern over school shootings is legitimate, but a careful consideration of the available data on school violence might lead to a reconsideration of these particularly Draconian policies. Although, as noted in Chapter 1, there are questions regarding the accuracy of data on school crime after the enactment of the No Child Left Behind Act in 2001, school violence decreased by 30% from 1990 to 2000 (Zernike, 2001). Between the fall of 1997 and June of 2001, 32 students and three teachers were shot to death at elementary or secondary schools in the United States, an annual rate of less than 1 death per 4 million students. In contrast, over the same period, 53 students died as a result of playing high school football (Lott, 2001). A report by the Juvenile Law Center noted that students are three times as likely to be hit by lightning as to be killed by violence in school (Leland, 2001). More generally, approximately 1 out of every 100 murders of school-age children takes place at schools (“A Third of Teenage Violence,” 2001), and the number of deaths in the 1999–2000 school year was approximately one quarter the number that occurred in 1992–1993 (*Secondary School Educators Newsletter*, 2001).

As The Civil Rights Project (2000) concluded, “Efforts to address guns, drugs, and other truly dangerous school situations have spun totally out of control, sweeping up millions of schoolchildren who pose no threat to safety into a net of exclusion from educational opportunities and into criminal prosecutions” (p. 2).

### **Evaluation of Drug Prevention Programs**

As noted in Chapter 1, in the late 1990s and early 2000s, numerous government, media, and Internet sources claimed that methamphetamine use in the United States constituted an epidemic. President Clinton referred to methamphetamine as “the crack of the 90s,” and in February 1998, Drug Czar Barry McCaffrey asserted, “Methamphetamine has exploded from a west coast biker drug into America’s heartland and could replace cocaine as the nation’s primary drug threat” (as quoted in Pennell, Ellett, Rienick, & Grimes, 1999). While there is no doubt that methamphetamine constituted a serious problem, particularly in some western states and jurisdictions, as has been the case with a number of other drug epidemics in the United States, the empirical evidence for the existence of the alleged methamphetamine epidemic was somewhat questionable (Mosher & Akins, 2007).

Montana experienced a significant problem with methamphetamine use in the late 1990s and early 2000s—it was alleged, for instance, that half of the state’s adult prison population was incarcerated due to methamphetamine-related crime (Erceg-Hurn, 2008). In order to combat this problem, in 2005, Montana billionaire software mogul Thomas Siebel launched the “Montana Meth Project,” the central feature of which was a graphic advertising campaign that starkly portrayed rape, prostitution, robbery, and beatings resulting from use of the drug; other ads depicted methamphetamine users with rotting

teeth, hollow eyes, and thin, scarred bodies<sup>1</sup> (Kemnick, 2009). According to the project's website, the ads caused "dramatic shifts in the perception of risk associated with meth use, more frequent parent-child communications, greater social disapproval, and significant declines in meth use and associated crime (The Meth Project Foundation, 2007). In September of 2007, the project's founder, Tom Siebel, appeared before a Senate Finance Committee hearing and claimed, "The meth project results in Montana have been more significant than any drug prevention program in history" (as quoted in Kemnick, 2009). Former Montana Attorney General Mike McGrath, who as of 2009 was the Chief Justice of the Montana Supreme Court and was an original member of the meth project's board, stated that the campaign "[is] very simply changing the nature of crime control in Montana" (as quoted in Kemnick, 2009).

The project won multiple advertising awards, and it was featured in reports by the White House Office of National Drug Control Policy, with ONDCP Director John Walters stating that the program should serve as "a model for the nation" (ONDCP, 2006). The program eventually expanded from Montana into six other states, and hundreds of media sources documented the apparent success of the campaign. Although it was initially funded exclusively by private entities, the Montana legislature granted \$2 million to the program in 2007, followed by approximately \$1.4 million of federal funds in the same year (Erceg-Hurn, 2008).

The Montana Meth Project's claims of success in reducing teenage methamphetamine use were based on data from a series of surveys, including surveys administered by the project itself, and the Youth Risk Behavior Survey in Montana. But as Erceg-Hurn (2008) pointed out, the project's own data show that the percentage of teenagers reporting that they had ever tried methamphetamine was 2% in 2005 and 3% in 2008. Data from the Montana Youth Risk Behavior Survey indicated that there had been a decline in teenage methamphetamine use since the introduction of the advertising campaign (3.7% between 2005 and 2007; Kemnick, 2009), but as Erceg-Hurn (2008) and Kemnick (2009) noted, the same survey revealed that use of the drug had been decreasing six years prior to the introduction of the campaign. In addition, before the ads started running in 2005, 98% of Montana teenagers strongly disapproved of methamphetamine use—that number dropped to 91% in 2008. It is also notable that, among Native American teenagers in Montana, a group at high risk for methamphetamine use, the percentage reporting that the advertisements exaggerated the risks associated with use of the drug was as high as 75% (Erceg-Hurn, 2008). Noting that a number of factors, including decreased availability of the drug, may have been responsible for any apparent decline in meth use, Erceg-Hurn (2008) concluded, "There is no compelling evidence that teenage meth use has declined as a result of the ads" (p. 261).

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<sup>1</sup>The advertisements for the Montana Meth Project can be viewed at <http://www.montanameth.org/ads>

Erceg-Hurn's (2008) study questioning the success of the Montana Meth Project, published in the peer-reviewed journal *Prevention Science*, was not well-received by project officials. Many claimed that Erceg-Hurn (who was a graduate student in Australia) was uninformed and incapable of evaluating the project because he was neither from, nor currently living in, Montana. The previously mentioned Chief Justice of the Montana Supreme Court, Mike McGrath, while still supportive of the meth project, confessed that he did not read Erceg-Hurn's study. He said, "I didn't really feel I needed to," and called Erceg-Hurn "just a guy from Australia" (as quoted in Kemmick, 2009). In addition, Bill Slaughter (2009), the Director of the Montana Meth Project, claimed that Kemmick's (2009) *Billings Gazette* article, which questioned the success of the campaign, "omitted a number of key facts and misrepresented others." While disputes over the data and the interpretations of those data to evaluate the project are perhaps to be expected, it is notable that the Chief Operating Officer of the Rimrock Foundation, a nationally recognized addiction treatment center based in Billings, Montana, commented that she was skeptical with respect to the figures cited by the project: "I think this is playing with the numbers—I'm fed up with it. They've been doing it since the outset" (as quoted in Kemmick, 2009).

