

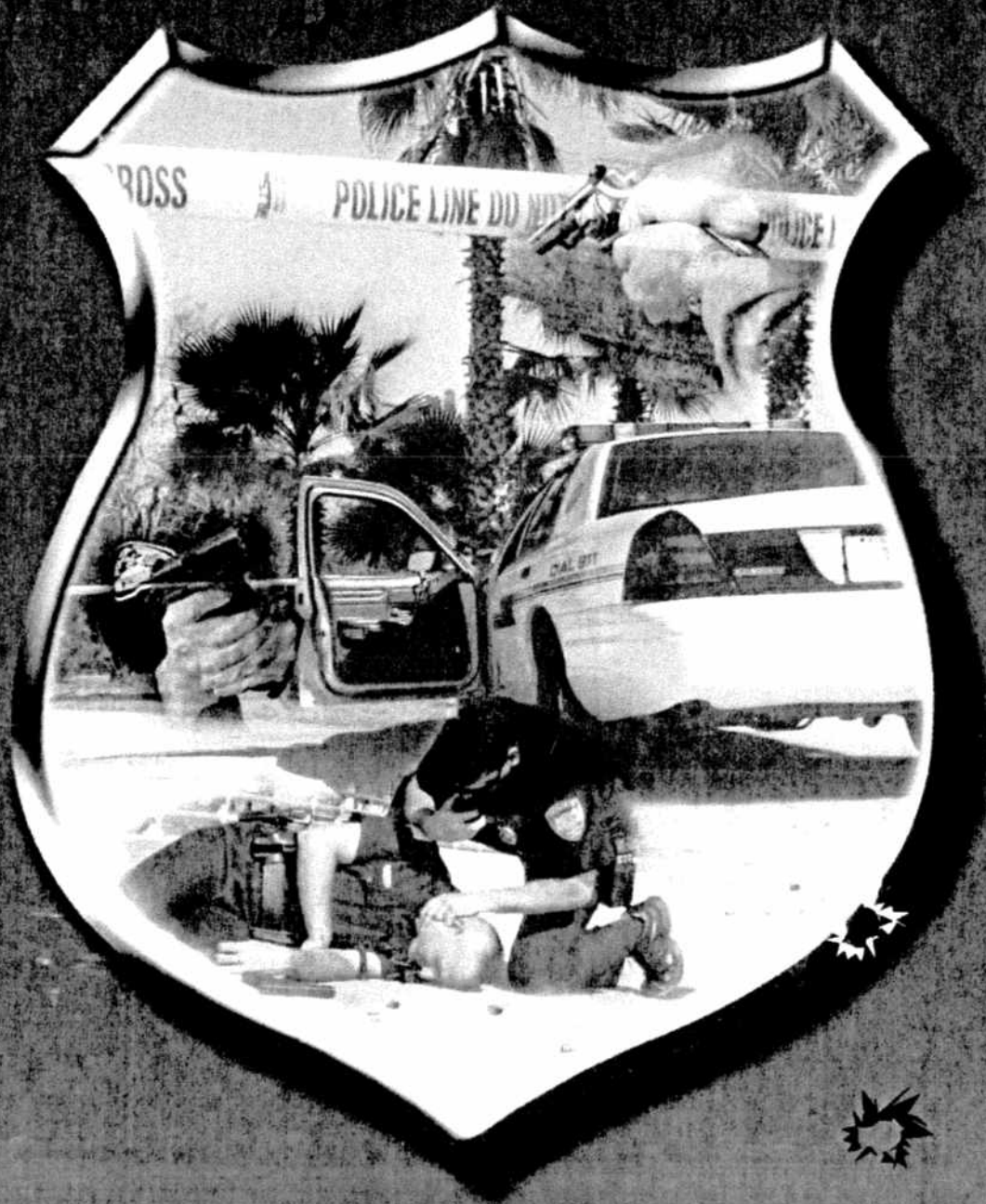


U.S. Department of Justice
Federal Bureau of Investigation
Criminal Justice Information Services Division

U.S. Department of Justice
Office of Justice Programs
Bureau of Justice Assistance



Violent Encounters



A Study of Felonious Assaults on Our Nation's Law Enforcement Officers

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United States Department of Justice
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August 2006

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ACKNOWLEDGMENTS

We sincerely thank the men and women of various law enforcement agencies who agreed to participate in this study and took the time to answer our questions and share their experiences. Without their honest comments—and their commitment to the vocation of law enforcement—we could not have completed the research necessary for our present study. Whatever benefits that may result from this work are due to the contributions each of these officers made. Not only have we learned a great deal from them concerning best practices in law enforcement, we have also experienced firsthand their commitment to their brothers and sisters within the law enforcement family. It is through their personal experiences, private reflections, and occasional struggles with the demons of their violent encounters that they have helped to make our streets safer and to deepen our understanding of tactical law enforcement.

The law enforcement leaders who offered agency case narratives and those who allowed their officers to participate in this study deserve our special thanks. Many of these officials stated that they would most willingly take part in any study or effort that might result in greater safety for their officers.

It is with particular gratitude that we acknowledge Dr. Bryan Villa, the former director of the Crime Control and Prevention Research Division in the U.S. Department of Justice; Mr. Jeff Allison, former chief of the Public Safety Officers' Benefit Program and currently serving in the Department of Homeland Security as a special advisor to the FBI's Office of Law Enforcement Coordination; and Mr. James Burch II, deputy director of the Bureau of Justice Assistance. Without their continued financial support, the collection of data for both *In the Line of Fire* and the present study could not have been accomplished. We thank them, too, for their sustained interest and encouragement throughout our research.

Violent Encounters is the third and final work in a series that includes *Killed in the Line of Duty* and *In the Line of Fire*. Several people played significant roles in supporting the series from inception through completion. These include such individuals as Mr. J. Harper Wilson, former chief of the FBI's Uniform Crime Reporting Program, who supported and encouraged us and, as our supervisor, allowed us to begin examining law enforcement safety, and Mr. John Hall, formerly of the Firearms Training and the Legal Instruction units at the FBI Academy, who continually offered his learned counsel in the areas of firearms and legal aspects of using deadly force. We thank Mr. Robert Chaney, formerly of the U.S. Attorney General's Office and currently with the U.S. Attorney's Office for the District of Columbia, who opened many avenues to us within the various components of the criminal justice system. Attending to the procedures of a bureaucracy can cause projects to stall in a quagmire; Mr. Chaney was able to make the process exceptionally manageable for us. Without his assistance, we would have lost a great deal of time doing administrative minutia.

Three individuals unfailingly supported our efforts from very early in our research until the final publication of the present work. They offered suggestions about the development and enhancements of the protocols we employed, and they examined—and recommended revisions to—every chapter. We benefitted from their many years as police officers and their keen insights into law enforcement safety. To these individuals—Mr. Harry Kern, chief of the Behavioral Science Unit at the FBI Academy, Mr. Wayne Koka of the FBI's Critical Incident Response Group, and Mr. Shannon Bohrer with the Maryland Police and Correctional Training Commissions—we owe a tremendous amount of gratitude.

We thank Dr. Darlene Howard, Georgetown University, Department of Psychology, for reviewing the chapter on perception and the processing of information. We greatly appreciate her time and comments.

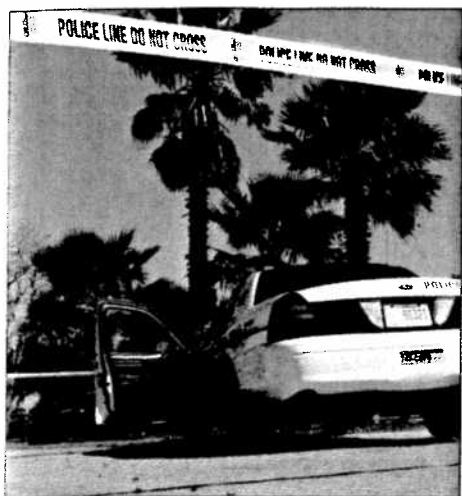
Ms. Bunny S. Morris, associate editor with the *FBI Law Enforcement Bulletin*, tirelessly, meticulously, and on her own personal time reviewed every word, examined every sentence, and turned our ramblings into intelligent thoughts. We are greatly indebted to her for the many, many hours she spent editing these chapters. We recognize that it is no easy chore to take three very different writing styles and make them appear consistent, articulate, and clear.

