IV. Behavioral Forensic Sciences

Chapter 19: Behavioral Forensic Sciences

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Chapter 19.1: Behavioral Forensic Sciences

Learning Goals and Objectives

The field of behavioral forensic science focuses primarily on the relationships between the fields of psychology and sociology and the criminal justice system. In this chapter, you will need to understand the following concepts:

- What is meant by the terms forensic psychology and forensic sociology;
- How is forensic psychology used before (investigative), during and after trials;
- How is criminal profiling done and what are its limitations;
- What is meant by legal competency and what are its implications;
- What roles do a forensic psychologist play in the legal system;
- What tools are available to assess mental illness and how are they employed;
- What is meant by a forensic autopsy.

Introduction

Most forms of forensic evidence are readily amenable to direct physical measurement and quantitative analysis. In fact, most of forensic science is based upon observable evidence that relies upon quantifiable scientific data which does not require significant amounts of subjective interpretation. Behavioral science, however, often deals with more subjective types of information that probe the underlying reasons for the outwardly observable patterns of a person’s individual thoughts, intentions and behavior. The field also deals with how people function both individually and collectively within larger groups and societies. The behavioral sciences are now, however, increasingly making use of measurable data to understand and predict personal reasoning and actions, partially in response to the field’s growing application in legal practice.

What exactly are the behavioral sciences? The behavioral sciences are fields of scientific exploration that examine the underlying reasons behind observed personal and societal human behavior. This broad term encompasses the work of several fields, but especially those of psychology and sociology. Psychology is focused upon understanding human behavior through the examination a person’s individual thought and mental processes. The field explores mental functioning from many different perspectives and covers an enormous number of sub-disciplines. For example, a neurobiological approach to psychology looks at the molecular and cellular components of the brain and nervous system to discover how memory, emotion, perception, reasoning and other personal traits are stored and processed at the smallest fundamental levels –molecules, cells and organs. Clinical
psychology, in contrast, aims to apply generally accepted concepts of psychology to prevent and treat mental distress and dysfunction as well as to promote personal mental health and well-being. Cognitive psychology examines how a person’s underlying mental activity affects their memory, perception, problem solving, reasoning, learning, language and other brain functioning. Social psychology focuses on how people deal with each other in social settings and how groups, in turn, affect the thought processes of an individual. These are just a few of the many branches of modern psychology. Other sub-disciplines of psychology include abnormal, comparative, developmental, educational, and school psychology. The growing field of forensic psychology, of course, deals with the application of psychological theories and practices to legal questions.

A characteristic trait of humans is that individuals tend to cluster together to form larger functioning units to collectively provide for the basic needs of individuals (e.g., safety, shelter, nutrition) as well as for other purposes, such as companionship, common interests, and pleasure. The field of Sociology, therefore, examines how individuals and groups function and behave within the context of larger societies. It also explores how individuals form social networks that collectively operate as complex organizations. Sociologists may focus on families, businesses, governments, cultures, political organizations and social movements, among other types of human groups. While psychology may be thought of as focusing upon the individual, sociology tends to focus instead upon the functioning of a society. In a forensic setting, sociologists may address issues related to domestic abuse syndrome, family dynamics, group-based thinking, cultural pressures, and social group involvements such as cults, networks, clubs and “fringe” organizations. Understanding how an individual affects a society and, in turn, how the society affects a particular individual may have very important forensic implications.

Background for Behavioral Forensic Sciences

Perhaps nowhere in forensic science is the inherent tension between science and the law more clearly seen than when considering the behavioral sciences. While both science and the law seek accurate information and logical deduction through generally accepted means of analysis, there are still many fundamental differences between the two fields. For example, legal questions usually have a finite time for active consideration before a decision must be rendered. Science, on the other hand, deals with questions in an open-ended fashion – there is not a timeline for coming to a definitive conclusion but rather a process is employed of continual and ongoing experimentation, analysis and refinement. The clinical behavioral sciences typically involve an ongoing, open-ended process when working with an

Selected Journals in Forensic Psychology

- American Journal of Forensic Psychiatry
- American Journal of Forensic Psychology
- Criminal Behavior and Mental Health
- Journal of Child Sexual Abuse
- Journal of Forensic Neuropsychology
- Journal of Forensic Psychology Practice
- Journal of Police and Criminal Psychology
- Journal of Psychiatry and Law
- Law and Psychology Review
- Psychiatry, Psychology and Law
- Psychology, Crime and Law
- Sexual Abuse
- Law and Human Behavior
- Criminal Justice and Behavior
- Behavioral Sciences and the Law
- Journal of Interpersonal Violence
- Journal of American Academy of Psychiatry and Law
- Psychology, Public Policy and Law
- Journal of Family Violence
- International Journal of Law and Psychiatry
- Journal of Forensic Psychiatry
- Journal of Threat Assessment
- Violence Against Women
- Archives of General Psychiatry
- American Journal of Psychiatry
- Development and Psychopathology
individual that is not easily amendable to a strict timetable. The law also seeks for “hard” physical data, usually derived through direct measurement of a material, to provide a basis for making supportable decisions. In the behavioral sciences, however, such definitive tests and data are often difficult or at times even impossible to obtain and, once obtained, may be difficult to interpret unambiguously. Nonetheless, the behavioral sciences are now being called upon routinely to provide vital information in conducting investigations and deciding legal questions.

**Forensic Psychology**

At the outset, an important distinction must be made between the practice of clinical psychology and forensic psychology. Clinical psychology focuses upon the diagnosis and treatment of mental and behavioral disorders in people. Diagnoses are often made slowly, evolving and changing over time as the consultation process between the patient and psychologist continues. Treatments similarly evolve over time as the long-term cooperative process between the psychologist and patient develops, most often with the patient’s willing participation stemming from their desire to find help for their problems. Clinical psychology is not an exact science and may involve multiple, successive approaches and “restarts” during the course of a treatment in dealing with a person’s problems. The treatment approach for an individual person continues to evolve as they change and progress.

