Chapter 1

What Is Theory?

Chapter Outline

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theory—A speculation about how phenomena, behavior, or processes are caused and what takes place after the cause is determined.

What Is Theory?

A **theory** is an objective, educated guess about a set of assumptions. Scholars argue that theories provide plausible explanations for reality (Maxfield & Babbie, 2012; Hagan, 2012). In the study of crime, theories have several functions. They enable researchers to identify, describe, explain, predict, and control for problems found in deviant and criminal behavior. By applying theories, researchers are able to identify social facts as they

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occur in their natural environment. Theories can describe conditions that precipitate deviant and criminal behavior. Theories have explanatory powers that allow researchers to discern why some people react the way they do to certain conditions. They enable researchers to understand the motivation of behavior within a given social context,

research—An investigation that employs the use of the scientific method. It is considered as a systematic investigation of phenomena, behavior, or processes that relies on empirical data and logical study and analysis.

while giving the researcher a frame of reference to isolate behavior. Theories provide researchers with the ability to make predictions regarding what the future could hold for those living under similar or adverse conditions or for other at-risk individuals. Moreover, theories enable researchers to propose and influence public policy so that undesirable behaviors will be controllable. In sum, theories can direct **research** and influence policies created to improve the human condition.

What Is Good Theory?

testability—Where research is concerned, one criteria of a good theory is that it must be tested. If it can be tested, it has the potential of making for good theory.

Contrary to popular opinion, not all theories are good theories. Hubert Blalock (1979) defines several criteria that make for good theory. He argues that these include **testability** and the ability of the theory to fit the research question. In social science research, testability is essential. Without testing and proving or disproving a theory, researchers cannot make qualified assertions about its predictive powers. In fact, without good theory, scientific researchers would have no claim of intellectual accuracy; their findings would be reduced to claims that are similarly made by the general public with respect to crime and criminal behavior. Moreover, since social researchers engage in the scientific method, their claims of accuracy should be based on research evidence and not mere speculation (Babbie, 1998).

Theories must fit the research question at hand. For instance, researchers would be hard pressed to apply a macro theory (one that addresses the aggregate) to answer a micro-level (individual) research question. An example even more to the point is that one should not use crime theories to explain delinquency. This mistake is often found in criminology. The inverse mistake is also made: theories that have been constructed to explain the

ecological fallacy—A logical error that results when one attempts to make conclusions about individuals based on group data.

behavior of juveniles are used to explain and make predictions about adult criminality. In research, this mistake is referred as an **ecological fallacy**. When such a mistake is made, one has to seriously question whether a misclassified theory can hold up to a particular investigation.

Criminological theories attempt to make sense of social phenomena, especially when no previous explanation has been given for the behavior in question. However, many theories cannot be tested, because their ideas are not fully developed or clearly defined (Hagan, 2012). Some theories that highlight this point include conflict, Marxism, differential association, and labeling. For instance, conflict theory argues that crime is a by-product

of unequal distributions of wealth and the disparate treatment of the people whom William Julius Wilson refers to as "the truly disadvantaged" (1987). The problem with this general theory is in defining, or **operationalizing**, what is meant by "unequal distributions" and "disparate treatment."

> **operationalize**—The process of defining variables that represent specific concepts, or portions of concepts, that will be collected from the study subjects. Researchers operationalize by imposing their ideas about how a concept should be measured in the study situation.

What is more perplexing and challenging to criminologists is explaining why some individuals who live in poverty, experiencing social, political, and economic inequalities, abstain from crime, while others vigorously pursue criminal ambitions. Differential association theory, developed by Edwin Sutherland, comes short of explaining why some individuals sharing the group's experiences, socializations, values, and definitions do not engage in crime while others do. Edwin Sutherland was also the first to argue that anyone in society regardless of social class could commit crime. Moreover, when outlining this theory, Edwin Sutherland never explained what was meant by definitions favorable to law violations.

The labeling theory argues that if a person acquires a weak self-image after being labeled, he or she will eventually engage in secondary deviance. How does one conceptualize and operationalize a weak self-image? A better question is, at what point does one experience identity transformation into a criminal or social deviant? And how can a researcher test such theories?

What Kinds of Theories Are There?