## TESTING CRIMINOLOGICAL THEORY

A wide variety of sociological, psychological, and biological theories have been proposed to explain the underlying causes of crime and its social, spatial, and temporal distribution. All of these theories are based on the assumption that crime is accurately measured. But when variation in crime patterns and characteristics is partially attributable to unreliability in the measurement of crime, it is impossible to empirically validate the accuracy of competing criminological theories.

One group of criminological theories that ultimately assumes crime is accurately measured is *criminal opportunity theories of victimization* (see Cohen & Felson, 1979; Miethe & Meier, 1994). According to these theories, demographic differences in victimization risks are attributable to differences in individuals' lifestyles and to routine activities that affect their exposure and proximity to motivated offenders, their attractiveness as crime targets, and the availability of suitable guardians to protect them from criminal victimization. For example, males are said to have higher risks of violent victimization than females because they are more involved in risky and dangerous public activities. In contrast, older adults are assumed to have lower risks of victimization than other age groups because they spend more time in the privacy of their home, use greater safety precautions against crime, and are less likely to be in contact with dangerous persons and places.

Criminal opportunity theories developed out of the findings of victimization surveys that indicated that the risks of experiencing crime vary across

social groups. If the measurement of victimization experiences is problematic, then it is unclear whether observed differences in victimization risks across social groups are real or a methodological artifact. Unfortunately, the serious problems with victimization surveys in terms of their underreporting of violence among intimates, the selective perceptions of respondents, and telescoping issues raise some doubts about the empirical foundation that underlies these theories of criminal behavior and victimization.

According to “pure” *biological theories*, high rates of violent behavior by men are due to sex differences in biological and evolutionary traits. *Sociobiological theories*, in contrast, focus on the interplay between genetic and environmental factors that influence the differential propensities toward violence (see Ellis & Hoffman, 1990). The accuracy of each of these types of biological theories depends on the nature and extent of differences in involvement in violent crime. If such gender differences are not consistent across geographical areas or over time, a purely biological explanation would not be supported. In contrast, if gender differences in violent offending are relatively constant across social settings, a sociobiological approach lacks empirical validity. Unfortunately, the variability in reporting of crime statistics across jurisdictions makes it impossible to evaluate the accuracy of these competing biological theories.

A similar situation characterizes sociological theories of crime. *Social structural* approaches are based on the assumption that crime is a lower-class phenomenon, and they offer explanations for these class differences. For example, anomie theory (Merton, 1957) states that crime is the result of the disjunction between cultural goals and the institutional means of achieving them. According to this theory, lower-class people engage in street crime because they have accepted the cultural goal of material success but do not have access to, or have rejected, the legitimate means of achieving it. According to social disorganization theory (Shaw & McKay, 1942), lower-class areas are “natural areas” for crime because they are characterized by various factors that impede social control and monitoring of youth (e.g., high population turnover, lack of economic opportunity, and high ethnic diversity).

As with the evaluation of biological theories, the veracity of these social structure theories is tied directly to the accuracy of crime data. If police statistics on crime are seriously biased against lower-class and racial or ethnic minority individuals (e.g., because of more intensive police activity in lower-class and minority areas), these types of criminological theories are based on a dubious empirical foundation. The uncritical acceptance of police statistics as an accurate measure of crime has been a major criticism of many sociological theories.

One of the most widely tested recent explanations in criminology is Gottfredson and Hirschi’s (1990) *self-control theory*. They defined crime as “acts of force or fraud undertaken in pursuit of self-interest” (p. 15) and asserted that certain features are shared by all crimes: (a) They provide easy and immediate gratification of desires; (b) they are exciting, risky, and thrilling; (c) they offer few, if any, long-term benefits; and (d) they require very little skill,

planning, or specialized knowledge to commit. Individuals who engage in these acts are characterized by (a) low self-control, (b) a tendency to be insensitive, (c) a likelihood of taking risks, and (d) shortsightedness. The source of low self-control, according to Gottfredson and Hirschi, is inadequate child-rearing.

Self-control theory has been critiqued on a number of grounds in the criminological literature (see Akers, 1997; Tittle, 1995). But one of the most problematic aspects of this theory—in terms of the relationship between data sources and theories—is its reliance on official data as a source of information on white-collar crime. Gottfredson and Hirschi (1990) rely on UCR data to specify the types—in particular, the Part II offenses of embezzlement, fraud, and forgery—as examples of offenses that constitute the category of white-collar crime. As Curran and Renzetti (1994) pointed out, Gottfredson and Hirschi view white-collar crime as relatively uncommon in occurrence but as sharing features of other, relatively common crimes. That is, for Gottfredson and Hirschi, similar to street crimes, white-collar crimes are spontaneous and quick, require no specialized knowledge, and yield limited profits for offenders.

Their operationalization of white-collar crime, then, is especially problematic. The crimes they have chosen do fit with their general definition of crime but do not encompass the full range of offenses that constitute white-collar crime. Embezzlement, fraud, and forgery often *may* be spontaneous acts without long-term benefits to the offenders, but organizational and corporate crimes rarely are. Indeed, much evidence indicates that corporate offenses—which, as noted in Chapter 3, are not captured in official data—are planned and executed over an extended period of time and are quite profitable for those who engage in them. As Beirne and Messerschmidt (2000) noted, “Most criminologists would agree that persons with high levels of self-control who practice deferred gratification are precisely the individuals who engage in the numerous types of political, white-collar, and syndicated crime!” (p. 221).