Dr. Stephen R. Band, former chief of the Behavioral Science Unit at the FBI Academy, sponsored our research into law enforcement safety, encouraged the publication of these findings, and supported the dissemination of these materials to the law enforcement community. A former police officer, Dr. Band recognized the need for enhanced safety practices within the law enforcement community. His position remained focused on one goal: "If it helps save the life of an officer, it's worth doing."

Several members of the FBI's Criminal Justice Information Services (CJIS) Division in West Virginia assisted in various ways. To them, we offer our appreciation and gratitude. These include Mr. Edward Daerr for his steadfast support and encouragement; Ms. Michele Casteel and Mr. Paul McInturff for their support and encouragement; Dr. Maryvictoria Pyne for her continued assistance and interest in ensuring the availability of our previous studies to the law enforcement community; Mr. Larry Deese for his innovative and imaginative use of photography and videography and, along with Ms. Lisa Stout and Ms. Deborah "Lea" Post, on cover design and graphic layout of *Violent Encounters*; Ms. Lorie Doll for her many hours transcribing audio tapes from countless interviews; and Mr. Darrin Moor for the intense and important work of data entry; and Ms. Melissa Blake and Mr. Carlos Davis for their efforts in analyzing and confirming research data.

We also express our sincere thanks to the members of the Training and Systems Education Unit, Multimedia Production Group, the Communications Unit, and the Crime Analysis and Research Development Unit—all of the CJIS Division. Although much of their work occurred behind the scenes, their many dedicated hours ensured the professional appearance of this important information, further enhanced by the many quality photographs strategically placed throughout. We express our gratitude to the personnel from the following agencies who participated in posing for these realistic-looking photographs: Sarasota, Florida, Police Department; Brandenton Beach, Florida, Police Department; Clarksburg, West Virginia, Police Department; Harrison County, West Virginia, Sheriff's Office; Bridgeport, West Virginia, Police Department; the FBI Police at the CJIS Division; and other CJIS Division personnel.

During the years of research for *Violent Encounters*, as we collected data through interviews and later analyzed the information, several interns from the Behavioral Science Unit contributed their talents. We thank all who assisted us in the many tasks necessary for completing the present work, including literature searches and reviews and specialized data analyses.



CONTENTS

Executive Summary	iii
Introduction.....	1
Chapter 1: The Offense and the Circumstances	5
Chapter 2: The Victim Officer	13
Chapter 3: The Offender	25
Chapter 4: Weapons.....	43
Chapter 5: Perception—Its Role in the Violent Encounter	61
Chapter 6: Suicide by Cop	83
Chapter 7: Procedures and Training.....	93
Chapter 8: Summaries of Selected Incidents.....	145
Chapter 9: Conclusions and Reflections	155
Appendix I: Methodology.....	165
Appendix II: Participation Protocols	169
Bibliography	171
Biographies	175

EXECUTIVE SUMMARY

Law enforcement officers, charged with safeguarding the nation's citizens, face potential felonious death and assault daily; they deserve the best possible safety training. The present work, *Violent Encounters: A Study of Felonious Assaults on Our Nation's Law Enforcement Officers*, offers insights that may help to improve safety-training techniques. This study concludes a series of research reports on law enforcement safety (see *Killed in the Line of Duty* [1992] and *In the Line of Fire* [1997]). The research findings in the present work reveal, in particular, the discrepancy between how officers and offenders perceive the same situation and what might cause such perceptual discrepancies and distortions. Complementing the data analysis, case summaries, and narrative provided in this study are photos of law enforcement scenarios, figures, and tables that help to convey the statistical research findings.

The narratives examined in the following pages can help to make officers aware of perceptual distortions that they might experience in the line of duty. When encounters between officers and suspected or known offenders turn violent and the balance of power shifts in favor of the offender, some facet of the interpersonal dynamic has gone terribly wrong. Close examination of such incidents emphasizes that self-awareness can be critical to survival. What were the officers and offenders expecting, thinking, saying, and doing? What did each of them notice about the situation? Did the officers inadvertently reveal signs of their own lack of mental and physical readiness to meet challenges?

In the data collection phase of this study, the law enforcement community supplied information about approximately 800 incidents of felonious assaults against officers; 40 of the incidents are examined here, involving 43 offenders and 50 officers. All of the available case data, the information gleaned from in-depth interviews with the victim officers and the offenders, and details discovered from visits to the crime scenes are included in the research. Thirty-five of the offenders were interviewed in correctional settings, and 8 offenders within their communities. All 50 of the victim officers, 3 of whom had to retire as a direct result of the injuries they received when feloniously assaulted, chose where they wanted their interviews to take place.

The first three chapters of this study describe the offense incidents (including the surrounding circumstances), the officers, and the offenders—with particular attention to the verbal and non-verbal interactions between officers and offenders within a specific set of circumstances. The discussion highlights areas of law enforcement training that play important roles in officer survival.

Chapter 4 provides an in-depth analysis of weapons-related issues, including types of weapons used and prior weapons experience of not only the offenders but also the victim officers. Commonalities and traits of armed offenders who attempted to kill or did kill law enforcement officers are discussed. The topic of searching suspects who may be armed is particularly important, since failure to notice a concealed weapon can result in a deadly assault. Issues regarding the thoroughness of searches are discussed at length, including being aware of the possibility that female suspects may experience a less rigorous search than do male suspects. How the offenders acquired and used their weapons, how often and where they practiced with them, and their level of accuracy with their weapons—all of these critical issues are explored with reference to the specific incidents examined for the present study.

Besides the three main components of a violent encounter—the offender, the officer, and the circumstance itself—there is a further breakdown that law enforcement officers should understand: the role of perception. Chapter 5 begins with a look at one theory of how humans perceive their environments and then explores some of the real-life mistaken assumptions that can result if one is unaware of certain perceptual pitfalls. Next, case studies provide details about the way in which officers and offenders processed information during actual incidents and, in particular, how their perceptions may or may not have differed. These examples show how perceptual discrepancies involving the dynamic processes of perception, memory, and information retrieval may result in an encounter turning violent and potentially deadly. The chapter concludes with a discussion of how the phenomenon of perceptual distortions may affect law enforcement safety training. By incorporating realistic scenarios of violent encounters, training can help to give officers

experience in handling misperceptions and perceptual discrepancies. Such preparation can increase an officer's chances for survival.

The law enforcement community must continue to examine the phenomenon known as *suicide by cop*. Chapter 6 explores the topic of suicide by cop and suggests adoption of the following definition: "an act motivated in whole or in part by the offender's desire to commit suicide that results in a justifiable homicide by a law enforcement officer." Widespread misunderstanding about this topic has amplified the inherent distress for the people whom such suicides implicate. Prior to 1990, neither the public nor the media commonly used the term suicide by cop when reporting law enforcement incidents that involved the use of deadly force under these circumstances. Although the term is more often used today, a clear and uniformly accepted definition has yet to surface. National standards applying to the incidence of suicide by cop must evolve before the law enforcement community will be able to effectively address the challenges and dangers of offenders who intentionally draw law enforcement officers into the dynamic of suicide. The effects on officers, families, and local communities following incidents where offenders have deliberately compelled officers to use deadly force are both traumatic and long lasting. Officers involved in these tragedies emphasize the need for additional training by law enforcement agencies, an increase in conscious awareness of these incidents within communities, and greater interaction with the media so that news coverage of these incidents is accurate and complete.

Safety training for law enforcement officers is continually improving. The officers and offenders who participated in this study identified what they considered to be important training issues. Chapter 7 includes not only their comments on how lack of training may have affected the outcome of a felonious assault, but also a discussion of the extent to which training and procedural matters—such as written policies and directives—can positively influence the outcome of a violent encounter. Special attention is given to a comparison of physical training and mental training. Topics covered in this chapter include, for example, vehicle stops and pursuits, facing a drawn gun, the use and malfunction of firearms, and using nonconventional weapons. The training issues specific to non-uniformed officers, handcuffing and escape techniques, answering electronic alarms, the myth of one-shot drops, and evacuating wounded officers—these and other topics are explored. Throughout the chapter,

scenarios from actual cases demonstrate that training does indeed influence the way that officers behave when involved in a critical incident. A most dangerous time for officers is when they begin to disregard or shortcut their safety training. The chapter concludes with a few suggestions about how best to learn from training sessions.