Forensic psychology, in sharp contrast to clinical psychology, focuses solely upon the diagnosis of mental and behavioral problems at a particular time without any concern towards the person’s treatment and eventual recovery. Additionally, the forensic diagnosis determined for a person is not expected to change or evolve over the course of a trial. The forensic work is not concerned with the person’s welfare or with their best interests, rather it seeks to understand their mental and behavioral state when the crime was committed, when they are tried, or even when they are sentenced. In fact, any consideration towards providing treatment for a patient from a forensic psychologist is usually considered unethical and a conflict of interest. The forensic psychological investigations are, therefore, not carried out for the subject’s benefit but solely to inform the court. In summary, in clinical psychology there are patients working towards their effective treatment while in forensic psychology there are subjects, often defendants, presented for evaluation.

The differences in forensic and clinical psychological approaches are quite evident when considering how the two disciplines are practiced. Most legal systems employ an adversarial approach between the opposing sides of an issue as a means for getting at the key information of the case. Clinical behavioral science usually employs a cooperative approach, without “opposing sides”, in dealing with people. In

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(adapted from Packer, Ira K. *Professional Psychology: Research and Practice* 2008, 39(2), 245-249.)
clinical settings, the patient and the psychologist (or psychiatrist) work together cooperatively to design and implement a patient’s treatment plan. There is usually a well-understood recognition by the patient in clinical settings that their cooperation with the psychologist will lead to an end result that they personally desire. In forensic psychology, however, the subject is often very aware that full cooperation with the psychologist might clearly work against them and they, accordingly, often seek to be evasive, misleading or even hostile in their dealings with the forensic psychologist. Ethically, forensic subjects must be told in advance that their evaluation is solely for legal purposes and not for their treatment. There is often usually no advantage, therefore, for the person to cooperate with the forensic psychologist since there is no treatment option in the forensic process and the results may land them in jail or lead to confinement in a mental institution. This, of course, complicates the job of the forensic psychologist or psychiatrist since the subject is often intentionally working against the purposes of the examination.

In spite of these issues and problems, the legal system is making increasing use of behavioral science. Psychological professionals are often called upon to aid in interrogating witnesses, empaneling juries, evaluating minors, testifying in court and assisting with sentencing, among other duties. In the following sections, some select uses of the behavioral sciences in forensic settings will be presented.

**Applications of Forensic Psychology**

The use of forensic psychology in legal settings encompasses an enormous range of activities, from aiding in the investigative process, through informing courtroom proceedings, to providing post-trial opinions regarding sentencing and the treatment or commitment of defendants. Each of these uses may employ different psychological tools and expertise but are expected to rely upon generally established and accepted principles. While it is impossible to be complete, a

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**Psychiatrist or Psychologist?**

The two terms, “psychiatrist” and “psychologist”, are frequently encountered in forensic work, but what’s the difference between them? While there are important similarities, there are also key differences.

Both psychiatrists and psychologists are mental health professionals who may practice diagnostic psychology and psychotherapy in the treatment mental illnesses and disorders. Both have extensive education and training, must be licensed by states before they can practice, and may be involved professionally with forensic cases. Both can treat the full range of mental diseases and disorders, from very mild to severe illnesses.

Psychiatrists are first trained as medical doctors and then, typically, go on to four more years of residency training in mental health. As MDs, psychiatrists can prescribe medicines and may focus upon the medication management aspects of an illness, although many psychiatrists also do psychotherapy.

Psychologists are Ph.D. (or Psy.D.) scientists with at least two years of specialized internship in clinical training. They usually focus on psychotherapy and typically cannot prescribe medications (except in a few states). While psychologists usually rely more heavily on testing than psychiatrists, both professions use various forms of psychological testing.
few of the most common applications of forensic psychology are described in this chapter. The use of forensic psychology in criminal cases may be divided into three broad areas based upon when the information and expertise is required: pretrial, trial and post-trial phases of the criminal justice process. Pretrial applications include criminal personality profiling, interrogation and interview techniques, threat analyses, crime scene reconstruction, case linkages, and others. Trial uses include jury selection, competency to stand trial evaluation, evaluation of insanity and diminished capacity defenses, assessment of the defendant’s mental state at the time of the crime, the role of drugs or alcohol in the crime, and advise on defense/prosecution case presentations in court. If a defendant is found incompetent to stand trial, the forensic psychologist may also advise the court about the steps that need to be taken to make the defendant competent to stand trial. Post-trial uses often center upon sentencing options open to the court - should the defendant be committed to a civil or forensic mental institution or be required to take medication. Additionally, the forensic psychologist/psychiatrist may be called upon to monitor the treatment and progress of an incompetent defendant and to decide if there is little chance for them to become competent within a reasonable time.

Pretrial Uses of Forensic Psychology

During the investigative process of a crime, psychological techniques can play a key role in identifying the likely perpetrator of the crime and in building a sustainable case against them. This process is often referred to as the criminal investigative analysis (CIA) method and contributes information in a number of ways.

Crime scene analysis: The evaluation of a crime scene from the perspective of a criminal's behavior can provide specific insights as to how and why the crime was committed as well as what type of person might commit a particular crime. Crimes involve both a criminal intent, mens rea (Latin term for “guilty mind”), and a criminal act, actus reus (“guilty act”), on the part of the offender. Understanding the linkage between these two aspects can inform the investigative process.