Another theory that has relied primarily on official data is that of Wilson and Herrnstein (1985; see also Herrnstein & Murray, 1994) who, in their book *Crime and Human Nature: The Definitive Study of the Causes of Crime*, asserted that “every study of crime using official data shows Blacks to be over-represented among persons arrested, convicted, and imprisoned for street crimes. . . . No matter how one adjusts for other demographic factors, Blacks tend to be overrepresented by a factor of one to four among persons arrested for violent crimes, and by a factor of nearly three to one among those arrested for property crimes” (p. 461).

Wilson and Herrnstein (1985) examined four possible explanations for the racial differences in official crime data. *Economic deprivation* theories argue that blacks are more likely to be involved in crime because of reduced opportunities for them in society; *culture of poverty* theories imply that protracted poverty in black families results in poor socialization practices such that black children do not possess “either a sufficiently strong regard for the good opinion of others or a sufficiently long time horizon to make them value conventional

norms or defer instant pleasures for delayed rewards” (p. 467). The *subculture of violence* theory asserts that blacks have a hostile view of the larger society, do not value legitimate goals, and thus are more likely to engage in crime. Wilson and Herrnstein essentially rejected these sociological explanations of crime and argued that black-white differences in crime are largely attributable to constitutional factors—in particular, differences in intelligence scores between blacks and whites. They claimed that studies indicate that black IQ scores are, on the average, approximately 12 to 15 points lower than those of whites, and they dismissed the notion that the differences in IQ scores can be explained by social class differences or cultural bias in IQ tests. They concluded, “If lower measured intelligence is associated with crime independently of socio-economic status, and if Blacks, on the average, have much lower scores, than [sic] these facts may help explain some of the Black-White differences in crime rates” (p. 471).

Several criminologists have taken issue with Wilson and Herrnstein’s explanation of these racial differences. Some suggest that the overrepresentation of blacks among arrestees is at least partially the result of biased police procedures, including the tendency for police to patrol black areas more frequently than white areas and the tendency to focus more on street crimes involving blacks more than white-collar and other forms of crime. Although Wilson and Herrnstein (1985) asserted that these factors cannot account for all or even most of the black overrepresentation in official statistics, evidence indicates that racial biases in law enforcement are pervasive in the United States. This leads to a consideration of one of the emerging challenges in measuring crime in the context of official data: the issue of racial profiling.

## RACIAL PROFILING/BIASED POLICING

All of our citizens are created equal and must be treated equally. Earlier today I asked John Ashcroft, the Attorney-General, to develop specific recommendations to end racial profiling. It is wrong, and we must end it. It’s wrong, and we will end it in America. In doing so, we will not hinder the work of our nation’s brave police officers. They protect us every day, often at great risk. But by stopping the abuses of a few, we will add to the public confidence our police officers earn and deserve.

—President George W. Bush (address to a joint session of Congress, February 27, 2001; quoted in *The Atlanta Journal Constitution*, 2001)

In the late 1990s, there was a virtual explosion of media exposés on racial profiling or biased policing on the part of police departments in the United States, and by 2009, hundreds of police departments in the United States were collecting data on the race and ethnicity of individuals they contacted. In a report prepared for the U.S. Department of Justice, Ramirez, McDevitt, and Farrell (2000)



defined racial profiling as “any police-initiated action that relies on race, ethnicity, or national origin rather than the behavior of an individual or information that leads police to a particular individual who has been identified as being, or having been, engaged in criminal activity” (p. 3).

Although evidence of racial profiling on the part of law enforcement was largely based on anecdotal information in the early 1990s, by the end of the decade, there was widespread concern over the issue, and a number of jurisdictions began to collect more detailed quantitative data on police stops. For example, in a study conducted in New Jersey, Lamberth (1996) found that while blacks comprised approximately 15% of speeding drivers on a particular section of the New Jersey Turnpike, they constituted 46% of those stopped and 73% of those arrested by the New Jersey State Police over the 1988 to 1991 period. In a similar study focusing on a particular section of Interstate Highway 95 in Maryland, researchers recorded observations on approximately 6,000 vehicles and reported that over 93% of the operators of those vehicles violated traffic laws and were thus eligible to be stopped by the police. Of the violators seen by observers, 17.5% were black and 75% white. However, blacks comprised 32% of those searched by the Maryland State Police (Lamberth, 1997). And in a study of the North Carolina Highway Patrol (NCSHP), Smith et al. (2003) found evidence that in some of the districts patrolled by the NCSHP, African Americans were more likely to receive citations relative to a baseline comparison of their involvement in accidents and were more likely to be searched by members of the NCSHP Criminal Interdiction Team.

These and other data provide some indication of the pervasiveness of racial profiling, but as the report to the Department of Justice (Ramirez et al., 2000) suggested, “The only way to move the discussions about racial profiling from rhetoric and accusation to a more rational dialogue about appropriate enforcement strategies is to collect the information that will either allay community concerns about the activities of the police or help communities ascertain the magnitude of the problem” (p. 13).