Chapter 8, includes case summaries of some of the incidents that comprise the current study. The details provided here may help readers better understand what the victim officers experienced during the assaults. Review of these scenarios points toward implications of related training issues, not only for the officers but also for the administrators, trainers, and supervisors.

The major theme that threads throughout this study derives from the concept of the *deadly mix*. As explained in chapter 9, this term describes an integrative process encompassing all aspects of the officer, the offender, and the circumstances that brought them together at the time of the felonious assault. Conceptually, the deadly mix is a term that can be used to provide some insight into why law enforcement assaults and deaths still occur on an unrelenting basis regardless of technological advances, innovative equipment, and proactive policing strategies.

Ideally, encounters between law enforcement officers and offenders would never turn violent, and the number of law enforcement officers feloniously killed or assaulted would diminish to zero. In practice, however, violent encounters between officers and offenders will continue to plague America, sometimes involving the deadly mix that often results in serious injury or death to those charged with safeguarding its citizens. Only when detectives, use-of-force investigators, supervisors, and administrators examine the various components of the deadly mix will a greater understanding of these encounters emerge. To make an objective assessment of each case, it is necessary to carefully and completely examine all aspects of the incident thus allowing the facts to surface.

It is in the best interest of every law enforcement agency, every officer, every community, and every citizen to take the time to fully and impartially examine the events described in the present study. This combined effort will help America's law enforcement officers continue to ably protect and serve their communities and their brothers and sisters in the law enforcement family. Most of all, it will help them survive these violent encounters; they will return home to their loved ones each day; and they will lead long, productive lives after fulfilling their roles as society's guardians.

INTRODUCTION

Violent Encounters: A Study of Felonious Assaults on Our Nation's Law Enforcement Officers is the final installment of a trilogy that explores many issues affecting the safety of law enforcement officers. First in the series was *Killed in the Line of Duty: A Study of Selected Felonious Killings of Law Enforcement Officers* (1992), followed by *In the Line of Fire: Violence Against Law Enforcement* (1997). With the publication of *Violent Encounters* (2006), an arduous yet rewarding journey comes to an end. As we conducted the investigation and research, compiled the data, analyzed the findings, and wrote the study, we drew upon a rich background in law enforcement. Anthony J. Pinizzotto is the senior scientist and clinical forensic psychologist in the Behavioral Science Unit at the FBI Academy. Edward F. Davis is a retired lieutenant with the Metropolitan Police Department, Washington, D.C., and an instructor in the Behavioral Science Unit at the FBI Academy. Charles E. Miller III is a retired captain with the Metropolitan Police Department, Washington, D.C., and the coordinator of the FBI's Law Enforcement Officers Killed and Assaulted Program; he is also an instructor in the FBI's Criminal Justice Information Services Division. Together, we offer this study to members of the criminal justice system, the academic community, and the general population who are searching for ways to reduce the number of felonious deaths, injuries, and assaults sustained by members of America's law enforcement profession.

Seeking an Answer

Over 15 years ago in a now nonexistent office of the FBI's Uniform Crime Reporting (UCR) Program, special agents and former law enforcement officers discussed an incoming National Law Enforcement Telecommunications System message that involved a police officer's line-of-duty death. In time, UCR personnel would record the facts surrounding the officer's death in the annual *Law Enforcement Officers Killed and Assaulted* publication. The report would include the officer's age, sex, race, physical attributes, years of service, task being performed

at the time of death, weapons used in the deadly assault, geographic area of the country where the encounter occurred, and the type of law enforcement agency that employed the officer. The publication also would contain similar relevant information regarding the offender involved in the incident.

The discussion in this small office, located only two blocks from FBI Headquarters, focused on one question: Why? Why did this particular incident result in the death of an officer? The agents and former officers hoped to find an answer by studying the personal, professional, and demographic facts regarding the officer, the offender, and the incident that resulted in the officer's death. The narrative of this incident describes an initial offense that was not out of the ordinary: a routine traffic stop. "Routine" because officers perform this task many times a day, every day, for an entire career. But this time, it ended differently; it ended tragically.

Was something unique about this encounter? Was something special about this officer or this offender? Why did this offender, known within the community as quiet and nonconfrontational, turn violent? Why did this particular incident result in the death of this officer? The answers to these questions, however, never surfaced among the stark facts of the case.

Ultimately, these questions led to the development of a special, nationwide study that resulted in *Killed in the Line of Duty*. The introduction articulates, as follows, the need that the study fulfilled:

Having conducted law enforcement training throughout the Nation and having repeatedly had the unanswered questions posed, the staff of the FBI's Uniform Crime Reporting Program formulated a plan for a project that would combine and study the felonious killings of officers through an interactive and integrative approach. The study would address the psychology of the offender, the behavior of the officer, and the circumstances in which the officer lost his or her life. Clearly, such an integrative study could practically and substantially add to the current base of knowledge on officers' slayings. While it

would not answer all the “questions” or prevent all future deaths, it would examine the complex situations in a different manner than had been previously accomplished.

A review of these incidents included a thorough analysis of departmental investigative reports, forensic records, and court documents. UCR staff conducted interviews with fellow officers and supervisors of the decedents, as well as the offenders associated with the fatal assaults.

Killed in the Line of Duty was the first study of its kind on a national scale; it analyzed the details of 51 incidents resulting in the felonious deaths of 54 officers at the hands of 50 offenders. Although it raised more questions than it answered, the study revealed a number of factors present during the incidents that influenced their outcomes, and it set forth an intriguing assessment: “In combination, or integratively, these factors combine into a ‘deadly mix’ of an easygoing officer who will use force only as a last resort with an offender of aberrant behavior in an uncontrolled, dangerous situation.”

Reporting the results to various law enforcement agencies throughout the United States, Canada, Europe, and Asia, we recognized that having completed the 1992 study, the work actually had just begun. Although one sheriff mentioned that he attributed the saved life of one of his deputies to his having read the study, we felt that too many unanswered questions remained. Consequently, we requested and received funds from the National Institute of Justice to assist in a second study on law enforcement safety.

Further Investigation

When researching the *In the Line of Fire* study, we used the same methodology that we used in the first study but revised and adapted the protocol so that it pertained to officers who had been seriously assaulted, along with the offenders who attacked them. The victim officers’ comments on the circumstances of the assaults contribute immensely to an understanding of the interpersonal dynamics that operated during the encounters.

The *In the Line of Fire* study was a collaboration between the Behavioral Science Unit of the FBI’s Training and Development Division and the Training and Systems Education Unit (formerly the Education/Training Services Unit) of the FBI’s Criminal Justice Information Services Division. Conducted over a three-year period, the study examined 40 cases, which had 52 victim offi-

cers and 42 offenders. Nine cases involved more than one victim and three involved more than one offender. As stated in the introduction, “Like its companion, *Killed in the Line of Duty*, it does not answer all questions. It does take us further in the process of understanding the various threats that face officers as they perform their duties.”

Not surprisingly, there was a striking similarity between the 1992 and 1997 studies in terms of the various threats that officers faced as they performed their duties. Law enforcement officers continued to become unwitting components of the deadly mix. Both studies found that officers often neglect their own safety when performing their duties. The two studies also discovered that many officers fit the following categories of personal characteristics:

- hard working;
- friendly and well-liked;
- fails to follow all the rules, especially in regard to arrests, confrontations with prisoners, traffic stops, and waiting for backup when backup is available; and
- feels they can “read” others/situations and will drop their guard as a result.

When officers received calls for service, as well as when they initiated contacts, their mental and physical reactions were geared toward responding, helping, clearing the call, and returning to service for the next call. They often were thinking about the next call before they cleared the current one. Consequently, they sacrificed their own safety for what they perceived as “the greater good: the safety of the community.” The officers sometimes failed to keep in mind that their own safety must come first so that they remain alive and able to protect the community.