Victimology

Possible ways a person can harm another:¹

1. Physical abuse: hitting, punching, pulling hair, slapping, grabbing, biting, kicking, bruising, burning, twisting, throwing, killing.
2. Sexual abuse: any unwanted sexual contact, sexual intercourse without consent, rape, forced sexual perversion, forced unprotected sex, and forced sex with other people or animals.
3. Verbal abuse: derogatory comments, insults, humiliations, or constant put-downs, usually with the victim told they are physically unattractive, inferior, incompetent, unable to succeed on their own and are not a good role model. The intent is to keep the victim under total control.
4. Psychological/Emotional abuse: manipulation and/or intimidation intended to destroy the other's self-esteem or sense of self, usually over long periods of time, including but not limited to destroying or depriving someone of self-esteem, property, personal needs, food or sleep, and the comfort of pets.
5. Spiritual abuse: occurs as a deep sense of betrayal by religious traditions or other moral agents of the community when the victim feels that faith did not protect them or that the moral code of society has failed them.
6. Economic abuse: insisting victims turn over their money, possessions, or wealth, having them beg for necessities, giving them insufficient allowance for basics, or refusing to let them participate in financial decisions for themselves.
7. Social abuse: Jokes, criticisms, or put-downs, usually about appearance, sexuality, or intelligence: false accusations, suspiciousness, constant monitoring and control of victim's activities or access to information; isolation.

And understanding the criminal act can provide valuable insights into the guilty mind that produced the act.

In the behavioral criminal investigative analysis (CIA) process, the investigator first assembles all of the information obtained from the crime scene, along with any other relevant input, such as witness statements, police reports, medical interventions to aid victims and any known prior linked activities or similar crimes. The investigator then tries to find the psychological thread tying all of these items together. Answers to critical questions may often be found though this type of behavior-based analysis, questions such as why did the event occur, was it planned or spontaneous, how was the criminal contact started, why did it happen at that particular location and at that time, what was exchanged between the offender and the victim, how did the participants act during the exchange, what was the criminal thinking during the crime, how did the participants view their roles during the crime, and what motivated the actions of the criminal (and sometimes the victim) after the crime. This analysis may uncover prior relationships between the victim and the offender, even unconscious ones, and reveal the level of criminal refinement and judgment of which the offender is capable. The analysis may also let investigators clear through the forest of irrelevant information to focus upon the truly relevant evidence and behaviors. This process can also point to the existence of missing evidence, for which an intentional search can then be made. The CIA method can help investigators assess a suspect’s mental and physical ability to commit the crime (means), their motivation for performing the crime, and their specific opportunity to carry out the crime – sometimes summarized popularly as the means, motive and opportunity. Piecing all of this information together

The Interviewer’s Art

“Investigators often ask, ‘Do any magic words exist for obtaining confessions?’ The answer is an unequivocal yes. Certain words and phrases, such as ‘accidents happen...’; ‘anyone in this situation could have...’; ‘everybody makes mistakes...’ can give offenders a dignified way to admit their involvement in a crime and provide investigators with a proven approach to obtaining confessions.”

In a case presented in this article, a 16-year old stepdaughter was reported missing from her home. The stepfather, Brad, had been on bad terms with the daughter, Valerie, and had separated from the girl’s mother just days before the missing report was filed. Investigator’s used the Rationalization-Projection-Minimization (RPM) method to obtain a confession from Brad for the daughter’s homicide. Here are some of the ways investigators used an understanding of the RPM defense mechanism to gain a relationship with Brad and obtain the confession:

- **Rationalization**: “Brad, being suddenly placed in the situation of having a wife and teenager in your home must have been stressful. Any man would have seen the need to define the rules for a teenager, like curfews, use of the car, whom she dated. Constant tension existed in the house, ending with your wife’s taking her daughter’s side and forcing you out of the picture.”
- **Projection**: “Brad, if only Valerie’s mother had set clear rules when Valerie was growing up, she wouldn’t be such a defiant teenager. If her mother had backed your reasonable rules for Valerie, maybe Valerie would have understood. If Valerie hadn’t openly ridiculed and taunted you, you would have held your temper as you usually do. It was Valerie who started this.”
- **Minimization**: “I have looked at this case very carefully, Brad. This was probably an accident. You didn’t intend to do this. You wish you could change it and would change it, if possible. It was not a planned, intentional act; it just happened. This is not like you. You normally don’t act this way.”

Using this empathetic approach, investigators were able to obtain a confession from an otherwise very difficult suspect.
may provide insights into the criminal’s personality, mental state, and character that can be used by investigators to reduce the field of possible suspects and, in the best scenario, lead ultimately to one particular person.

Many aspects of the CIA method, such of profiling and victimology are often not acceptable in courtroom proceedings as evidence. The intended use of CIA is to provide direction for investigators into productive avenues of inquiry, especially when few other leads are available, and to help them search for and build a credible case against possible perpetrators for criminal prosecution.

**Victimology:** The relatively recent use of ideas from the field of victimology, or the study of victims, in criminal cases involves looking for links between the background, life, lifestyle, occupation, education, age, habits, physical characteristics and other features of a victim with the criminal action that has been directed against them. It may be thought of as “victim profiling” and is conceptually the reverse of “criminal profiling” (see below) that focuses behavioral inquiry on the criminal. Investigators try to learn as much as possible about the victims themselves in the search for hidden relationships between the victims and the offender. For example, understanding a victim’s lifestyle, beliefs, and personality can help answer questions such as why the attack was initiated on the chosen victim rather than against someone else and why they were attacked in a particular manner.

The way in which a victim is chosen may provide critical insights into the unknown criminal’s thinking and mental state. One key question to answer is whether the choice of the victim was carefully considered or was purely by chance. The victim may be a complete stranger to the criminal but yet be very carefully chosen, such as is often the case where serial killers prey upon victims that have very specific physical or personal traits. It is important to note that the criminal investigative use of victimology is entirely different than assigning “moral guilt” to the victim for the crime directed against them by their actions or some aspect of their traits. For example, a serial killer might target young, blond haired women as prey, so that a victim cannot be thought at all morally responsible for the crime directed against them due to their physical traits, lifestyle or personality. This aspect of victimology is an extremely controversial area of study as researchers probe the validity and potential destructiveness of the idea of victim “proneness”.