There are a number of important issues to consider here. How can officers determine the race or ethnicity of the individuals they stop in the least confrontational manner and without increasing the intrusiveness of the stop? Is it possible that collecting data on the race or ethnicity of those stopped will result in *disengagement*<sup>2</sup>—leading police officers to reduce the number of

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<sup>2</sup>Some evidence suggests that disengagement may be occurring in certain jurisdictions. For example, in Cincinnati, three months after riots related to alleged discriminatory practices on the part of the police occurred, the *Los Angeles Times* reported that “some police officers openly admit to slacking off on their jobs for fear that aggressive patrol work will set this tense city aflame once more” (Simon, 2001). Similarly, the *Seattle Times* noted that police in that city were engaging in “de-policing, selective disengagement, [and] tactical detachment . . . [as a] logical reaction to chronic charges of police racism” (Tizon & Forgrave, 2001).

legitimate stops and searches they conduct? How can police departments ensure the accuracy of data collection procedures and be certain that the reporting requirements are not circumvented by officers who fail to file required reports or who deliberately report erroneous information? Can the data be analyzed and compared with an appropriate measure of the larger population of a jurisdiction (Ramirez et al., 2000)—that is, what is the appropriate denominator or benchmark with which to compare traffic stop data? And finally, what additional factors need to be taken into account in determining whether bias exists at the level of who is issued citations or is arrested and who is subject to being searched?

### **Coding Race and Ethnicity Data**

The report to the Department of Justice (Ramirez et al., 2000) outlined the practices for collecting race data in several jurisdictions. In San Jose, California, it was determined that because the perception of the officers ultimately led to the problem of racial profiling, the officers' perceptions were the appropriate method for ascertaining the race or ethnicity of the individuals they encountered. In that jurisdiction, officers were required to code eight categories for race and ethnicity: Asian American, African American, Hispanic, Native American, Pacific Islander, Middle Eastern/East Indian, white, and Other.

In 1999 data, African Americans and Hispanics in San Jose were stopped by police at a rate exceeding their percentage in the population of the city. African Americans comprised 5% of San Jose's population but 7% of vehicle stops; Hispanics were 31% of the city's population but constituted 43% of the stops. However, San Jose police officials asserted that there were two reasons for these racial and ethnic disproportions in stops: (1) The number of officers per capita was higher in police districts that contained a higher percentage of minorities, and (2) socioeconomic factors in minority neighborhoods resulted in more calls for service and resultant interactions with police. These explanations suggested the possibility of a social structural dimension to racial profiling, indicating that, in order to properly analyze and draw conclusions from these data, detailed characteristics regarding the racial, ethnic, and socioeconomic composition of particular police precincts will be required.

In 2000, it was estimated that slightly more than 23% of San Diego's population was Hispanic, approximately 9% was black, and 5% was Asian. This city began collecting race-based traffic stop data in January 2000, and similar to the decision in San Jose, it opted to use the officers' perception of the driver's race or ethnicity. If officers were not sure, they were allowed to ask the driver. In San Diego, however, there were 18 separate racial and ethnic categories from which officers could choose: Other Asian, black, Chinese, Cambodian, Filipino, Guamanian, Hispanic, Indian, Japanese, Korean, Laotian, Other, Pacific Islander, Samoan, Hawaiian, Vietnamese, white, and Asian Indian. One might question the ability of police officers to accurately code the

race or ethnicity of those stopped, given the sheer number of categories listed. It is difficult enough for people to accurately distinguish between blacks and Hispanics, let alone between Korean, Japanese, or Laotian.

In an additional study that raised questions regarding the reliability of the coding of race in studies of biased policing, the Vancouver, Washington, police department had officers enter a code indicating whether they knew the race of the motorist before stopping them—only 6.5% of the officers indicated they were certain of the motorist's race (Mosher, 2005b).

### **Benchmarks/Denominators**

In order to determine whether racial profiling is occurring, researchers frequently compare demographic statistics (including race or ethnicity, age, and gender) of those contacted by the police with comparable census population data. However, such data are generally inappropriate because they do not adequately capture the population at risk of being stopped by police (Fridell, 2004).

An additional benchmark, pioneered by Lamberth (1996) in the 1990s and subsequently used by several other researchers across the United States (e.g., Alpert Group, 2004; Engel, Calnon, Liu, & Johnson, 2004; Greenwald, 2001; Smith et al., 2003), is based on observational *road survey* data. The methodology in studies using this benchmark involves observers recording the race or ethnicity, gender, and (sometimes) age of drivers, either at stationary points or while observers drive in vehicles themselves—in some cases, observers also record whether motorists are involved in traffic violations such as speeding or running red lights. While such benchmarks may be appropriate for some studies of biased policing, they have a number of shortcomings—especially in the context of analyzing traffic stop data from large, geographically dispersed law enforcement agencies such as state patrols. As Fridell (2004) pointed out, in order to use observational data as a benchmark, the data must be location specific—that is, one can't record observational benchmarks on a particular section of a state highway and then compare the data to contacts for the entire state. For this and other reasons, observational data are extremely expensive to collect, and despite claims by some researchers that a high degree of reliability can be achieved in observers' coding of race or ethnicity, gender, and age, such claims are rather questionable.

For example, Lamberth (2005) reported interrater reliability coefficients on race in several studies that were never lower than .80 (meaning that at least two observers agreed on the race of the person they were observing at least 80% of the time), regardless of whether the observations were conducted in daylight or non-daylight hours. This level of agreement should be considered in the context of a 2001 observational study in New Jersey, in which one third of the data had to be excluded because the driver's race or ethnicity could not be determined due to various factors including the speed of vehicles, windshield glare, bad weather, and

shadows (Lange, Blackman, & Johnson, 2001). Similarly, Rojek, Rosenfeld, and Decker (2004), in an observational study in Missouri, reported that at night, observers were unable to determine the race of drivers in 40% of the vehicles. In a Bureau of Justice Statistics study conducted to determine the interrater reliability in the identification of Hispanics at border patrol checkpoints and airports, observers agreed approximately 50% of the time on whether or not someone was Hispanic (United States Department of Justice, 2003). In addition, as noted in a study of racial profiling in Miami Dade, Florida, "even in situations where drivers are stopped and observers have an opportunity to see them clearly, it is highly unlikely that an observer can distinguish an 'Hispanic' [from a member of another ethnic group.] To make this type of identification on a person driving by an observer at varying speeds is virtually impossible" (Alpert Group, 2004, p. 76).