Unlike the *Killed in the Line of Duty* study, which explored the topic of officers killed in the line of duty, the *In the Line of Fire* study included officers who survived assaults and were thus able to explain their actions or offer reasons why they chose not to act. The additional insight that we gained from these comments triggered the questions that led to the present book, in particular: How and why do offenders and officers have different perceptions about a situation? *Violent Encounters* examines this and related issues that help to explain the deadly mix that results in tragedy. (Further discussion of the deadly mix and a conceptual graphic of this phenomenon appear in chapter 8.)

Perceiving Challenges

In the first study, a working hypothesis was that the officers and offenders did not perceive the gravity of the situation to the same degree. It appeared that by the time the officer realized the seriousness of the situation, it was too late. Because of the nature of the first study, it remained an open question. It was, however, tested in the second one, wherein we asked the officers and offenders in each assault case if they shared the same evaluation of the circumstances that brought them together. The discrepancy proved noteworthy. Two-thirds of the offenders stated that they believed the officer did not know how serious the situation had become just before the assault occurred. Without knowledge that these offenders made this assessment, the officers involved in these same incidents said that they were unaware of the impending assault.

What causes these perceptual differences? Even though clearly life-and-death situations, they could not have been processed in a more strikingly opposite manner. What is it in the histories, training, and experiences of these individual officers and offenders that produced such wide discrepancies?

The way officers perceive situations motivates them to act. A common experience within law enforcement involves witness statements. Officers arrive at the scene of an incident and separate the witnesses so they cannot hear or observe what the others say. When the officers compare the statements they wonder whether the witnesses observed the same incident. The statements often contradict one another or contain inconsistent information. Experienced law enforcement officers recognize this phenomenon and are not surprised when it occurs. In fact, they often use special interviewing techniques to obtain accurate statements that reflect the facts of the incident. What does surprise them is that they too are subject to these perceptual distortions and misperceptions. An officer-involved shooting scenario can illustrate this.

After the dust settled, the sergeant asked, "How many times did you fire?" With some certitude, the officer responded, "Twice, maybe three times, but I think only twice." Upon examining the officer's magazine, the sergeant found that seven rounds had been expended.

What happened to the officer's perception of the incident? Is this a rare occurrence? Is the officer's memory faulty? What about offenders? Do they possess greater or lesser accuracy than officers? Is this normal? What is it in the officers' and offenders' lives that affects their perceptions in these encounters? What messages did officers unknowingly and unintentionally send to offenders giving them the sense that they were vulnerable on that particular day? What implications for safety training came about as a result of examining these circumstances?

After we had gathered a significant amount of data for the current study, but before its publication, we began to incorporate the findings into the training offered to law enforcement officers nationwide. Five officers who received the revised training contacted us and stated that the training helped them to become more safety conscious in their daily patrol duties. It made them more alert to danger signals that offenders display. It also made them more aware that they, as officers, emit signals about their own mental readiness to meet challenges—signals that offenders are often able to "read." In the words of one of the officers: "The training you provided me in your seminar on law enforcement street survival helped me to recognize the presence of a threat and react appropriately. The danger signs were present. I'm not sure I would have seen them and acted on them as quickly as I did if it hadn't been for your training." This statement aptly describes our motivation for publishing this three-part series on law enforcement safety. If one officer's life is saved, all of our work, all of the physical and emotional pain that assaulted officers endured during the attacks and in the later retelling of them, and all of the grief borne valiantly by the surviving families and friends of deceased officers will serve a higher purpose and keep one more dedicated member of the law enforcement profession from succumbing to the deadly mix.

CHAPTER FIVE

Perception—Its Role in the Violent Encounter



As an integrated part of understanding the three main components of a violent encounter—the offender, the officer, and the circumstance itself—there is an additional aspect that law enforcement officers should understand: the role of perception.

This chapter explores the ways in which officers and offenders process information during an encounter and, in particular, how their perceptions may or may not differ.

The present discussion is not an exhaustive review of the cognitive and emotional aspects of perception. Rather, its purpose is as follows:

- To give an overview of a current theory about the way in which human beings perceive their environment.
- To explain how the perceptions of the officer and the offender at the crime scene may have affected the ways in which both acted.
- To discuss the implications of these findings for law enforcement training.

Processing Information: Perception, Storage, and Recall

This section examines a particular case in order to explore how different people may process information in different ways, including their perception, storage, and recall of details. How often do law enforcement officers observe suspects and immediately know that they possess a weapon or illicit drugs? On such occasions, why are some officers frequently unable to articulate which observational building blocks they linked together to identify indicators that led to a perception of reasonable suspicion or probable cause? Equally important, why do they sometimes have difficulty explaining what factors caused

them to react in appropriate ways to prevent an assault, make a justified and successful arrest, or save an innocent life? A close look at the circumstances of one case—the officer's perceptions of the encounter, the community's perceptions of the encounter, and additional examples of similar cases—can help answer these questions and highlight specific interactions during violent encounters.

Case Review

On a warm summer evening in a large city, narcotics officers working the 4 p.m. to midnight shift began a buy-bust operation at an intersection known as an open-air drug market. Approximately 50 to 60 persons, many presumably involved in drug trafficking, had congregated on the sidewalk. Five minutes earlier, two undercover officers had walked into the area and purchased illicit drugs from several street dealers. Both officers left the intersection and broadcast the drug dealers' physical descriptions to arrest teams, which consisted of three unmarked vehicles with three officers in each car. The arrest teams canvassed the vicinity to locate the suspected drug dealers.

As the unmarked police cars approached the targeted street corner, the crowd immediately began to disperse. At this time, an officer observed a subject matching the description of one of the drug dealers and instructed the driver to stop the vehicle. The doors of the unmarked police car swung open, and the crowd began to clear the area more hurriedly. The officer who first saw the alleged dealer shouted to his fellow officers to indicate the person he intended to stop. Simultaneously, another officer exited the cruiser and pointed to a different individual approximately 30 feet farther down the sidewalk. The second officer began calling out to the others, as well as broadcasting on the radio, to "get the one in the red shirt;



he's got a gun." The man in the red shirt ran down the sidewalk after he saw the plainclothes officers approach him from both sides with their weapons drawn. Although ordered to show his hands and lie flat on the ground, he ignored the command and continued running. Two officers grabbed the subject and attempted to gain control of his hands while forcing him into a prone position. He continued to resist both officers by trying to stay on his feet and keeping one hand pressed against his waistband as if reaching for a weapon. As a result, one officer struck the man's arm with a collapsible baton, causing him to fall to the ground and release his grip on the handgun. One officer then safely removed a .357-caliber handgun from the subject's waistband, placed it in his own waistband for the purpose of temporarily securing the weapon, handcuffed the subject, and placed him under arrest. The remaining members of the arrest team continued to canvass the area until they located, identified, and arrested the alleged drug dealers.

OFFICER PERCEPTION. While the officers were in the station house processing the prisoners and completing the necessary paperwork, the officer who originally identified the alleged dealer turned to the officer who had spotted the gunman and asked, "How did you know he had a gun?" The officer who noticed the gunman hesitated for a moment and then replied, "I'm not sure why; I just knew." He finished processing his prisoner and sat down to prepare his statement of facts for presenting the case to the prosecutor's office. As he began to recall the circumstances of the incident, he made a conscious effort to remember every detail that led him to conclude that the suspect possessed a handgun. First, the officer recalled that when they drove up to the scene, he saw the male in the red shirt sitting on a curb. As the officers exited their vehicles and the crowd began to scatter, the man stood up and adjusted his waistband. Next, the officer remembered that, although the weather was extremely warm, the subject had on a long-sleeve dress shirt with the shirt-tails hanging out. Finally, he recalled that immediately after the man stood up, he turned the right side of his body away from the officer and began to walk in another direction, grabbing the right side of his waistband as if securing some type of object. The combination of these factors led the officer to correctly believe that the individual in the red shirt was armed.

The officer made these recognitions so rapidly that he experienced an *instantaneous recognition* of danger.

Yet, he could not articulate these detailed and specific reasons to his fellow officers until long after the incident was resolved and, then, only after he had made a conscious effort to recall every detail that led him to develop, process, and act upon his observations.