There are two general **typologies** of theories. Theories can be used for explaining phenomena on both the macro and micro levels. **Macro-level theories** explain larger social occurrences. For example, theories that attribute crime to the social order operate at the macro level in their explanatory powers. They often ask, to what extent does poverty influence crime? Such theories are often called social structure theories. They argue that there is something in the social order or environment that propels individuals to commit crime. Such an environmental factor could be poverty or a lack of community mechanisms, such as traditional families, leaders, monetary resources, and group cohesion that exert social control. Some macro-level theories include social disorganization, strain, and conflict.

> **typologies**—The different types of theories used to explain criminal behavior.
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> **macro-level theory**—A theoretical explanation that has an extensive explanatory power, and can be used to explain group behavior. Theories that examine poverty and socialization are typically macro in their level of explanation.

Micro-level theories attempt to explain the causes of crime on a smaller scale. Instead of attributing the origins of crime to the broader society, these theories argue that by examining an individual's group experiences and interactions, crime causation can be discovered. Social

> **micro-level theory**—Theoretical explanation that has very limited explanatory power—for instance, to explain the behavior of a single individual. In the study of crime, micro-level theories are primarily biological and psychological.

learning and social control are theories found on this level. These theories are often referred to as social processing theories, because they look at the process by which one learns and develops criminal behavior patterns. They typically focus on certain groups of people or subcultures. Micro-level theories also examine an individual's social, biological, and psychological makeup. The key difference between macro- and micro-level theories is that macro theories are concerned with the aggregate entities of society, while micro-level theories focus on individuals. Micro-level explanations are most effective when they endeavor to explain behavior on a case-by-case basis, while macro-level theories are generalized to cover larger groups of people.

Levels of Explanation

Each theory is designed with a certain level of explanatory power. These levels of explanation often include the behaviors of individuals, groups, and social classes. It is important that one's theory has the correct explanatory power, because many theories fall short, generalizing about an incorrect level or object. Some theories attribute the cause of crime to social factors, while others maintain that crime is caused by psychological or physical anomalies. Some theories attempt to explain why governments engage in criminality, and yet other theories focus on why individuals commit criminal activities.

The Classification of Theory

Another area of concern in criminological theory is classification. Theoretical classification is a way to group theoretical development into neat packages. However, this practice is not as concise as it could be, since criminological theories are not clearly stated. Two forms of classification, and perhaps the oldest, are the classical and positivist theories. The classical theory emerged during the 18th century. It focused on making legal reforms and humanizing the administration of justice. The positive school emerged a century later, making the individual its primary focus. Positivists argued that offenders engaged in crime and antisocial behavior because they were either physically or psychologically impaired, or suffered from criminogenic environmental influences. Both classical and positive schools of thought served as the genesis of criminological theory.

Processual and structural classification are dichotomous yet intertwined arguments about criminal behavior. Processual classification states that becoming a criminal and committing aberrant behavior is a gradual process whereby one learns and accepts definitions favorable to committing these actions while interacting in personal groups or cliques. Some processual, or social processing, theories are social learning, social control, and labeling theories. This tradition argues that people are socialized into either law-abiding or criminal behavior. And some offenders may persist in a life of crime because of negative societal reactions.

Structural classification contends that negative social forces in the environment, community, or society push offenders in the direction of crime, leaving them little choice in the matter. Structural classification theories argue that the social order is unjust and

resources are distributed unequally. In addition, poor segments of the population have inept community controls that make them disorganized. Classical strain theory points out a factor that amplifies the difficulty of the underclass; namely, that the American culture teaches that anyone can live the "American Dream" if one engages in hard work. This is not necessarily the case, however; those in the middle and upper classes already have an advantage in their pursuit of the American Dream. They have avenues to economic opportunities that may be withheld or blocked from members of the lower class, which in turn may cause those in the lower class to feel frustrations that push them toward crime.

Theory-Then-Research versus Research-Then-Theory

Before undertaking a scientific investigation, researchers may want to determine an appropriate methodology or protocol to use. For example, a researcher may ask, should scientific investigations be guided by theory, or should research inform theory? There are two schools of thought where theory and research are concerned. One is advanced by Karl Popper (theory-then-research) and the other by Robert K. Merton (research-then-theory). The general argument is that social scientists operate and exist in two "worlds." These include the world of observation and experience, and the world of ideas, or theories and models. Understanding a systematic connection between these two worlds enhances the goals of the social sciences (Babbie, 1998).