Aside from reliability issues and additional limitations with observational data, as previously noted, perhaps the most serious problem with respect to observational benchmarking is the rather exorbitant cost of such data collection. In 2001, for example, Washington State passed legislation requiring all law enforcement agencies in the state to collect data on the characteristics of individuals contacted in traffic stops, but the legislation stipulated that agencies would not be required to collect and analyze the data if they could not afford to do so (Lovrich, Gaffney, Mosher, Pratt, & Pickerill, 2007). Perhaps not surprisingly, the overwhelming majority of law enforcement agencies in Washington State took advantage of this provision and chose not to collect data.

Researchers examining biased policing for the Washington State Patrol (WSP) developed a number of alternative, more appropriate, and less costly benchmarks with which to compare traffic stop data. The first of these alternatives is contacts initiated by the WSP as a result of calls for service and vehicle assists. This particular benchmark is considered a *blind* type of benchmark because it is highly unlikely that WSP troopers know the race of the individual being assisted in the vast majority of such citizen contacts. A second benchmark available for analysis in the WSP study is a comparison of traffic stop data for drivers who had been contacted as a result of being identified as speeding via radar patrols (including aircraft patrols) with all other stops. This particular benchmark statistic constitutes a measure of both driving quantity and driving quality, and it has the additional important advantage of being a blind count. In other words, WSP troopers operating radar units seldom if ever can determine the race or ethnicity of motorists identified as speeding using this technique. The third alternative benchmark used in this research involved a comparison of daytime to nighttime stops. A logical argument would suggest that if racial profiling were occurring, it would be more likely to manifest itself in daylight stops than in nighttime stops because officers would be better able to form an impression of the race of individual drivers during the daylight hours than at times of the day when their visibility is likely to be impaired (Lovrich et al., 2007).

Arguably the most effective benchmark is to compare traffic stop data with rates of involvement in roadway collisions. These collision data can be

seen as measuring both the quantity and quality of driving in a particular area, and most important, they constitute another blind measure since law enforcement officers do not know the race of those individuals they will contact in a traffic collision prior to arriving at the scene of the collision.

The utility of using collision data instead of census population data as a benchmark is demonstrated in an analysis of traffic stop data in the Yakima area of Washington State. Census data for this area indicated that 23.6% of the population was Hispanic, but in 2002, 52.6% of those contacted by the WSP were Hispanic—on the surface, this seems to provide clear evidence of racial profiling. However, due to the presence of migrant and seasonal farm workers and undocumented immigrants in this agricultural area of the state, census data significantly underestimate the Hispanic population. In contrast, the alternative collision data benchmark indicated that 52.8% of those involved in collisions in this area were Hispanic, an almost identical figure to the 52.6% contact figure, suggesting that racial profiling in this area of Washington State was likely not occurring. Collision benchmark data have also been used in a study of the Miami Dade Police Department (Alpert Group, 2004).

### Citations, Arrests, and Searches

Among others, additional indicators of racial profiling that have been reported include racial and ethnic differences in citations, arrests, and searches. But here too, in many instances, claims of biased policing have been based on questionable data and analyses. Analyses of citations in the context of traffic stops need to take into account the fact that some members of minority groups are less likely to be compliant with traffic laws (Braver, 2003; Voas, Tippetts, & Fisher, 2000; Voas, Wells, Lestina, Williams, & Greene, 1998; Wells, Williams, & Farmer, 2002), may be more likely to have a higher number of violations as a result of any particular traffic stop (Lovrich et al., 2007), and may be more likely to be involved in more serious offenses, such as driving while impaired (Campos-Outcalt, Prybylski, Watkins, Rothfus, & Dellapenna, 1997). Each of these factors in and of themselves will increase the probability of receiving a citation.

With respect to searches, analyses should separate *low (or no) discretionary searches* (such as mandatory vehicle searches for drivers apprehended for driving while impaired) from *consent searches*, in which law enforcement exercises considerably more discretion in deciding whether to conduct a search. For example, an analysis of searches conducted by the WSP that made these distinctions found that, although minorities were somewhat more likely to be searched, the disparities were not likely the result of intentional or purposeful discrimination (Pickerill, Mosher, & Pratt, 2009). This study also found that additional factors, such as the age and gender of the motorist, the time of day of the stop, and the number of violations associated with the stop, affected the likelihood of a search.

In his speech quoted at the beginning of this section, President Bush implied that racial profiling is primarily the result of biases and practices of individual officers. However, the studies conducted up to this point imply that racial profiling is also related to larger social, structural issues. In order to adequately interpret the findings from racial profiling studies, additional data on the social class and economic characteristics of communities will need to be collected. As Matthew Zingraff, the lead researcher in a study of racial profiling in North Carolina argued, "In the long run, I think we're going to learn that the disparity that does exist is a result of a lot of things other than active racial animus" (as quoted in Jonsson, 2001). To conclude, the collection of race and ethnicity data by law enforcement constitutes one of the great challenges for official data in the 21st century.

## RECENT DEVELOPMENTS IN OFFICIAL DATA, SELF-REPORTS, AND VICTIMIZATION SURVEYS

The importance of accurate crime measurement has resulted in several recent developments designed to improve the quality and nature of crime data that derive from different methods. Developments in official police reports, self-report measures, and victimization surveys are outlined in this section.

### **Advances in Reports of Criminal Incidents**

#### *National Incident-Based Reporting System*

Incident-based reporting systems in the United States are widely regarded as representing a major advance in the police recording of crime data. As noted in Chapter 3, although the development of this recording system has evolved slowly across jurisdictions, if it is ultimately implemented on a national basis, the National Incident-Based Reporting System (NIBRS) will dramatically alter the volume of official counts of crime. The wider array of information collected about the crime incidents will also enhance the utility of these data for research purposes and the development of public policy.