COMMUNITY PERCEPTION. Several citizens sitting on their front porches witnessed the arrest teams approach and apprehend the male armed with a handgun. None of the citizens knew that he had a firearm. One later filed a complaint against the officers involved and stated, "There were a lot of young men standing on the street corner. The police pulled up, and all of the young men began to disperse as they normally do. There's a lot of drug dealing that goes on over there. We've seen the police jump out on the drug dealers many times. But, this was different. They immediately pulled their guns out and were pointing them at this young man. They were also hollering something at him, although we couldn't hear what they were saying. They didn't give him a chance. They just grabbed him, beat him with a police club, and hauled him away. They didn't stand him on the corner for a while like they do all the other dealers. They just beat him for no reason and took him away." Why did these witnesses not see the danger signals that the officer perceived?

ADDITIONAL EXAMPLES. Far from the metropolitan area where the drug deal described above occurred, an incident took place involving *shots fired*—two chilling words that can interrupt the momentary quiet of an officer's radio. Scores of officers responded to the location that the dispatcher had broadcast. What began as a calm midnight tour of duty quickly changed into a frantic gun battle. Afterward when asked how many shots he had fired, the officer involved responded, "I only got two shots off...." When his weapon and magazine were examined, however, it became clear that six shots had been expended.

In another jurisdiction, an officer became involved in a shooting after a suspect had shot at a fellow officer. The officer fired his service shotgun once, striking the suspect in the chest and causing him to fall to the ground. Although wounded, the suspect continued to move his hands toward his weapon that he had dropped on the ground. As the officer was about to fire another round at the suspect, he noticed something in his peripheral vision that made him stop: it was the foot of the second officer kicking the suspect's handgun away. At that point, his vision opened up, and he saw the second officer standing to the right of the suspect. As the shooting was unfolding,

the first officer did not see the second officer approach as the suspect fell to the ground, dropping his weapon.

QUESTIONS TO ANSWER. Some officers can identify with these scenarios. When involved in a serious, life-threatening situation, tunnel vision, auditory exclusion, the inability to recall details—even very important details—may occur. Why and how does this happen? Why do some witnesses of an encounter and even some well-trained and experienced law enforcement officers report what appear as conflicting and contradictory accounts? Answers lie in our unfolding knowledge of how we perceive what is happening in our environment, how we process and store that information in our brains, and how we then recall that information.

Mistaken Theory: The Brain as a Video Camera

The following is a discussion of several assumptions that stem from a now-discredited theory that humans process information in the same way that a video camera captures information. Over the past few decades, cognitive scientists have gained a better understanding of how perception, storage, and retrieval of information occur in the brain.¹ They have studied not only the global aspects of perception, but also specific areas of the brain that contribute to the perceptual process.² Only recently have researchers dispelled the theory that the brain works like a video camera. That theory generated the following mistaken assumptions:

Mistaken Assumption #1: Everyone sees what really occurs. When people reflect on their own experiences, they quickly see how erroneous this assumption is. It takes nothing more than attending a sports event. The referee throws the penalty flag. As quickly as it hits the ground, spectator opinions of what really happened during the controversial call fill the air. With equal certainty, opposite sides defend their positions. It is very clear to each person what happened in spite of the fact that these explanations contradict one another. It could not have occurred the exact way each person recalls: either the penalty took place or it did not. Until viewing the instant replay in slow motion, however, all spectators believe that they *saw* and *know* what happened. Only the instant replay can reveal the true events that took place.

Mistaken Assumption #2: Everyone sees everything that occurs. If this were true, it would not matter where in relation to an incident a witness was standing or whether

the witness was tired or fully alert. If the mind recorded all stimuli as does a video camera, then a person would need only to recall the specific information. Research experiments, as well as personal experiences, show that the position (standing or seated) of witnesses will affect the quality, quantity, and accuracy of their perceptions. Something as simple and yet as dramatic as depth perception is affected greatly by a person's location in reference to the incident. For example, the perception of how quickly an object was moving oftentimes depends on the viewer's position vis-à-vis the object in question. Watching the flow of traffic can easily demonstrate this. Looking at oncoming traffic from various angles will result in seeing the vehicles appear to move faster or slower depending on the angle of view, even though they are moving at the same speed.

Mistaken Assumption #3: Everyone processes incoming information the same way. One of the investigators offers a story to exemplify how this assumption is inaccurate. During his college years, he and a friend decided to play a set of tennis and then go into town to do some shopping. At the prearranged time and place, they met. One was dressed for tennis, the other for shopping. Each "knew" they had decided to do both: play tennis and shop. However, they "recalled" the order of those events quite differently.

Mistaken Assumption #4: Everyone remembers exactly what occurred during an incident. In a previously discussed case, an officer involved in a shooting recalled that he had fired only two shots. In fact, he had fired six. Even after he saw the evidence of six spent cartridges in his weapon, he still was certain that he had fired it only twice.

Mistaken Assumption #5: Memories stay the same, maintain accuracy, and remain consistent over time. During the 1970s, journaling was very popular. Many individuals recorded events that occurred and various reactions they experienced during them. Upon reading those journal entries years later, many people are surprised at their recorded entries and reactions. Their current recollection of these circumstances sometimes prove quite different from what they wrote two or three decades earlier.

Mistaken Assumption #6: Because their memories are recorded in their brains as events happen, people can replay those experiences with accuracy and in

detail. As will be explained later in this chapter, this misunderstanding of how perception and memory work has led some judges to refuse to allow witnesses to testify in cases where their memories may have been contaminated.

Interviewing Witnesses

Neuroscientists' realization that the brain does not work like a video camera resulted in a new understanding of how witnesses remember crime scenes. Law enforcement personnel now recognize that during interviews and interrogations they can no longer rely on the assumptions generated by the theory that the brain processes information like a video camera. For example, an old interview technique included informing witnesses that because the brain records experiences just as a video camera does, they can recall, in detail, the events that occurred in their presence, even if they were not paying particular attention to them. Because witnesses fully expected to remember details, many times they would recall those specific details that the officers asked about. Law enforcement personnel now know that many of those so-called remembered details were confabulated, or made up. Witnesses were not intentionally lying; they very much believed that what they recalled happened in the way they described it. In many cases, however, the details that the witnesses remembered during the use of these interviewing methods were blatantly incorrect. Unfortunately, although these recollections were clearly wrong, they became embedded in the memories of the witnesses and were resistant to change. It seemed to the



Why do some witnesses report what appear to be conflicting and contradictory accounts?

witnesses as if the events as recalled were, in fact, the way they took place. This is one of the major reasons that witness information has traditionally been regarded as questionable.³

This inaccurate understanding of human perception and memory was most clearly demonstrated through some inappropriate forms of hypnosis used to refresh supposedly the memories of witnesses or victims. These individuals were told that their minds recorded events in detail, much like video cameras, and that they could use their mind's imaginary remote control device to play the event. They also were informed that they could rewind their mind's video tape and even zoom in on details of what someone may have been doing or wearing that their conscious minds could not remember. Although this may be a reasonable technique in some therapeutic settings, it is misleading and inappropriate in forensic matters. Again, if given the suggestion that they will recall exact



A witness's misconception may lead to an incorrect recollection of an incident.

details of events (that they may or may not have actually observed), people may imagine witnessing specific details, even though these never occurred or never actually were observed. Many of these details might well be confabulated. The result of using this inaccurate model of human memory and the sometimes faulty and confabulated information it produces has led some investigations far from the correct path to the offenders.

These same principles apply, of course, when law enforcement officers are interviewed following the use of deadly force. As this chapter unfolds, it will become clear why some officers could not recall the specific number of shots fired or see certain events that occurred, such as an approaching officer, during incidents involving the use of deadly force.⁴ To come to a better understanding, a review how the brain works will prove helpful.

Current Theory: The Brain's Processes and Constructs

This section introduces cognitive and biological scientists' current understanding of the way in which the brain processes information. The first principle for understanding how perception occurs is that the brain *processes* events and various stimuli in the environment, not merely records them.⁵ This process operates in a slightly different way for each person, and law enforcement officers often observe the effects of this difference. When an incident occurs on a busy street, it is common for officers to separate witnesses and to interview each one individually. Routinely, each witness's rendition of the occurrence offers very slight to very major differences. Are they lying? In most instances, the answer is no. Rather, each person perceived the incident somewhat uniquely and then processed and recalled that information in different ways, thus rendering contrasting accounts.⁶

How does this various processing of information occur? Why do three people present at the same event describe it differently? The answers lie in combining three components: biology, environment, and psychology.