The theory-then-research argument of Popper holds that theory should come first and research should follow. Stated another way, theory should guide research. Popper contends that with this approach, scientific knowledge would advance more rapidly through the development of ideas and attempts at refuting those ideas through empirical observations. He argues that theories can be reached only by intuition that is supported by experience.

Merton, in his counterargument, argues that empirical research goes beyond the passive role of verifying and testing theories. It does more than confirm or refute hypotheses. It shapes the development of theory because it initiates, reformulates, deflects, and clarifies theory. Merton contends that research suggests new problems for theory, calls for new theoretical formulations, and leads to the refinement of existing theories in addition to serving the function of verification (Babbie, 1998).

Despite the two opposing views, there is still no consensus on which should come first, theory or research. The disciplines of criminology and criminal justice have embraced both approaches.

How Do Criminologists Conduct Research?

What most people understand about crime, justice, law, and the criminal justice system is often presented to them by the mass media (Surette, 2013), typically the local news, newspapers, and television programming that is packed with a little information about the justice system and a lot of entertainment. Unfortunately, this is what constitutes the social reality for many Americans. Unlike citizens in the lay public, criminologists are

professionally trained to use the scientific method to study crime. This alone gives credibility or believability to the assertions they make about crime and its causation.

In making assertions about crime, criminologists are concerned with validity and reliability. **Validity** is the accuracy of measurement, and **reliability** is the consistency of measurement. Those who study crime must be sure that they are studying exactly what they should and, at the same time, that their research findings yield consistent measures and lend themselves to replication studies.

> **validity**—The accuracy or exactness of measurement in research investigations.
>
> **reliability**—A consistent or repeated measure. It allows for replication in research.

Unfortunately, it is sometimes very difficult to achieve both in research. As such, some scholars may focus on validity or an accurate measurement of the investigation in question, reasoning that to consistently get an invalid measure does nothing to advance the discipline's body of knowledge.

Researchers use many techniques or methodologies to arrive at their conclusions. Techniques include the following: social surveys, longitudinal designs, aggregate data, experimental designs, observational measures, case studies, life history methods, and unobtrusive measures (Champion, 1993; Hagan, 2012). An important fact to remember is that the research question or problem the researcher is attempting to answer will determine the type of methodology that he or she uses in the investigation (Hagan, 2012; Nachmias and Nachmias, 1981). Moreover, some researchers recommend the use of triangulated measures. This practice allows for better control over rival causal factors that may be responsible for the findings or outcome in research. It encourages the use of multiple methods to gain greater control.

Survey Research

Researchers use social surveys to measure attitudes, beliefs, values, orientation, and behavior. There are several types of surveys, including questionnaires, interviews, and telephone calls (Fowler, 1988; Hagan, 2012). Surveys allow criminologists and criminal justicians to get to the "dark" figures of crime. These are figures that are not calculated into official crime statistics. They are the unknown data that often puzzle researchers. Some scholars contend that surveys, especially those that allow respondents to remain anonymous, are very helpful when collecting sensitive data. For example, they can be used to gather respondents' beliefs about other racial and ethnic groups, and other areas and subject matter that researchers may have a difficult time collecting since respondents may be uncomfortable answering questions face-to-face. Surveys can also be used to measure the experiences of respondents, such as their levels of victimization as well as participation in offending behavior. **Survey** research is often referred to as cross-sectional research. This type of research allows researchers to collect data from a **cross-section** of the community, thereby representing the entire community.

> **survey**—An instrument used by social scientists to measure attitudes, behaviors, beliefs, and preferences of respondents.
>
> **cross-section**—A representation of an entire community or data collected at one point in time.

Unless it is followed up, survey research represents taking a measure at one point in time. Survey data lack predictive power regarding the future behavior of people who are surveyed. For example, if survey research is conducted at a local public high school to measure the students' involvement in drug use, one would assume that the students would represent the entire community. We would expect that the students would have different positions in the economic structure of society. Stated differently, the students would be from different social economic backgrounds. Taken together, they represent the diversity of the entire community. Surveys are also used to measure if racial bias or selective law enforcement exists in official processing that may be apparent in the Uniform Crime Reports (UCR) and the National Incident-Based Reporting System (NIBRS). In fact, many self-report studies of juvenile delinquency reveal that despite social class, juveniles report engaging in similar amounts of behavior, but poor juveniles are more likely to be arrested and receive official processing.