The emergence of NIBRS data, however, will not eliminate the systemic problems that plague official measures of crime. Similar to the basic UCR data, the national representativeness of NIBRS data will ultimately depend on citizen reporting, and police recording, practices. If citizens do not report their victimizations to the police, no type of police data will accurately measure the true extent of crime.

Even with extensive training and standard coding rules, problems of unreliability in classifying and counting crime incidents are compounded under NIBRS because of the greater complexity and diversity of the information collected. One unfortunate consequence of collecting more detailed information is the possibility of even greater disparity in its recording within and across jurisdictions.

NIBRS data are also not immune to political distortion and manipulation. In fact, the greater quantity of data that are collected under NIBRS may provide even greater opportunity for deception and fabrication. By emphasizing only particular NIBRS data elements that convey a positive spin on the effectiveness of police crime control activities and ignoring data that show contrary evidence, law enforcement agencies and other organizations may be able to pick and choose particular trends from these data that support their political position. Even under the NIBRS procedures, reporting practices involve low visibility decisions that may be easily distorted for a variety of purposes.

### **Measuring Cyber-Crime**

Although it should not necessarily be considered to represent an official measure of crime, the Internet Crime Complaint Center (IC3) was established by the Federal Bureau of Investigation and the National White Collar Crime Center to receive criminal complaints related to the Internet. Such crimes include intellectual property rights violations; computer intrusions, or what is more commonly known as hacking; economic espionage; online extortion; international money laundering; and identity theft, among others. As noted on its website (see <http://www.ic3.gov>), “IC3 accepts online Internet crime complaints from either the person who believes they were defrauded or from a third party to the complainant.”

In the 2009 calendar year, the IC3 received 336,655 complaint submissions, representing a 22.3% increase from 2008 (Bureau of Justice Statistics, 2010). Of these complaints, approximately 44% were referred to law enforcement agencies for additional consideration, and the total estimated monetary loss from these referred cases was close to \$560 million. While this figure was more than double the reported monetary losses from Internet crime in 2008, one needs to be cautious in interpreting the statistics since the report notes that the increase was likely due to a modified complaint system that was initiated in 2009.

### **Crime Mapping**

In one form or another, crime mapping has been around for decades. However, in recent years, crime mapping involves the use of high technology geographic information system (GIS) software tools to conduct spatial and temporal analyses of events involving victims, offenders, and crime incidents. Results from a 2000 government survey indicated that nearly two thirds of the nation’s largest law enforcement agencies used GIS to map reported crimes, more than one half used GIS to map calls for service, and more than two in five used GIS to map arrest data (Reaves & Hart, 2000).

There are also private organizations that provide crime mapping services, including [crimereports.com](http://crimereports.com)—which charges law enforcement agencies \$100 to \$200 per month, and which bills itself as “the world leader in online crime

mapping” (<http://www.crimereports.com>). This organization even has an iPhone application that allows users to view the various crime maps on their iPhones. Interestingly, if an individual accesses this site and is unable to see crime maps in their jurisdiction, the following message is received: “The area you searched for is not currently part of the CrimeReports network. If you would like CrimeReports in your area, contact your local law enforcement agency and ask them to join.” In addition to [crimereports.com](http://www.crimereports.com), the Omega group offers [crimemapping.com](http://www.crimemapping.com), which served 50 law enforcement agencies as of 2009; there is also “[spotcrime.com](http://www.spotcrime.com),” which provides similar services (Leinwand, 2009), among others.

Within law enforcement agencies, crime mapping is most often practiced in one of three ways: Administrative Crime Analysis, Tactical Crime Analysis, and Strategic Crime Analysis (Boba, 2009).

#### *Administrative Crime Analysis*

Administrative Crime Analysis (ACA) typically involves long-range projects, often internal to the particular law enforcement agency. Common practices associated with ACA include providing economic, geographic, and law enforcement information to police management, city hall, city council, neighborhood or citizen groups, or the media. While the results produced from ACA are often the same results that are produced from other analytic approaches, Boba (2009) suggested that “information that is chosen for presentation in ACA is typically only the ‘tip of the iceberg’ of the research and analysis that are conducted” (p. 301). For example, law enforcement agencies routinely post information from ACA on their websites in the form of community bulletins, interactive web-based crime incident maps, sex offender locator maps, or agency reports.

#### *Tactical Crime Analysis*

Tactical Crime Analysis (TCA) emphasizes collecting data, identifying patterns, and developing possible leads so that criminal cases can be cleared quickly. TCA usually involves analysis of individual, incident-level data associated with specific crime events (e.g., robberies, motor vehicle thefts, and residential burglaries). Analysts engaged in TCA often produce reports containing time series or point-pattern information depicted in charts, graphs, maps, or some combination thereof. In short, TCA is a crime analysis technique that aims to describe and convey information about crime patterns quickly and easily so that the effects of crime fighting and reduction strategies can be maximized.

#### *Strategic Crime Analysis*

Unlike the other two approaches, Strategic Crime Analysis (SCA) focuses on operational strategies in an attempt to develop solutions to chronic crime-related problems. Spatial analytic techniques associated with SCA usually



involve analysis of geographic units (e.g., jurisdictions, census tracts, patrol districts, beats). SCA focuses on analysis of clusters in order to produce information that can be used for resource allocation, beat configuration, the identification of nonrandom patterns in criminal activity, and unusual community conditions. In short, SCA provides law enforcement agencies with the ability to provide more effective and efficient service to the community. One of the most popular analytic techniques used in SCA is *crime hot spot* analysis.