**Interrogations and Interviews:** Interviews of witnesses and interrogations of suspects play a central role in the criminal investigative process. Properly handled, interrogations can provide a wealth of information, even leading to confessions, while their improper or ineffectual use can be disastrous to a case. Most interrogations rely upon an understanding of human personalities and behaviors in an attempt to gain information, detect lying and obtain confessions from suspects.

The successful interrogation of suspects generally relies upon two types of information: crime scene evidence, especially behavioral evidence, and background information about the suspect. Interviewers must first do the “homework” thoroughly. The crime scene itself, when properly analyzed for behavioral cues, gives insights into the perpetrator’s

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*Figure 19.3.* The interrogation of suspects is usually held in carefully arranged rooms that are designed to place the suspect in an appropriate psychological and physical position to the maximum advantage of the interviewer. (http://people.howstuffworks.com/police-interrogation1.htm).
personality, mental state, and motives for the crime. During the interrogation, the suspect’s compatibility with the behavioral evidence obtained from the crime scene can lead investigators to either a stronger or weaker belief that the suspect was involved in the crime. For example, if a fairly high level of sophistication was needed to perform the crime, the ability of the suspect to achieve this level of sophistication can be evaluated. If it becomes clear during the interrogation that the crime was well beyond the suspect’s mental means to plan and carry out, then it becomes highly unlikely that the suspect was involved. If, in contrast, it is observed that their mental composition lends itself to the particular type and events of the crime, then they become a more likely suspect.

Often, the goal of an interrogation is to obtain a confession from the suspect. Knowing more about the suspect’s thoughts, beliefs, feelings and mental background can prepare an interviewer to conduct a successful interrogation. Most common types of criminal personalities employ three kinds of interrogation defense mechanisms: rationalization, projection and minimization (RPM). When an investigator can recognize that a suspect is employing one or more of these defense strategies, they can use that information to draw the suspect into providing valuable information or a confession (see inset box “the Interviewer’s Art”).

**Rationalization** involves the criminal providing themselves with reasonable explanations to justify their actions in ways that favorably reflects upon them and allows them to “save face” in their own estimation. Interviewers can build upon this behavior by empathizing and agreeing with the suspect that their actions were quite reasonable, understandable and even justified in the situation, building a sense of confidence and rapport between the interviewer and the subject. It’s important to note that the interrogator provides a comfort level to the suspect on a psychological basis and not in any legal sense. **Projection** deals with the criminal placing blame for the crime on someone else, projecting the blame, often onto the victim. Interviewers can encourage this type of blame projection by suggesting that the crime was reasonable based upon the provocation received through the actions or words of someone else, especially the victim. **Minimization** allows criminals to reduce both their involvement in the crime and the actual seriousness of the crime and thereby reduce their internal responsibility for the crime – possibly to the point that they believe themselves to be the true victim through shifting the responsibility for the crime to the actual victim. Interviewers can reinforce this mechanism by using words such as “accident”, “mistake”, “unavoidable”, or “minor” and avoid words such as “murder”, “assault”, and “violent” when talking to the suspect. A murder is still a murder but the perpetrator can lessen their internal guilt by convincing themselves that it was a mistake or an unintentional accident.

Many methods of interrogation have been developed that rely upon manipulating the physical environment, psychological mood and perceptions of the suspect (Figure 19.1.3). One common approach is the **Reid Technique** which uses nine steps in carrying out an interrogation. These steps include: confrontation, story (theme) development, stopping suspect
denials, overcoming suspect objections, holding the suspect’s attention, loss of the suspect’s resolve, providing alternatives to the suspect, holding a conversation with the suspect, and obtaining the confession. These techniques have been employed extensively by police and law enforcement agencies for successful suspect interviews.

Interrogations are, of course, open to controversy surrounding issues of coercion and deception, especially when a confession is obtained, and the violation of a suspect’s civil rights. Significant strides have been made in recent years, however, to protect both the rights of the suspect as well as those of the police during the interrogation process. Nonetheless, care must be exercised to restrict interrogations to within the bounds of what is deemed locally to be an acceptable and admissible process.

**Eyewitnesses:** Forensic psychologists are sometimes asked to evaluate the reliability of potential eyewitnesses during an investigation. Eyewitness testimony is well known to be among the most unreliable forms of evidence and is increasingly being excluded from trials. Nonetheless, a good eyewitness can help enormously and a mistaken one can greatly harm an investigation. The brain has an amazing ability to fill in the “blanks” with information that may seem completely factual to a witness when a memory is incomplete or faulty. This tendency is compounded by the fact that witnessing a crime

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**New York’s “Mad Bomber”**

One of the first uses, and dramatic early successes, of criminal profiling occurred in the 1940s and 1950s in New York City. For 16 years, the city was terrorized by a series of 33 pipe bombs placed across the city, of which 22 exploded. The first bomb, placed in 1940, carried the note “Con Edison Crooks – This is for you” [Note: Con Edison is the primary electrical supplier for New York City]. After intense investigative efforts, all leads led to a dead end.

Finally, psychologists were called in to try to rekindle the investigation. Psychologists carefully compiled all that was know in the case and, using the best research and concepts of the era, compiled a list of characteristics of the unknown bomber that concluded that the culprit was:

- A male of average build (historically, most bombers were males);
- Forty to fifty years old, since paranoia develops slowly;
- Precise, neat and careful – determined from his letters;
- A foreign-born, educated person (not college) from eastern Europe;
- A loner with few friends, little interest in women, and probably living with his mother in Connecticut;
- When caught would probably be wearing a double-breasted suit.