When these data are collected at a single point in time, they indicate the students' level of drug involvement only at the time these data are collected. They do not indicate if students either abstained or continued to use drugs after the survey.

Sampling

Most surveys use sampling techniques after data have been collected. A **sample** can be representative of the population if it is properly collected (Philliber , Schwab, and Sloss, 1980; Hagan, 2012). There are two types of samples: probability and nonprobability. Those samples that use

> **sample**—A smaller number of individuals taken from a population for the purpose of generalizing to the whole. If the sample is conducted in a random fashion, it should reflect the population.

an equal probability of selection method are often preferred and are used to represent the entire population (Champion, 1993; Babbie, 1998; Senese, 1997). This is not the case for nonprobability samples. Frank Hagan (2012) describes the equal probability of selection method (EPSEM). In this method, every element in a targeted population has an equal probability of being selected into the sample. For example, researchers do not always have the time or resources to interview everyone in a targeted population, nor is it necessary to survey the entire population (Hagan, 2012; Maxfield and Babbie, 2012). A randomly selected probability sample allows researchers to make valid inferences about the targeted population. However, if the sample is not selected in a random manner, the findings from the research cannot be inferred to represent a larger population. This places limitations on the study in question. In the study of crime, the two main types of surveys are self-report surveys (in which people self-report their levels of unreported crime) and the National Crime Victimization Survey (in which victims report victimizations that are not calculated into official police reports).

While no research technique is without flaw, there are several criticisms of surveys: (1) respondents often lie about, forget, or even exaggerate their criminal behavior; (2) surveys fail to measure changes that occur within people over time; and (3) research questions may not measure what they are intended to measure. As a result, some researchers argue that surveys should provide open-ended questions instead of closed-ended. They contend

that this may be the only way to achieve validity, because items included in closed-ended questions may not truly reflect the respondent's feelings. The respondent is then left to select the response that is most closely related to his or her true feelings.

Researchers also attempt to validate some responses they receive in surveys. Some techniques that they use to determine if reports are accurate are truth scales and outside sources when possible. Because surveys can be unreliable, steps must be taken to enhance their accuracy. For this reason, surveys are believed to be high on reliability but low on validity (Babbie, 1998; Hagan, 2012).

Longitudinal Research

While cross-sectional research provides a single measure at a given point in time, longitudinal research designs entail observing a group of people who share a like characteristic for an extended period of time to measure changes that take place (Hagan, 2012; Agresti and Finlay, 1997). Typically, the group shares characteristics, such as age, race, social class, education, or even birth dates. For example, Marvin Wolfgang, Robert Figlio, and Thorsten Sellin in Philadelphia conducted a longitudinal study on a birth cohort for 18 years, tracking 9,945 boys, and Sheldon and Eleanor Glueck studied the life cycle of delinquency, following the careers of known delinquents (1972). **Longitudinal designs** measure change that occurs within the lives of the subjects of an investigation that may explain a particular outcome. Stated another way, this method is used to determine which events experienced by the subjects caused them to develop into who they are.

longitudinal design—A study that is conducted over time to determine what causes change. These studies typically use a group of subjects who share similar characteristics (a cohort).

While engaged in longitudinal research, criminologists may examine newspapers, hospital records, educational background records, marital records, police records, and death records. Sometimes longitudinal designs rely on a process called retrospective format. It essentially requires taking a group of known offenders and looking back into their early childhood experiences to determine what may have caused their law violations. Researchers may examine the subjects' family relationships, academic failures, alcohol and drug use, or whether they lacked a proper male or female role model. One type of longitudinal design referred to as **time series** involves observing a group of subjects for a while and then giving them a stimuli or treatment and making several more observations at different intervals to determine the effect of the intervention. This technique is used to determine if any changes occur over time and whether the stimulus is responsible.

time series design—A research method that refers to the analysis of a single variable at several successive time periods with a measure taken before treatment and several observations after treatment.

aggregate data research—Studies that rely on existing statistics or numbers about social behavior.