Biological Aspects

Currently, cognitive scientists consider that the way the brain processes material can best be understood as a multitasked operation.⁷ This has not always been their understanding, even among biologically-based scientists. For example, a discarded theory of how the brain works

once explained that for every experience a specific brain cell recorded and responded to that particular event. This theory was often colloquially referred to as "the grandmother cell" theory, based on the principle that for every experience (including that of one's own grandmother), a corresponding cell existed in the brain. When that particular cell was triggered, the appropriate image (grandmother) would appear in the individual's mind. Clearly, this is not how the brain actually perceives stimuli and processes and recalls events. After all, if the brain really worked this way, the vast amount of experiences that a typical adult has in a lifetime would require the brain to be the size of a small building.

The brain processes all incoming stimuli, assigning certain responsibilities to its various parts. An estimated 1 billion stimuli are sent to the brain every second. These include sounds (such as noises from air ducts, sounds of animals, and movement of air and wind) and light (areas of the room that receive more or less light and shades of lighting, such as flickering candles and the rays of sun on glass). Of these multiple sensations, only about 100 are sent on to be processed. For example, when you hear the word *apple*, what do you think about and what image comes to mind? Ask several people to respond to the word *apple* and you will quickly hear a variety of answers. Some will say, "red," "juicy," or "grandma's apple pie." Others will offer "yellow" or "tree." Why so many different first responses?

No single cell in the brain is exclusively dedicated for collecting all apple-related data. So, how does the image of an apple become displayed in the mind? Perception and memory are segmented and stored in various parts of the brain. Color, size, shape, taste, and texture are all experienced and stored in different parts and areas of the brain. When people hear the word *apple*, they call upon their own individual experiences with apples, and, based upon these, their personal image of an apple comes to mind. The mental exercise of filling in the blank or sentence completion also can demonstrate this constructive aspect of the brain. When presented with the sentences "Men are like _____" and "Women are like _____," individuals draw from their own vast experiences and associate the missing information with an answer consistent with these experiences.

Effects of Environment and Psychology

Scientists currently believe that the brain constructs

memories by linking together pieces of information. An example of this process involves what happens when people think about an apple. They associate this image with some of their experiences, all equally idiosyncratic. When asked to articulate what they are thinking, some people may discuss a recent grocery shopping experience; some may relate a particularly fond memory of a teacher as far back as elementary school; and some may speak of a time in childhood when they went to an orchard and picked apples.

Some perceptions and memories, then, are the result of or are influenced by various related pieces or bits of information, such as size, shape, color, and texture, coming together in the brain at a point in time.⁸ Memory especially is affected by past similar occurrences and can be looked at as a chain made up of links associated with one another. When there is a critical mass of such information, one link attaches to a related link and these attach to yet other links, ultimately forming a memory chain. One person might say, "The word *apple* makes me think of growing up in a small town in Pennsylvania, which leads me to think about my summers when we were out of school. One of our chores was to pick apples from the trees on our property. These apples were used to make cider, dumplings, and pies. The pies were most enjoyable, especially with the cinnamon that flavored them. But, cinnamon was great in the winter, too. We would put it in our warm apple cider after coming in from sledding." And, the story goes on from there. That same initial image, however, could lead another person into quite a different direction.⁹

People construct memory links based on their particular experiences, biases, and expectations.¹⁰ They retrieve memories by associating a memory segment to another closely related one. For example, a witness might say, "The man I saw was tall, about 6 feet tall. I knew this because he walked by my girlfriend, who is only 5 feet tall. The suspect looked a foot taller than my girlfriend. I guess that's what made me focus on his hair. His head became so prominent when he walked by my girlfriend. His hair was the same color as my girlfriend's, dirty blond, but hers is short and straight. His was very curly and long, at least over his collar. Oh, and the collar was white; it really stood out on the blue shirt he was wearing."

Upon examination, the statement quoted above demonstrates that one piece or bit of information led the witness to recall another associated piece of information.

Most interviewers know that open-ended questions—allowing witnesses to talk and recall on their own—achieve a greater amount of accurate information.¹¹ By asking questions during witnesses' initial recollections of the events, interviewers may inadvertently interrupt their recall and send them off on some tangential road. Interviewers should ask questions regarding particular statements made by witnesses after taking the initial verbatim statements.

So far, the present discussion has focused on perception and memory as they pertain to nonthreatening and nontraumatic circumstances. What happens to perception under exceptional conditions of high stress and anxiety?

Impact of Emergency and Trauma

Physiological conditions can affect the way that the brain processes information. High alert or high arousal produces intense and specific physiological reactions. One of the most important effects of intense stress, dichotomous thinking, separates materials into contradictory or mutually exclusive categories. Officers move from driving down a peaceful street on a clear evening to suddenly hearing shots ringing out from an alley they are approaching. As an armed suspect runs toward them, they have no time to engage in a group discussion to debate what their response should be. In such situations, humans have only two viable options (fight or flight) with which they are biologically wired to react. They can either run away from the threat or attack it head-on. Another physiological reaction is the "freeze response" (discussed later in this chapter). The brain reduces its functioning to one purpose: preservation.

Several specific and intense physiological reactions typically take place during moments of self-preservation. People who face life-threatening events are bombarded with stimuli from all sides. By focusing on preservation, the brain directs all of its forces to those activities needed to survive. Many brain functions that are not necessary for immediate survival become less active, and those areas that are needed to promote survival become dominant. This includes the body's blood flow during conditions of extreme physical or emotional shock. During life-threatening situations, the body shunts blood to the brain and heart, the two most important organs for survival.¹² This process results in many of the seemingly odd and exaggerated experiences officers have during use-of-force

situations, namely auditory exclusion, time distortion, and tunnel vision.¹³ Each of these sensory experiences can be very adaptive, albeit confusing both to the officer experiencing it and to those who later hear of it from the officer. For those listeners who have had similar reactions during highly dangerous circumstances, they respond with, "I know just exactly what you're talking about." Those listeners who have not experienced similar situations or otherwise lack an understanding of such normal reactions under stress may doubt the officer's truthfulness or judgment.

Perceptual Distortions

Why do perceptual distortions take place, and why are they biologically adaptive? Some officers related that when gunfire erupted during a violent encounter, they heard only popping sounds—not at all similar to sounds they had heard on the firing range or even while hunting. Others noted that they did not hear police radio transmissions or even the raised voices of other officers during the encounter. In these cases, their brains were attempting to reduce the amounts of what are perceived as distracting stimuli by filtering out as much noise as possible to allow the officers to focus intensely and almost exclusively on the perceived threat.

During an extreme situation, time often appears to slow down. What took only 3 to 5 seconds to occur may seem to the officer involved as having taken 10 to 15 minutes. It is as if the brain is putting the brakes on, trying to slow down what is happening. Overwhelmed by the vast amounts of information coming in, the brain slows its processing down in an attempt to collect information, to rapidly make sense out of the material, and to control what is happening. During such occasions, some officers may see movements of people and objects in slow motion. One officer stated that he could actually see the ejected shell casings tumble from his pistol as he fired and could read the words on the bottom of them as they slowly passed in front of him. In another incident, an offender fired at an officer seated behind the wheel of his police vehicle. The officer said:

As I told you earlier, it was like things just, all of a sudden, everything went into slow motion, at least for me. The bullets are hitting the glass and breaking through the windshield, and I can, I know people probably think I'm lying, but I can actually see the projectiles coming through the windshield

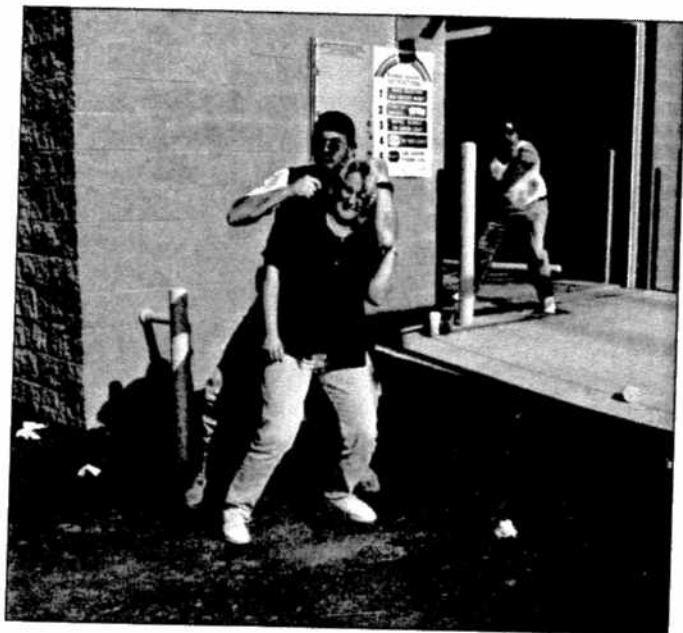
at me. I throw my hand up in a defensive reaction, and I catch one of the projectiles. It hits me in the finger and goes through my arm. And then, when I was firing at him, it seemed like I was throwing mud balls because I'm watching as the bullets are leaving the barrel of my weapon. It's like it's going in slow motion at him. When I'm shooting at his car, I am trying to lay these bullets into the back window. It's like I'm throwing mud balls. You see them arching, and they are going into that window. You can see the window exploding, and it's all going, it's like it's in such slow motion.