Unfortunately, the rapid development and use of crime mapping and analysis (especially among law enforcement agencies) has outpaced the concern for data quality and measurement issues. For example, few agencies are aware of how crime incident location data contained in a records management system is converted into latitude and longitude coordinates used by crime mapping software—a process known as *geocoding*. Positional accuracy refers to the difference between where a crime incident location is geocoded and the true location of where the event took place. If the positional accuracy of geocoded crime data is substantially large, results of spatial analysis can be meaningless. In a recent case study of registered sex offenders in Orange County, Florida, for example, researchers demonstrated the positional accuracy of street geocoding and its impact on assessing violations of residency restriction laws. The results showed that the positional accuracy in street geocoded locations of schools, daycare facilities, and sex offender residences was off as much as 5 miles, 7 miles, and nearly 18 miles, respectively (Zandbergen & Hart, 2009).

An additional example of the potential problems with crime mapping comes from the Los Angeles Police Department, whose online crime map in 2009 excluded close to 40% of the crimes reported in that city. Among the 19,000 criminal incidents between January 1, 2009, and June 13, 2009, that did not appear on the website [lapdcrimemaps.org](http://lapdcrimemaps.org) were 26 homicides, 137 rapes, more than 1,000 violent robberies, and 10,766 personal, vehicle, and other thefts (Welsh & Smith, 2009a). In response to this problem, the head of the LAPD's statistics unit commented, "It is what it is. It's for the general public. For what we do [at LAPD] we have a much more robust thing" (as quoted in Welsh & Smith, 2009a). Earlier in 2009, it was revealed that a particular area of Los Angeles (one block from the LAPD headquarters) was the most likely place to be victimized by crime. However, the crimes reported as occurring in that area actually happened elsewhere in the city, the "only thing they had in common was an address that was impossible for a computer to find" (Welsh & Smith, 2009b).

### **Advances in Self-Report Methodology**

Reverse record checks and other types of cross-validation procedures have been widely used over the last two decades to assess and refine the methods of self-report surveys. Across various substantive domains (e.g., drug use, alcohol use, sexual behavior, income tax evasion), self-reports of criminal and

conventional behavior have become a mainstay of basic social research and public surveys. Although there remains considerable suspicion about the accuracy of self-report measures of serious criminal behavior, surveys of known offenders have increasingly been used to understand the nature of crime and the decision-making processes underlying offenders' selection of crime victims.

One of the most interesting applications of self-report methods involves asking known offenders to describe their motives for committing particular offenses and the situational factors that influenced their criminal decision making. These studies often involve interviews with incarcerated offenders, who are asked questions about target-selection factors and are given visual cues that represent different crime situations. Through these self-reports of "attractive" crime situations, researchers have been able to identify key factors that underlie offenders' selection of victims. For example, the primary target-selection factors for burglaries identified in these self-report studies include signs of occupancy, convenience and familiarity, and the expected yield from the crime (see Bennett & Wright, 1984; Cromwell, Olson, & Avary, 1991; Miethe & McCorkle, 2001). From a public policy perspective, these self-reports by known offenders have become essential for developing reasonable situational crime prevention strategies and other crime control approaches.

As an approach for measuring the true nature and extent of crime, however, self-report studies continue to be limited by various methodological problems. Sample selection bias remains a serious problem because those who participate in these surveys and report criminal behavior are probably considerably different from those who refuse to participate. Even when conditions of anonymity are guaranteed, the threat of legal liability for their answers still contributes to considerable underreporting of serious criminal acts among respondents.

### **Advances in Victimization Surveys**

Major advances in victimization surveys have primarily involved the development of more comprehensive screen questions. As noted in Chapter 5, the screen questions in the NCVS have led to dramatic increases in the number of recalled victimizations for particular types of crimes (e.g., rapes, assaults, burglaries) identified in these surveys. In addition, the greater use of computer assisted telephone interviewing with central monitoring of the interviews has also resulted in higher victimization rates derived from these surveys.

Although improvements in screening questions and survey methods can be seen as positive developments, these "advances" in victimization surveys may have an unintended consequence of increasing the number of less serious and even trivial offenses being recalled in victimization surveys. If a higher proportion of individuals are reporting minor property offenses and alleged threats without injuries in victimization surveys, then the surveys may contribute to an overestimation of the crime problem. As a result of these changes, UCR and NCVS trends may also exhibit less convergence over time.

As a measure of crime prevalence, advances in victimization surveys are still unable to correct the major problems associated with this measurement approach. Regardless of whether or not new screens are used, victimization surveys cover only a small proportion of criminal behavior, and the results are susceptible to both sampling error and sampling bias. Problems with telescoping and the length of the reference period continue to adversely affect estimates of national victimization rates.

### **Internet/Web Surveys**

In addition to providing opportunities for the commission of new types of crimes and the mapping of crime across and within jurisdictions, the Internet has also contributed to developments in survey methodology. Despite its relatively short history (the first published papers on web-based surveys appeared in 1996), as Couper and Miller (2008) noted, this new tool has had a profound effect on survey research, and there has been a virtual explosion in Internet surveys in the last few decades. As Witte (2009) commented, "Today, a week does not pass when most internet users are not afforded the 'opportunity' to participate in at least one online survey" (p. 284).

Internet surveys have a number of advantages compared to telephone or face-to-face surveys. These surveys are much cheaper to conduct than mail, telephone, or face-to-face surveys; interviewer wages, long-distance charges, postage, printing, and keypunching costs associated with other survey modes are virtually eliminated (Dillman et al., 2009). The web can also facilitate access to specialized populations, and the relative anonymity of the Internet may lead to higher response rates and more truthful answers (Skitka & Sargis, 2006). In addition, the computerized nature of Internet surveys facilitates experiments comparing the effects of different design features on responses to questions, among other things (Couper & Miller, 2008).