Aggregate Data Research

Aggregate data research relies on official crime reports or any officially collected data—that is, any data that are

collected and kept by governmental agencies (Hagan, 2012; Babbie, 1998). For example, the Federal Bureau of Investigation annually publishes the UCR (also see the NIBRS). Official data are also collected by courts, corrections and juvenile justice departments, and the U.S. Census Bureau, to name a few. These data often provide demographical information (such as race, ethnicity, age, gender) and reveal trends and patterns than can be used to determine whether there are increases or decreases in the numbers of crimes that are reported. These data often reveal the type of offense an arrestee may have committed. Other crime data are collected by the Vera Institute and the National Institute of Justice Council on Juvenile Justice and Delinquency Prevention. Because of the problems associated with collecting these data, they are high on reliability and low on validity. Critics claim that these data should be accepted with caution owing to citizen reporting practices, law enforcement practices, and methodological problems. At the very least, these concerns make us question the accuracy of these data. Aggregate data are perhaps stronger when they are corroborated by other data.

Experimental Research Designs

Social science research utilizes several types of **experimental designs**: classical, Solomon Four, and pre-experimental. These designs entail intervening in the lives of subjects to determine the outcome of an intervention. These studies focus on cause and effect (see Simon, 1978; Champion, 1993; Senese, 1997). Critics charge that there are not enough experimental designs used in criminal justice and criminological research. Perhaps the two most publicized experiments are the Kansas City Police Prevention Patrol Experiment and the Minneapolis Domestic Violence Experiment. In the first experiment, researchers

> **experimental design**—A study that attempts to approximate laboratory conditions. Experiments include two groups, control and experimental. The experimental group is exposed to a treatment, or independent variable, and the control group is not exposed to the treatment; it is used to compare to the experimental group. The purpose of this research is to determine cause and effect.

wanted to determine if routine patrol decreased crime, decreased fear of crime, and increased arrests. This was accomplished by comparing measures of crime, fear, and arrests in several beats by employing the use of reactive patrol, regular patrol, and proactive patrol. The research revealed no difference with regard to crime, fear, and arrest (Larson, 1975). In the second experiment, Sherman and Berk (1984) investigated police response to domestic violence in Minneapolis. In the investigation, police used several approaches to respond to cases of intimate personal violence. They discovered that when police effected an arrest instead of relying on mediation, separation, or a "cooling-off" period, offenders were less likely to reoffend. While engaging in a classical experimental design, researchers must be aware of the elements associated with conducting experiments. They include: the random selection of subjects, control and comparison groups, the experimental condition (treatment or stimuli), and pre- and post-measure. The formula for experimental research is represented in **Table 1.1**.

Theoretically, the classical experimental design uses two samples that are selected from a population. The assumption is that equivalence (E) exists with regard to every element

Table 1.1 The formula for experimental research.

Experimental Group	Control Group
Equivalence (E)	Equivalence (E)
Pre-measure (01)	Pre-measure (01)
Treatment (X)	Placebo (0)
Post-measure (02)	Post-measure (02)

found in the population. That is, subjects taken from the population are similar and can therefore be placed in either group. If this condition is not achieved, the experiment is believed to be contaminated (Hagan, 2012). One group is called the experimental and the other is called the control group. However, to ensure that the two groups are equivalent, the researcher should conduct a premeasure (01) for confirmation to determine if equivalence exists. This takes place with regard to both the experimental and control groups. Later, the experimental group gets the treatment or stimuli (X), while the control group receives the placebo (0). After the experiment runs its course, a post-measure (02) should be taken to determine if the treatment had any effect on the outcome (since experiments are concerned with cause and effect). Within the context of an experiment, the treatment is referred to as the independent variable, and the outcome is the dependent variable. The logic of the experiment assumes that the independent variable is causal. Experimental research is high on validity and reliability.

Observational Research

> **observational research**—A research design whereby the investigator collects data by interacting with the subjects of the research in their natural setting to understand what their experiences mean to them. This approach renders a grounded theory when the research is completed.