Another officer explained that he believed he benefited from having veteran officers tell him that slow motion can occur. In this incident, an offender had initiated a gun battle. The officer related, "During my slow-motion experience, I felt very aware of what was happening. I felt a strange calmness and confidence in my ability to take the proper action, which was to shoot the b—." He attributed his reaction to having been trained to expect these sensory distortions to occur in a highly charged situation.

Many officers spoke of experiencing tunnel vision. This occurred when they focused on an extremely small, narrow, and limited area. They could not recall seeing surrounding or peripheral movement or activity. Their brains were attempting to limit and restrict the amount of incoming information necessary to develop strategies



Because of tunnel vision, many officers were unable to recall seeing surrounding movement or activity.



Tunnel vision may cause an officer to overlook the most dangerous threat.

for self-preservation. The brain does this by reducing the field of vision to what is perceived as the most dangerous threat. In an incident from the current study, an offender pointed a .45-caliber semiautomatic pistol at an officer's head. The officer advised:

When I saw the gun, I didn't know what caliber it was, but it looked like a 12-gauge shotgun barrel. I knew that couldn't be because the guy was pointing a handgun, but it sure looked like a 12-gauge barrel to me. When the confrontation was over and I got on the radio, the dispatcher asked me for the description of the subject. All I could tell her was that it was a white male and he was armed with a handgun. Thank God she had the tag number of the vehicle. At the time, all I could remember was his face and the barrel of that handgun pointing directly at my head.

Other officers similarly stated that they could relate in detail the description of the weapon they faced but had greater difficulty describing their assailant. This is both understandable and adaptive because the officers immediately perceived the weapon as presenting the most dangerous and instantaneous threat to them and, therefore, the primary focus of their attention.

As understandable and adaptive as slow-motion reactions are from a strictly biological perspective, they also can be very maladaptive in the law enforcement

world. Neuroscientists have a growing understanding about why and how these reactions occur. Current studies explain how blood supply to various parts of the brain is enhanced while that to other parts of the body is reduced during traumatic and emergency situations. Perception, memory, and recall are all constructive; they come about from various parts of the brain working together to produce an experience. If particular areas of the brain receive a reduced supply of blood, very little activity occurs there. On the other hand, where the blood supply is enhanced, more focus and attention may take place. And so, if the stimuli are not perceived to begin with, they certainly cannot be recalled at a later time.

Constructive Nature of Perception: Implications for Law Enforcement



These findings have immense implications for law enforcement. They not only may affect officers' perceptions for the purpose of future testimony but also may be responsible, in part, for whether officers avoid harm, sustain serious injuries, or even die during an emergency response. It also is very important to recognize that not all officers will experience the same sensory perceptions or distortions as other officers on the same scene. The degree of emotional intensity each officer experiences during an encounter will vary as well. These variations in reaction, perception, and recall should not be considered in and of themselves as pathological, unnatural, or attempts by officers at distorting what actually occurred. An example can help explain this:

An officer responded to a call for an armed holdup in progress. As he approached what he knew from the address to be a small restaurant, he turned off his siren. As he got closer, he also turned off his emergency lights. He parked his vehicle several yards from the restaurant to avoid being seen approaching. Before entering the restaurant, he noticed the waitress at the cash register and someone standing in front of it with his back to the door. The officer knew something was wrong because the waitress never cashed customers out, only the owner did that. The officer realized that this was very likely a robbery in progress. As he approached the door, he noticed that all of the patrons were seated and looking down either at their tables or at the floor. He opened the glass door to the restaurant and told the person at the register, whom he assumed to be the armed suspect, to remain where he was and to extend his arms up and away from his body. As the suspect extended his arms, the officer saw the suspect's weapon, a handgun. As the officer moved toward the suspect, he heard a pop and felt a burning sensation. He recalled having difficulty breathing and then falling to the ground. The officer never saw the second holdup suspect at the end of the counter. He remembered that as he opened the door and commanded the suspect at the register to extend his arms, his attention and focus became fixed on that suspect. When he saw the suspect's weapon, all he remembered from that point was seeing the outline of the suspect in

front of him. The officer experienced tunnel vision and auditory exclusion. Even when he was shot, his later recollection was only a burning sensation, not a slam to his side as the bullet entered his body between the vest panels at his armpit.

In the example described above, the officer's biological reactions to the immediate stress affected his perception of the other dangers present in the restaurant and influenced his response to being shot. These reactions also influenced what he could recall of the incident and what other information he did not perceive or could not remember. Some of the details that the officer did not perceive were later provided by certain patrons and workers in the restaurant and further corroborated by other witnesses.

Training Concerns

Law enforcement training must take into account the biological reactions to acute danger that officers experience and then help them to deal with these reactions. Most officers know that witnesses and victims experience such reactions but may not expect to be affected themselves. Officers should know that they or their partners might experience such reactions during an extremely stressful situation. Law enforcement training must educate officers to understand the nature and cause of biological reactions, to recognize them when they occur, and to help develop psychological protections to reduce their negative impact.

Police supervisors, training officers, citizens, and prosecutors must become aware of the biological reactions to stressful, emergency situations. They must also understand the psychological effects of these experiences. Following a traumatic incident, the statements of witnesses, victims, and police officers may reveal some confusion regarding observed details. Conflicting statements made by police officers may result from the same type of biological and psychological reactions that influence witnesses and victims of violent crimes.

Social science research, including the investigators' findings (*Killed in the Line of Duty* [1992], *In the Line of Fire* [1997], and the current study), seem to indicate that training can make a significant and important difference in dealing with these reactions. Officers interviewed for the current study indicated that during a traumatic or life-threatening emergency situation, they "heard the voice of my instructor at the academy" telling them to expect cer-



Some confusion in providing details following a traumatic incident can be seen in witness's and victim's statements.

tain reactions. It appeared that knowing that they might experience these stressful reactions minimized the intensity of them. Only 2 of the 50 officers in the current study actually recognized the reactions they were having and attempted certain interventions that seemed to minimize the effects.