Police published details of the profile, seeking information from the public and asking the bomber to turn himself in. The bomber responded with another letter that gave more information about his grievances against Con Edison. Eventually, through several published letters, the police were able to determine from the bomber that he had been injured on the job and been turned down for compensation – even giving the date of his injury as Sept. 5, 1931. Eventually, they located the files of a former Con Edison employee, George Metsky, the details of which matched remarkably well to the details given by the bomber, including the date of injury. Metsky was arrested and provided the police with an accounting of all the bombs, even a number of bombs that they had never found. George Metsky was found to be “incurably” insane and committed to a state mental hospital in 1957. Later, Metsky was released in 1971 and lived to an age of 90 before passing away in 1994. When arrested, he was wearing the predicted double-breasted suit.
is usually a stressful event. When placed under stress, the brain may also “forget” a great deal of information and replace it with fabricated memories. Some witnesses try especially hard to be “helpful” to the police, including victims and family members, but this added stress can easily lead to either fabricated information or altered memories without the witness even knowing it. These problems all contribute to incorrect or misleading witness testimony that psychologists try to identify and place in perspective during an investigation.

**False confessions:** Made-up and untrue confessions are relatively common in high-profile cases and forensic psychology can be used to help discern true from false confessions. These false confessions arise for many reasons. The confessor may suffer from a mental illness, be under the influence of drugs, desire attention, or simply be confused and tired. Sometimes, a criminal may confess to a crime to protect someone else or provide an “alibi” for themselves for another, more severe crime, such as confessing to a robbery to avoid the accusation that they committed a murder at the same time but in another location. Other false confessors may admit to a crime they didn’t do simply to end a difficult or intimidating interrogation. Often, a psychological evaluation can discover underlying reasons that might lead to the false confession or expose inconsistencies between the confession and the physical evidence recovered.

**Profiling:** Probably one of the most familiar, and often incorrectly portrayed, psychological tool used in television and movie plots is psychological criminal profiling. Criminal profiling, sometimes called offender profiling or “criminal investigative analysis (FBI term), in its broadest sense, is usually defined as the application of accepted behavioral science concepts to provide information about a criminal’s behavioral patterns and personal characteristics from known information about a serial crime. This information, if assembled properly by trained and ethical practitioners, can assist with the reconstruction of the crime scene, aid in identifying the offender and provide valuable evidence during the trial. The primary goal is usually to provide information about the characteristics of an unknown criminal (or potential criminal) by the way they plan, execute, and interact with the victims of their crimes. The profile does not typically
identify any specific criminal but rather focuses on identifying the kind of person most likely to have committed the crime.

The criminal profiling process has undergone enormous revision since its first systematic application in the 1970s, although it had been used sporadically earlier. One of the most famous and earliest examples came from the description of George Metsky as New York City’s “Mad Bomber” from the 1940s and 1950s. (see inset box “New York’s ‘Mad Bomber’”). This kind of profiling usually involves a multi-step process, such as the FBI method outlined in Figure 19.4. It is a relatively new application of behavioral science to the law and continues to undergo rapid development and refinement.

Criminal profiling has found valuable uses in providing leads for different types of serial crimes such as in hostage situations, anonymous threatening letters and messages, stalking, serial homicides, sexual attack, arson and others. The technique has probably gained its greatest attention in assisting with various kinds of serial violent attacks. In these situations, the crimes often appear to be “motiveless” and random – striking fear and even panic in the area residents. Because of their seemingly random nature, useful investigative leads may be very limited in serial crimes. This is in contrast with other types of violent crimes where an array of known suspects with a variety of understandable, and even clearly apparent, motives for committing the crime are available for investigation. Criminal profiling in serial attacks, however, holds that these events are actually not motiveless crimes but rather are crimes where the motive is known only to the criminal, and sometimes not even consciously understood by the criminal themselves. So, while the criminal may not know their victims or have planned the crime ahead of time, the choice of victim and method of attack are not random but fit some set of required features in the criminal’s mind. There are underlying patterns of behavior in committing the crime that, as more data is obtained, help to paint a picture of the

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**Early Profiling Efforts**

Profiling in one form or another has been around for at least a millennium. The first real psychological profiles based upon empirical behavioral research, however, began to be developed in the 1940s and 1950s.

An interesting use of psychological profiling occurred in the World War II year of 1943 when Dr. Walter C. Langer was asked by the US Government to develop a psychological profile of German leader Adolph Hitler in an attempt to predict and understand his next moves in the war. Dr. Langer published the results of his analysis years later in 1972 in his book *The Mind of Adolph Hitler*.

Dr. Langer analyzed anything he could find about Hitler: speeches, writings, accounts, past actions, interviews with acquaintances, and other sources. From these, he determined that Hitler was meticulous, often manic, delusional, and sadistic, suffered from an Oedipus complex, and urolagnia. He also feared germs, always crossed a room diagonally while whistling, and liked Wagnerian opera and dangerous circus acts.

From these and many, many more pieces of information, Dr. Langer predicted that Hitler’s mental state was deteriorating in 1943. He also predicted that, if the war went against him, he would not try to escape to another country nor allow himself to be captured but would rather commit suicide or be intentionally killed by an aid. Today it is widely believed that Hitler killed himself in his private bunker in Berlin on the eve of the allied occupation of the city.

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**Linkage Analysis**

One type of criminal profiling involves looking for possible links between several crimes. The process involves trying to understand the behavior of the offender to see if similar features can be found in different crimes. The analysis often employs gathering both physical and psychological evidence, including determining the modus operandi, victimology, crime scene similarities, and any “signatures” of the criminal.
Developing a criminal profile usually involves several stages, beginning with the collection of all possible types of information that might be relevant to the case. In the FBI approach, the first stage of the process is referred to as the profiling input stage. This stage relies upon information collected at the crime scene and information about the victim’s background, personality, and traits, along with interviews, medical information, and any possible relationships with other similar crimes (see inset box “Linkage Analysis”). Subsequent stages in developing the profile usually include the decision process stage, where the collected information is arranged into patterns (e.g., victim and perpetrator’s risk assessment, intent of the perpetrator, crime type, etc.), the crime assessment stage, where the information is used to reconstruct the events of the crime focusing on how each participant behaved and reacted before and during the crime, the criminal profile stage, where the psychologist tries to determine the criminal’s behavioral composition and personality and to formulate this analysis into a useful investigative plan, and finally, the investigative stage, where the plan based on the profile is used to generate and pursue leads. These stages are focused, of course, upon arriving at the end game stage of apprehending the criminal.