Some social scientists view **observational research** as a more valid measure than the other methodologies, but argue that it poses more ethical questions (Senese, 1997). Observational research is typically referred to as field research or qualitative methods. The technique involves spending time in the natural environment of the subjects and interacting with them. This allows researchers to determine how people react in their natural environment and what behaviors mean to those who engage in them (Maxfield and Babbie, 2012; Hagan, 2012). Observational research is a sensitizing approach used to inform the reader about the plight of the subjects under investigation in the research. The technique requires that the researcher not start with a theory, but move toward a grounded theory as the research is being performed. Some of the tools on which this methodology relies are informants, gaining access, tests, rapport, and ethics. The advantages of using this method are: (1) one can observe changes in people over time, (2) the method is fairly inexpensive, and (3) it is high on validity. The negative points are: (1) the method is very time-consuming, (2) researchers cannot control the behaviors of the subjects, (3) there are

sometimes problems gaining entry, (4) the research conclusions are tentative, (5) there are problems with generalizations, (6) the method may be low on reliability, and (7) the researcher may face ethical dilemmas. Classical research that has relied on this methodology includes William Foote Whyte's "Street Corner Society," Lord Humphey's "Tearoom Trade," Joseph Styles's "Outsider/Insider," Martinez Jankowski's "Island in the Streets," Elias Anderson's "A Place on the Corner," and Elliot Liebow's "Tallay's Corner." Again, though the research question typically dictates the methodology, some researchers rely on multiple methods to address a research question. This process is known as triangulation, and is believed by some scholars to bring more credibility to the research investigation (Whyte, 1984).

Ethics in Criminological Research

The concept of ethics is very important to criminological research. **Ethics** refers to the standard of conduct used by a given profession or group. Those in a particular profession try to safeguard the reputation of their profession by

> **ethics**—What is morally right or wrong as agreed to by a group or profession.

rigorously adhering to agreed-upon standards of conduct (see Babbie, 1998; Maxfield and Babbie, 2012; Kraska and Neuman, 2012). Sam Souryal (1992) defines ethics as a branch of philosophy that studies what is morally right and wrong or good and bad, as decided on by a group of people. The academic disciplines of criminology and criminal justice have such a code (Hagan, 2012). The purpose of the code is to ensure that the subjects of research are not harmed or injured during or after their participation in research. At the same time, the code ensures that the purpose of research is to advance the understanding of human behavior and social reality. Subjects of research must be protected since they are making a sacrifice by participating in a scientific investigation. In many cases, they have very little to gain economically, and, at best, the only thing that researchers can promise them is that their participation will contribute to positive change in the human condition (Babbie, 1998; Maxfield and Babbie, 2012). If participants are harmed in scientific investigations, others in the general public may refuse to participate in any academic research in the future. Therefore, researchers have established general guidelines with which to approach their investigations: (1) make participation voluntary, (2) never injure participants, (3) protect anonymity and confidentiality, (4) practice full disclosure, and (5) remember ethics when analyzing and reporting the research findings.

Make Participation Voluntary

The history of research conducted in the name of science is saturated with shameful accounts of participants being either forced into or deceived into submitting to scientific investigations that ended in horrific tragedy, with many unknowing subjects used as guinea pigs in biomedical as well as social scientific research (Hagan, 2012). Therefore, researchers should seek informed consent or an agreement of understanding regarding the purpose and consequences associated with the study. For the subjects involved in

any research investigation, participation must be voluntary. If participants are forced or coerced into being a part of research, they may be inclined to respond in a manner that they think the investigator expects. For example, if a professor forces her students to complete a survey or questionnaire because they represent a sizable convenience sample or captive audience, the students may feel compelled to respond in a positive manner in an attempt to satisfy the professor. Any response given by the students would be suspect because of the bias built into the student–professor relationship. In an ideal situation, the researcher would get the participants' informed consent, stating that they agree to the conditions and terms of the research investigation. This process makes for bias-free and objective responses from the participants in a given research investigation.