Of course, there are also problems associated with Internet and web-based surveys. The primary one is related to how representative of the general population Internet-based surveys are, and it is difficult to identify the actual nature of nonresponse bias associated with these surveys. Substantial proportions of the general population do not have access to the Internet, and the differences between those who do have access and those who do not are apparently not diminishing (Couper & Miller, 2008; Skitka & Sargis, 2006). A Pew Research Center survey (Rainie, 2010) conducted in 2009 found that 74% of adults used the Internet, but it also revealed substantial differences in Internet access across several demographic categories.

As Exhibit 6.1 shows, while Internet use did not vary according to gender, whites had higher rates of use as did those in younger age and higher income groups. Those with higher levels of education were more likely to report Internet use, while those living in rural locations reported the lowest levels of use. An additional problem for web surveys is that there are also

**Exhibit 6.1** Percent Reporting Internet Use, 2009

Male	74%
Female	74%
Whites	76%
Blacks	70%
Hispanics	64%
Age 18–29	93%
Age 30–49	81%
Age 50–64	70%
Age 65+	38%
Household Income < \$30,000	60%
Household Income \$30,000–\$49,999	76%
Household Income \$50,000–\$74,999	83%
Household Income > \$75,000	94%
Education < High School	39%
Education High School Degree	63%
Education Some College	87%
Education College Degree or higher	94%
Geographic Location Urban	74%
Geographic Location Suburban	77%
Geographic Location Rural	70%

SOURCE: Adapted from “Internet, Broadband, and Cell Phone Statistics,” by L. Rainie, 2010, *Pew Internet and American Life Project*, <http://www.pewinternet.org>

demographic differences in access to high speed Internet connections, which may make it difficult for people to respond (Dillman et al., 2009). These demographic differences must be considered when attempting to generalize the results of such surveys to the larger population.

While Internet surveys have not proliferated in the discipline of criminology, they have been used to study the connection between substance use and physical or sexual victimization among female college students (Parks, Romosz, Bradizza, & Hsieh, 2008), drug use and sexual behavior in a sample of young adults (McMorris et al., 2009), and drinking in a sample of college students (Kypri, Gallagher, & Cashell-Smith, 2004), among others.

Web surveys have also been used to address other issues of interest to criminologists. For example, Rosenbaum, Schuck, Graziano, and Stephens (2007), in cooperation with the Chicago Police Department and residents of Chicago, developed and implemented a web-based community survey in 51 Chicago police beats in order to, among other things, develop new external measures of police performance. With respect to methodological issues, Rosenbaum et al. (2007) found that “geo-based web surveys are sensitive to neighborhood differences that have been masked by large-scale surveys in the past” (p. vii). In particular, because their data were collected in smaller geographical areas in Chicago, the surveys revealed substantial differences in the assessment of police performance with racial minority groups, in contrast to citywide surveys that historically have left the impression that African Americans, Latinos, and whites are relatively homogeneous groups in terms of their assessments of the police.

## SUMMARY AND CONCLUSIONS

The major objective of this book has been to examine the most common methods for measuring crime. We have stressed the importance of accurate measurement of crime for evaluating criminological theory and public policy on crime control. On the basis of our review of the problems with each approach, it should be clear that neither official data, self-reports from offenders, nor surveys of victims provide a definitive and unequivocal measure of the nature and distribution of crime in society. Even with major advances in data collection and survey research technology, these three methods will continue to provide an incomplete and distorted picture of crime.

Given the limitations of current methods of counting crime, an important question involves whether these measures are “good enough” even if they are flawed. The answer to this question depends on the purposes to be served by these crime statistics. Police data on automobile thefts, for example, are probably adequate for most comparative purposes within and across jurisdictions because a high proportion of these crimes are reported to the police by citizens. In contrast, statistics on sexual assault, regardless of their source, are notoriously inadequate for almost all purposes of theory testing and the evaluation of crime control policies. The adequacy of official and unofficial measures of violent crimes other than murder and of property crime falls somewhere in between these two extremes.

Of the methods of counting crime examined here, the accuracy of police statistics on reported crimes is far less likely to be challenged in media accounts, academic research, and general public discourse than either self-report or victimization results. In fact, through their connection with the FBI, UCR data have a unique aura of legitimacy that furthers their immunity to widespread scrutiny. Even when the shortcomings of police statistics are identified in media or

academic accounts, UCR data are still treated as objective measures of the extent of crime. By identifying the various classification and counting problems with UCR data and their susceptibility to police manipulation and distortion, we hope our efforts will curtail the uncritical acceptance of police statistics as an accurate measure of the extent and distribution of crime.

In conclusion, an enormous amount of money and energy have been directed at the measurement of crime. Methodological refinements in the type of information collected, question wording, and the development of standardized procedures for classifying and counting crimes have improved the quality of crime statistics. However, each technique for counting crime has serious flaws that are inherent in their basic design. By understanding the strengths and limitations of each approach, evaluations of criminological theory and crime control policies may be better informed of the various procedures and practices that underlie the social construction of crime statistics.

### REVIEW QUESTIONS

1. Identify at least two areas where the three primary measures of crime (official data, self-report studies, and victimization surveys) are consistent with respect to known facts about crime in the United States.
2. Discuss how the way recidivism is measured can impact the evaluation of the effectiveness of correctional policies.
3. Choose your favorite criminological theory and find a journal article that tests the theory. What type of crime data were used to test the theory?
4. What are the key issues surrounding the collection and analysis of racial profiling data?

### INTERNET EXERCISES

1. Access the website for the Racial Profiling Data Collection Resource Center at Northeastern University (<http://www.racialprofilinganalysis.neu.edu/background/jurisdictions.php>). Click on the state you live in, and then determine which law enforcement agencies in your state are collecting racial profiling data. What type(s) of data are being collected, and how are the data analyzed?
2. Access the <http://www.crimereports.com> website and type in your location. How many crimes are listed for your location? Are there any sex offenders listed in your location? (If your location is not listed, do not enter an alternative location.)