Psychologists typically break the crime itself down into several phases for detailed analysis. The Antecedent phase involves the time up to the commission of the crime. Psychologists try to determine what plan the offender had before the crime occurred and what was the “trigger” that caused them to act when and where they did. The method and manner phase evaluates what actually happened during the crime, focusing on how the victim was chosen, and what method and manner was employed during the crime. This phase usually involves trying to determine the modus operandi (MO) of the criminal. The MO refers to the method, habits and tendencies of the offender in committing the crime. The next phase is the evidence disposal phase. In homicides, this usually refers to the disposal of the body but in other types of crimes it deals with how, if at all, the criminal changed or destroyed the evidence of their deeds after the crime. The final phase is the post-offense behavior phase explores if and how the criminal becomes involved with the investigation itself, such as through letters to the police, interactions with the media, clandestinely observing their crimes (e.g., as a spectator, etc.) or other ways.

For example, arsonists frequently stay close to their criminal works by spectating, video recording, or in others ways in order to “re-experience” their crimes.

The field of criminal or offender profiling is undergoing continuous development to improve its reliability and establish standards for its practice. Current trends are focused upon employing solid, generally accepted psychological principles in preparing the profile rather than relying so heavily upon the investigative field experience of the profiler. Additionally, statistical methods based upon empirical studies of serial crimes are beginning to make significant contributions to the field. Care must be taken not shut down other lines of investigation, however, when a match is found between the profile and a suspect as “false positive” matches and errors in profiles are still relatively common.
(see the case of Richard Jewell in the Olympic Park bombing in Atlanta in 1996).

**Other Pretrial Uses:** Occasionally, specialized psychological tools are employed with investigations. Some of these are not often admissible in court but may be useful in helping investigators either focus their efforts or uncover new leads on an otherwise “cold” trail. Two of these techniques have received more attention that the others: hypnosis and brain fingerprinting. Their use, however, remains somewhat controversial and may or may not be admissible into court proceedings.

Hypnosis, rather than being the sleep state often portrayed in movies, instead involves a state of heightened awareness and concentration, deep relaxation, inner absorption and enhanced suggestibility. A number of important misconceptions exist about hypnosis. For example, in hypnosis, the truth is that you cannot be compelled to do anything against your intrinsic nature, be forced into a hypnotic state, or be trapped in a trance state. The technique does, however, often allow access to hidden or repressed memories and emotions. The problem, of course, is that it is also very easy for an analyst to plant altered or new memories in a person’s mind – often without the analyst even knowing that it was being done.

Forensic hypnosis has been used in a number or high-profile cases such as the Ted Bundy, Boston Strangler, Hillside Murders, and Sam Sheppard cases. It has been used to relax witnesses to allow them to remember better, probe for forgotten information, and to look for evidence of malingering or deception in suspects, among other uses. Guidelines were established in 1983, aided by the work of Relinger and Stern, to help standardize hypnotic forensic investigations.

Brain fingerprinting is very different from hypnosis. Brain fingerprinting uses very rapid measurements of the brain’s electrical signals (“brain waves”) in response to various stimuli, such as words, pictures or sounds, to determine if a particular memory preexists within a person’s mind. Based upon the patterns of these signals, a determination can be made as to whether the relevant information is stored in the subject’s mind.
memory or not, Figure 19.1.5. Thus far, brain fingerprinting has been deemed admissible in many court proceedings and has also found use during the investigations.

**Trial Uses of Forensic Psychology**

Once the case proceeds to the judicial system, psychology continues to play an important role in the proceedings. The usual role is to inform the court about the mental state and competencies of the defendant. Recent uses, however, have also included assisting legal teams with juror selection and advice about how best to present their cases.

**Jury selection:** The fair and proper selection of a jury is key to the criminal justice system. The process of empanelling a jury, as might be expected, is a critical step in the legal process (Figure 19.1.6). Typically, the two “sides” in a case are allowed to question and, with limitations, indicate whether prospective jurors are acceptable or unacceptable to them. During this process, each side focuses upon finding jurors that will be most sympathetic to their “cause” without being disqualified by the other side and while staying within legal boundaries (e.g., disqualification cannot usually be made on the basis of race, gender, age, religion, disability, sexual orientation, etc.). Increasingly, forensic psychologists are involved in important cases advising legal teams about the acceptability or unacceptability of an individual juror and how to determine their acceptability. This process is sometimes referred to as the **scientific jury selection** (SJS) method.

In the selection process, each potential juror is usually subjected to the *voir dire* process (from the Old French “to speak the truth”). Usually, each side is allowed to ask potential jurors open-ended questions that allow the juror to talk about their experiences, beliefs, background and feelings. Psychologists then help the legal teams to understand the thinking behind the answers given in court by the potential jurors. They look for predictive characteristics in these answers that can give insight into the potential juror’s personal beliefs, attitudes, and openness to their case. For example, consultants try to determine a potential juror’s prevailing bias-related attitudes (e.g., age, gender or racial biases), previous personal histories and attitudes towards the police and crime, and a potential juror’s attitudes toward the specific type of crime and defendant in the case.

Forensic psychologists may also look to the community as an indicator of how individual jurors will behave when making their decisions. They may employ demographics, statistics, concepts from group psychology and sociology, area resident attitude surveys, and even perform mock trials conducted in the area to understand better how prospective jurors may be either inclined or disinclined towards their case.

More generally, psychologists may prepare a list of personal attributes found in jurors that would view their case most favorably. Through these tools, the psychologist tries to inform the legal team regarding

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**Restoring Competence**

In 1987, Kenneth L. Curtis first struck with his truck and then shot and killed his former girlfriend, Donna Kalson, before shooting himself in the head in a murder-suicide attempt. Despite extensive medical trauma and with the .32-caliber bullet permanently lodged in his brain, Curtis survived the wound but with severe disability and permanent brain damage. Nonetheless, he was charged in Kalson’s homicide. Prior to trial, however, he was deemed incompetent to stand trial due to mental defect and the charges were dismissed and Curtis was ultimately released rather than confined to an institution.