Never Injure Participants

Participants in scientific investigations should never be harmed during or after participating in research. Injuries to participants can go far beyond the physical and psychological; for instance, they could also be responsible for destroying a participant's reputation. Two often cited examples of injuries sustained during research are the Milgram experiment and the Zimbardo prison experiment. The Milgram experiment was premised on the idea that people will continue to obey orders from authority figures even if they know others are being adversely affected by what they are doing. In this experiment, a participant was instructed to deliver electric shocks to a person who provided incorrect answers to questions that were being asked of him. The person answering the questions was a member of the research team and was not really being shocked, but this was not known to the subject dispensing the voltages (the only true subject in the investigation). According to the research plan, the more questions the respondent answered incorrectly, the higher the voltage of electricity he or she would receive. This would continue until it was clear that the respondent was either incapacitated or dead. The experiment found that even when it was clear that the respondent was in pain or dead, the participant continued applying electric voltage. As a result of their participation in the experiment, many subjects (those applying the electricity) suffered convulsions and seizures (Milgram, 1963). The true subjects of the investigation were not briefed beforehand that they were participants in an obedience test.

Another prison experiment was conducted at Stanford University. Known as the Zimbardo prison experiment, the study collected a random sample of students to participate in a simulation of a prison setting. The students were selected to serve as either guards or prisoners. After operating for six days, the study was aborted, because the students began taking on the persona of the roles they had been given. Both groups of students went **native**. They experienced an overreaction to research roles that they were assigned. For example, those students who were acting as prison guards started to debase, dehumanize, and treat student-prisoners with contempt. They acted aggressively toward them by swearing, subjecting

native—A term used in observational research that denotes the researcher has lost objectivity and has overidentified with the subjects of the investigation. The term is also used to refer to a subject who has overidentified with his role in a research project.

them to excessive force, and demanding that they do physical exercises as part of their punishment. They also had them simulate homosexual activity. As tension mounted, those in the prisoner group grew depressed and even passive from their brief experience as inmates. Many cried out from the humiliation and were despondent during the experiment, but they did not stage a mass exodus from the simulated prison. They had accepted the role of prisoner and forgot that they were college students participating in a study. They believed that they could not leave until they had "served their sentence" (Zimbardo, 1963). The experiment showed that the social environment (especially an isolated one) can adversely affect one's personality. After the project was terminated, some students received extensive counseling and others left the university. Some scholars believe that these two research projects may have dramatized the need for the development of human subject committees and institutional review boards (Hagan, 2012).

The purpose of human subject committees and institutional review boards (IRBs) is to ensure quality control in research in general, and the safety of research subjects in particular. IRBs are composed of university professors, some of whom are other researchers and scientists, professionals in the community who review proposed research and make a decision regarding its merits, feasibility, risks, and benefits. The board can either approve or disapprove proposed research (Hagan, 2012). IRBs and human subject committees provide oversight and take the steps necessary to safeguard against participants being harmed by any aspect of research. They also require that if human subjects are to be used in research, an informed consent form must accompany the research proposal. Even with such consent, research committees can disapprove any investigation that they deem risky. This is done to protect the subjects of research and to prevent the university from civil liability if any injuries stem from the research investigation.

Protect Anonymity and Confidentiality

As previously stated, in more cases than not, the participants of research rarely have much to gain from social scientist research other than knowing that he or she may be helpful or instrumental in improving the human condition. As such, researchers should make efforts to protect them from harm. One way of doing this is to protect the subjects' anonymity and confidentiality. Many scholars believe that such protection could increase the likelihood that subjects will participate in research investigations (Kraska and Neuman, 2012). Anonymity occurs when the researcher is unable to connect a given response to a particular respondent. Confidentiality is maintained when the researcher is able to connect a given response to the respondent, but promises not to reveal his or her identity (Kraska and Neuman, 2012; Hagan, 2012; Maxfield and Babbie, 2012). Participation in research represents an intrusion into the lives of subjects since it could yield shocking findings and reveal a person's innermost thoughts, secrets, beliefs, and behaviors. Therefore, anonymity and confidentiality must be protected or participants' careers can be forfeited, marriages ruined, and lives shattered. Because of the sensitive nature of some research topics (e.g., alternative lifestyles, early childhood victimizations, drug use, racial views), researchers would do well to protect those who lend themselves to scientific investigations. Failure to

do so could mean that participants may be adversely affected by the research process and that the ability of scientists to conduct more research in the future could be drastically compromised (Kraska and Neuman, 2012; Hagan, 2012; Maxfield and Babbie, 2012).

Practice Full Disclosure

Researchers should always practice full disclosure in every aspect of research and at every stage of the research process. The subjects of an investigation should not be deceived, but rather told before they begin the research investigation about: (1) the purpose of the study, (2) how the study is to be conducted, and (3) the use of the research. Subjects should also be informed about the findings of the investigation before they are published. First, subjects should always have a general understanding of the purpose of any investigation in which they choose to participate. They should know what the researcher is trying to measure or determine. Unfortunately, many researchers are reluctant to inform subjects about the objective of the research out of fear that subjects may alter their behavior and act unnatural, thus contaminating the investigation. (This is especially true in qualitative or field research designs.) Second, participants must be aware of each phase of the research. They should know before agreeing to participate in research if there are aspects in which they cannot participate, especially actions that conflict with their ethics or morality. Third, the subjects should know how the findings from research will be used. They should know if the research is being used for political purposes—for example, to justify a policy or to advance a group's ideology. Stated another way, subjects should be told about the intended goals of the research. Fourth, the findings should be revealed to the subjects before they are released to the general public. This is very important, because research and researchers are not infallible. Sometimes, researchers misinterpret events that can easily be made clear by the subjects involved in the investigation. Therefore, to present research findings in an accurate manner, final reports from the investigation should be shared with the participants before they are published and made into public record (Hagan, 2012).

Ethics in Analyzing and Reporting Findings

Another area of research that is highly neglected, yet equally important is analyzing data and reporting the findings. Research data must be objectively interpreted as they are reported or as they are taken from the investigation. Data must be allowed to speak for themselves. Researchers should not take liberties by either fudging the findings or speaking beyond the scope of data. In essence, researchers are not allowed to change or set aside responses that are contrary to what they believe or desire as an outcome of research (Hagan, 2012). However, one huge difference between investigations conducted by researchers in the social sciences and their counterparts in the natural sciences is that a negative finding can have important research implications, especially if it defies conventional wisdom (Hagan, 2012). Researchers should not be reluctant to report negative relationships when they are discovered. Such findings could have the effect of moving

criminal justice and criminology into unchartered areas that could facilitate more effective policies, and, at the same time, eliminate spending on programs and policies that are ineffective or those that have not proven helpful in reducing or eliminating crime. Researchers should always report the problems of the data as well as any other problems that may even include the sample selection or subjects who were part of the investigation. More specifically, if the sample is not selected in a randomized manner, it should be reported as such because it has serious implication with regard to generalizations that could be made (Hagan, 2012).

Summary

Unlike lay citizens in the general public whose opinions about crime and justice are socially constructed by television from either the entertainment media or the local news, criminology and criminal justice researchers engage in the process of scientifically finding out about social reality. They conduct research that requires that they engage in the scientific method while using techniques such as experiments, aggregate data, surveys, longitudinal designs, and observational research while adhering to ethical standards of behavior. They often use theories to guide research or allow their research to inform theory in the process of reaching their findings.

In fact, researchers believe that the process is their only claim to intellectual accuracy about the assertions they are able to make about crime and criminal justice reality. Research methodology is very important in any scientific investigation, because it provides the blueprint used in any study from start to finish. If the methodology is flawed, the findings of the research are unreliable and suspect at best.

Methodological problems are typically found in the sample selection, or in how questions or items are constructed and measured. Moreover, problems can be found in the statistical application used to analyze data. For example, if a sample is not selected in a random manner and instead is based on convenience, the research findings could be limited to the subjects used in a given study. At the same time, there are many statistical analyses that should not be used if one lacks a representative sample. Therefore, researchers should speak to any limitations that are found in their investigations.

Limitations do not necessarily mean that the research was conducted poorly; they could signal, however, that the findings are tentative and not generalizable to wider groups and populations. Such reporting could inspire other researchers to replicate the study using a representative sample that could yield more accurate findings.

Discussion Questions

1. What is the fundamental difference in methodological approaches used by researchers who engage in experimental versus participant observation studies?
2. Explain the criteria used to measure whether a theory is considered good and is properly constructed.

3. Is it necessary for criminologists and criminal justicians to be ethical in their pursuit of the truth regarding research knowledge? Give specific examples of areas to avoid while engaging in research investigations.

4. After reading about the different types of research techniques, which do you believe is a more valid way to measure crime and delinquency?

5. What is the implication of selecting a bias sample in any research investigation?

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