Years later, in 1998, the wheel-chair bound Curtis was discovered enrolled in college as a pre-med student with a 3.3 GPA after 48 credits of study – his tuition was partially paid for by the State Department of Social Services.

Curtis was rearrested, found competent to stand trial – largely on the basis of his good grades in college – and plead guilty to manslaughter, receiving the maximum allowable sentence of 20 years in prison.
the acceptability of specific jurors and what types of in-court presentations might be most effective in making their case to the jury.

**Competency to Stand Trial** (CST): The 5th and 14th Amendments to the US Constitution, as well as the laws of many other nations, require that a defendant shall not be “be deprived of life, liberty, or property, without due process of law” (5th Amendment). The courts have ruled over and over that this due process clause requires that the defendants demonstrate suitable mental capacity to understand the charges that have been brought against them and to reasonably assist in their own defense. In order to stand trial, therefore, the US Supreme Court has defined adequate competency only when a defendant has both “sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding” and a “rational as well as factual understanding of the proceedings against him.” This competency determination is specifically to evaluate a defendant’s competency at the time of trial and does not consider the person’s mental state at the time the crime was committed (vide infra). The standards and the interpretation of what it actually means to have “sufficient present ability” and “rational as well as factual understanding”, however, are usually left to each state and court to determine. The final decision, however, is usually up to the trial judge and is usually based upon the psychological information provided to the court by the forensic psychologist or psychiatrist.

**Reasons for Incompetence**

- Common mental disorders that may lead to a determination of incompetence to stand trial include:
  - Organic brain syndromes (brain abnormalities such as stroke, tumors, etc.);
  - Cognitive or severe memory problems;
  - Severe neuroses such as paranoia or severe anxiety;
  - Psychoses and schizophrenia;
  - Mental retardation arising from congenital, developmental, trauma, and infection causes.

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**The John Hinckley Cases**

One of the few high-profile cases to successfully use the insanity defense was that of John Hinckley. On March 20, 1981, the 25-year old John W. Hinckley, Jr. partially broke through a police line and fired six shots at President Ronald Reagan who had just concluded a speech in Washington DC, badly wounding Reagan and three others.

At the time, Hinckley said that he had performed the attempted assassination in order to impress actress Jodie Foster with “the greatest love offering in the history of the world.”

When brought to trial in 1982, Hinckley used the insanity defense for the thirteen counts he was charged with. The jury ultimately found Hinckley not guilty by reason of insanity and he was committed to St. Elizabeths Hospital. At the hospital, Hinckley was determined to be “unpredictively dangerous” to himself and others. Recently, it has been determined that Hinckley no longer presents a threat and he is allowed long-stay visits to his parents home.

Because of the verdict in the case, Congress and a number of states reviewed their insanity laws and made important changes afterwards.

(photo from: http://law2.umkc.edu/faculty/projects/ftrials/hinckley/hinckleytrial.html)
trial, a person is committed either to a mental institution or to a physician’s care until such time as they are determined to be competent. Once deemed competent, they are then usually eligible to stand trial (see inset box “Restoring Competence”).

It has been estimated that around 60,000 competency evaluations are performed each year in the US to aid courts in determining a defendant’s ability to stand trial. These evaluations, however, may also have important uses beyond simply determining whether a defendant is fit to be tried in court. For example, in the US, it has been estimated that around 90% of all criminal cases involve guilty pleas by defendants that never formally come to trial. In these instances, a person must be deemed competent by the court in order to either plead guilty to a crime or waive their access to a defense attorney. Customarily, it has been up to the defense, however, to seek a competency evaluation in such cases. In the US, a person must also be determined to be competent before they can be executed. If they are deemed incompetent for capital punishment, they must be provided with treatment aimed at restoring their competency before they can be executed, which may include the use of psychiatric medications. Of course, there is a debate as to whether it is completely ethical to medically treat a person simply to restore competency only to allow their execution to proceed, although most medical organizations and professionals believe that it is proper to treat a person regardless of their legal circumstances.

One quite specific application of a competency determination involves the right of a defendant to represent themselves in court, a process legally called pro se (from Latin meaning “for themselves”). Before a defendant can be allowed to represent themselves, however, they must first must be warned of the dangers and risks of representing themselves without counsel, have knowledge of the charges

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**Pro Se Competence?**

In legal history, there can be found a number of high profile cases where the defendant has decided to represent themselves in court (pro se), usually with disastrous results. Often, this self-representation, ensured by the Constitution’s 6th Amendment, stems from a defendant’s paranoia regarding the competency of their appointed legal team, a disagreement as to how to defend their case, or from delusions regarding their own legal abilities. Classic examples of this come from the cases of Ted Kaczynski (the “Unabomber”), Joe Hunt, and killers Ted Bundy, Charles Manson, and Colin Ferguson, among others.

In the case of the “Unabomber” Ted Kaczynski, a series of bombs were mailed between 1978 and 1995 which injured twenty-three people and killed three. Eventually, a suspect “Unabomber” (so called because frequent targets were universities and airlines), was identified and captured through leads gleaned from his published manifesto. At trial, Kaczynski asked to represent himself when his defense team decided upon an insanity defense. Kaczynski was found competent to stand trial by the judge but deemed not competent to represent himself. When forced to accept legal help, rather than agreeing with his defense teams strategy of an insanity defense he agreed to plead guilty to 13 of the crimes.

For a different outcome in a case where a defendant was allowed to represent themselves, look at the case of Colin Ferguson.

(Ted Kaczynski. Photo from: http://megatiki.com/sap-nietzsche-unabomber/)
and punishment they face, understand the rules of evidence and courtroom practice and be competent to understand what they will face during the trial. Once deemed competent and able to understand the legal issues at stake, a judge cannot deny pro se, even if they disagree with how the defendant would present their case.

Defenses based upon mental diseases or defects: A number of legal psychological defenses have been recognized as arising from a defendant’s mental diseases or defects. Largely, these psychological determinations deal with the defendant’s mental state at the time of the offense (MSO) and a psychologist’s opinion given to the court about the defendant’s MSO is often critical evidence. Two of these psychological defenses, among others, however, are particularly important: legal insanity and diminished capacity.

Legal Insanity: One of the most popularly portrayed but, in reality rarely used psychological defenses is the insanity defense. It is important to note that legal insanity is solely a legal construct and is not a psychological definition. Different jurisdictions and courts define legal insanity somewhat differently but most follow, in some fashion, a definition that dates back to an 1843 English law, called the McNaughten Rule, which says that legal insanity can be used as a defense only if “at the time of the committing of the act, the party accused was laboring under such a defect of reason, from a disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong.” Simply stated, legal insanity is a viable defense only if the person either did not know what they were doing or couldn’t tell right from wrong at the time of the crime. In essence, the person admits that they actually did the crime by taking this defense strategy, that issue is not in dispute in the insanity defense. Instead of arguing in court whether or not they actually committed the crime, however, they must then prove that they were in such a mental state when committing the crime that they were not responsible for their actions. If a defendant is not successful in providing their incapacitated mental state at the time of he crime, they will be found guilty and sentenced accordingly since they have already admitted that they performed the crime.

In actual practice, the insanity defense is both rarely used (employed in less than one percent of all felony cases) and even more rarely successful (less than one-fifth of “insanity” cases result in a not guilty by reason of insanity verdict, or about 0.20 % of all cases - about two in a thousand cases overall). Homicide cases also form less than one-third of insanity defense cases. Additionally, the insanity defense is usually considered not to apply to psychopathic and sociopathic criminals, such as serial offenders. These are generally considered to be antisocial personality disorders and do not meet the requirements of a successful insanity defense.

The basis for an insanity defense is quite different from a determination of incompetence to stand trial. The insanity defense deals with a plea of not guilty by reason of insanity based on the offender’s mental state at the time of the crime while competence deals with whether a person is competent to stand trial due to their mental state at the time of the trial. Someone who is deemed incompetent to stand trial is usually held in a mental institution until such a time as they are determined to be competent to stand trial and participate in their own defense. When someone is determined to be not guilty by reason of insanity, they are usually committed to a mental institution until they are deemed safe to themselves and others and are then released. Statistically, however, a defendant found not guilty by reason of insanity spends twice as long confined to a mental institution when compared to a person simply found guilty of the same crime and sentenced to prison. Essentially no defendants found not guilty by insanity are directly released right after the trial, even under supervision. There are, however, legal limits to how long and under what conditions a person can be committed after conviction. For example, the defendant must be reviewed periodically to determine if continued treatment is necessary and where they should receive that treatment (e.g., forensic hospital, private mental hospital, clinic, supervised out-patient, or other).

Following the case of John Hinckley (see inset box “The John Hinckley Case”), the US Congress revised the laws governing the insanity defense to state that a person can be found not guilty of the crime
by reason of insanity when they cannot “appreciate” the criminal nature of their acts. This was a big change from previous standards that used the term “knowledge” instead of “appreciate” when applied to their understanding of the wrongful behavior of their actions. The use of the term “appreciate” implies a greater understanding by the criminal of their acts as compared with just simple knowledge. The law also forbids psychologists from testifying specifically on whether a person is insane or not. The psychologist can give their opinion about any mental illness in a suspect and how it might affect their thoughts and actions, but the determination of insanity is reserved solely for the jury – emphasizing the legal and not psychological definition of the term “insanity”.

As described before, a crime is considered to have two parts; the guilty act (actus reus) and the guilty intent (mens rea). Most insanity definitions deal with “cognitive” insanity – the inability to separate right from wrong or a lack of a mens rea. Some jurisdictions, however, also include a “volitional” definition of insanity. Volitional insanity arises in otherwise mentally healthy people who become so unbalanced at the time of the crime that they are unable to stop themselves or comply with the law even though they may know the difference between right and wrong (they are unable to fight an irresistible impulse). Most courts, however, restrict the definition of insanity to cognitive insanity.

**Diminished Capacity**: A special form of the insanity defense is often referred to as the diminished capacity defense. The term, while interpreted differently by various courts and jurisdictions, usually means that the offender had a reduced ability to understand the crimes that they committed – they could not form the needed mens rea or did not act knowing the consequences of their actions – but did not fully meet the requirements of legal insanity. As with the insanity defense, the defendant clearly admits to the crime but then seeks some level of protection because their mental state at the time of the crime was altered or impaired. Some states allow this defense only to reduce the degree of the charge on conviction but cannot lead to a not guilty verdict. For example, a first-degree murder charge may be reduced to third-degree murder or manslaughter if the diminished capacity defense is successful. First-degree murder requires premeditation, deliberation and the intent to kill while lesser charges, such as second-degree murder or manslaughter, reduces these requirements. A diminished capacity...

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**Diminished Capacity due to “Twinkies”**

In 1978, former San Francisco Supervisor Daniel J. White shot and killed Mayor George Moscone and Supervisor Harvey Milk.

When the case came to trial, White’s defense team argued that his mental state at the time of the crime was compromised from his problems with depression and used the diminished capacity defense. They argued that, among other things, White’s mental state had driven him to a number of unusual behaviors, including changing his diet to a high sugar “junk” food diet – “Twinkies”. The jury, moved by his confession, agreed with the defense and reduced his conviction from murder to voluntary manslaughter.

After serving five years of his seven-year sentence, White was paroled. Within two years of release, however, White committed suicide by carbon monoxide (CO) poisoning.

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