Case Review

As an example, several officers responded to the closing of a large night club, which usually contained 300 to 400 patrons, and was well known for attracting local drug dealers. Numerous shootings had occurred at closing time in the past. Eight uniformed and four plainclothes officers were assigned to the area. As the large crowd emerged from the building, a sergeant and an officer, both in uniform, were in the street attempting to keep traffic moving. Numerous pedestrians wandered into the roadway. After successfully moving them onto the sidewalk, the officer and sergeant turned their backs to the crowd and stood shoulder to shoulder facing the roadway. A male emerged from the crowd and walked up behind them. From a distance of approximately 2 to 3 feet, he aimed a .38-caliber handgun at the back of their heads and discharged one round. The officer related:

I was standing with my back to the crowd when I heard an explosion. It was so close to my ear that it blacked me out. It was near the Fourth of July and I thought, who's throwing cherry bombs at us? As I leaned over to clear my head, I heard the sergeant holler, 'Gun.' I then noticed that the sergeant was down on his knees with his hand to his head. I immediately knew that he had been shot in the head from behind. I continued to crouch and started to spin to the rear. I then observed a man with a gun backing away from us. As I turned to face him, the crowd behind him was frantically attempting to run for cover. He turned and ran up the sidewalk and then started to run towards the center of the street. I remember there were numerous occupied vehicles in the roadway. I knew this guy couldn't be allowed to get away. I thought the sergeant had probably sustained a fatal wound, and I was sure he was still down. Other uniformed officers were several hundred yards to the south of me, so assistance was not readily available. I ran after the offender, and I don't remember drawing my weapon. He briefly slowed down in the cen-

ter of the street. After he was on the other side of the occupied vehicles, I fired at his back while I was still running. I know I shouldn't have taken a shot while running, but it seemed like my best chance to stop him. I missed, and he continued to run. I probably hit one of the parked cars on the other side of the street. I continued to chase the offender when I saw a plainclothes officer emerge from between two parked vehicles. The plainclothes officer fired a single shot, which struck the offender in the chest. The offender fell in the street and was sitting partially upright against the front tire of a parked car. The offender appeared unconscious; however, the revolver was still in his hand. As other officers began to close in, the offender attempted to raise the revolver when he was shot in the head and incapacitated. The revolver was removed, and the offender was safely taken into custody. I then ran back to check on the sergeant. I was sure he was dead. But, when I got back to the original area of the shooting, the sergeant was not there. Neither were any other officers. I began to panic because I knew the sergeant was in serious need of medical attention, and I wasn't sure if anyone was looking after him. I then saw him walking towards me from the direction that I had just come. I was amazed that he wasn't hurt.

When asked about the same incident, the sergeant replied:

We were standing in the street when I detected movement behind us. Then, I saw the glint of a gun barrel coming towards our heads. At the same time, I heard it go off. I temporarily blacked out, fell to the ground, and grabbed my ear. I wasn't sure if I had been shot or the gunman missed. I hollered 'gun' to the officer who had been standing next to me. The officer immediately went into a crouch and spun to face the gunman while simultaneously pulling and extending his service pistol. The gunman was backing away from us, and the crowd behind him began to run in all kinds of directions. He looked like he was trying to make a decision whether he was going to run or fight. When he saw the officer's handgun being pointed in his direction, he began to run. I looked at my hand and there was no blood. I then realized that the gunman had probably missed both of us. I got

up and began to run approximately 10 to 15 feet directly behind the pursuing officer. There was a lot of traffic in the roadway, and I saw numerous citizens jump out of their cars without putting them in park. They were also running in numerous directions. The gunman ran past the unoccupied vehicles. Cars were now colliding with one another. He stopped, turned, and brought his handgun up in our direction. When the gunman stopped and began to turn, the officer in front of me went into a classic academy shooting stance. It was a textbook shot. The officer fired before the gunman could get the weapon fully raised. I know the officer's round struck the gunman because when the bullet hit him, he was knocked backwards, which caused him to spin and fire directly into the air. He spun and stumbled a little bit, but he continued to run. The officer who fired the round began to come out of his shooting stance, and then I heard another shot. I didn't see where it came from, but the gunman fell into the street. Several of us approached the gunman cautiously as we could see he still had the handgun in his hand. We positioned officers behind and on both sides of the gunman before we started our approach. As we approached the gunman, he attempted to raise the weapon again. The officer positioned behind him shot him in the head. That shot put him down for good. We removed the gun from him, handcuffed him, and waited for the ambulance. I then walked back down the street in order to secure the area where the shooting started. I ran into the officer who was standing next to me when all this began. To my surprise, he had returned to the scene to render first aid to me. He was very glad to see that I was okay.

The officer and sergeant were clearly involved in this incident in its entirety. Both recalled specific details that were basically the same; however, there were some major differences.

- Why did the officer not recall drawing his service weapon while turning to face the offender?
- Why did he not remember seeing the offender stop, turn, and raise a gun in his direction?
- How could the officer not have seen the offender's gun discharge into the air?
- Why did the officer believe that he was running when he fired the shot?

- Why did he not see citizens jumping out of their cars and the vehicular collisions that occurred?
- How could the officer fail to notice that the sergeant was behind him and had participated in the offender's arrest?

Case Review

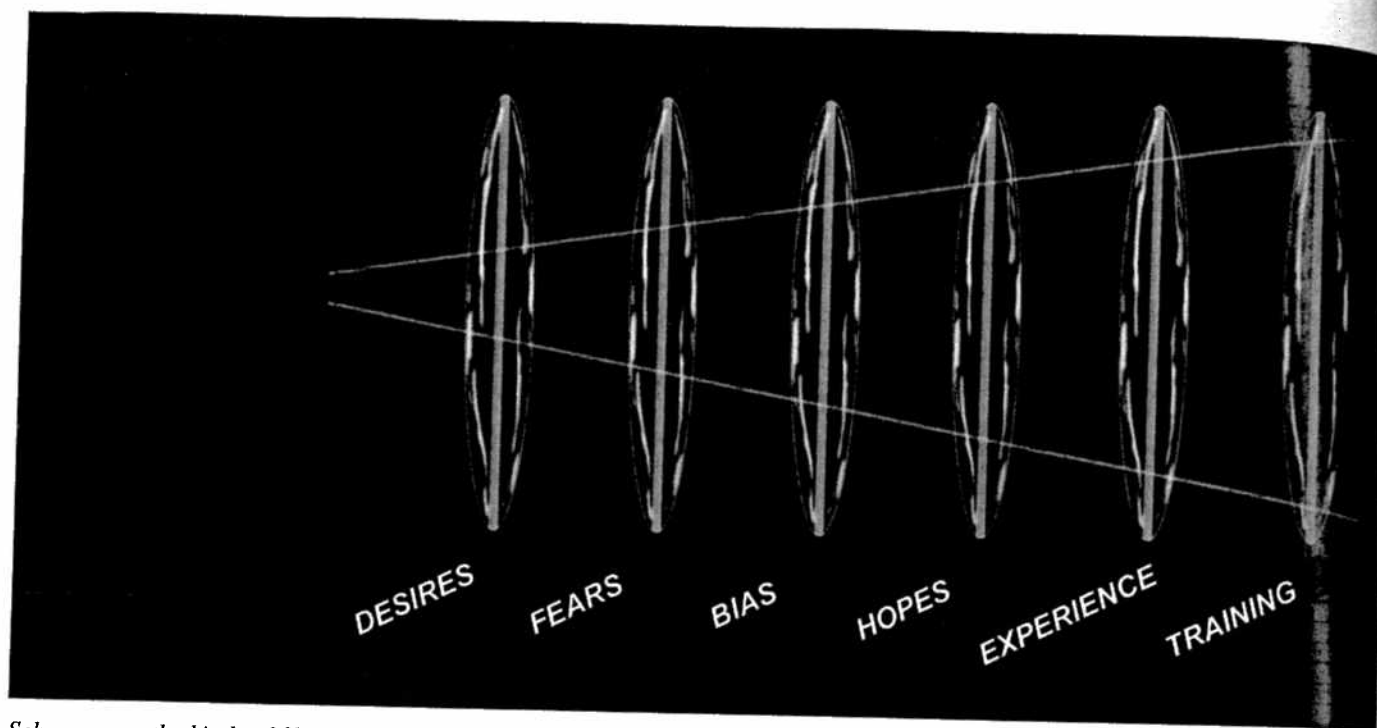
An officer chased an armed offender attempting to flee the scene of a shootout with several other police officers. The offender ran through the yards of several residences, and the officer momentarily lost sight of him on several occasions. The officer stated that he experienced tunnel vision; he concentrated his vision on the offender, in particular his hands. The officer rounded the corner of a residence and caught a glimpse of the offender as he fled into a wooded area. The officer remembered his instructor's words, "Pay attention to your surroundings and where the bad guy is leading you." The officer said that he paused and considered the possible consequences of chasing an armed suspect into a large wooded area unfamiliar to him. The officer advised:

It was clear that this guy was willing to kill a cop. He had already tried to do so. He could ambush me from a variety of locations in those woods. I knew nothing about this area, and it occurred to me that the suspect might be trying to lead me into a trap. I decided it wasn't worth the risk. The suspect was apprehended later without incident. We'll never know what would have happened if I had entered those woods, but I believe, I believe, I did the smartest thing at the time. He was caught later and nobody got hurt. I'm sure it was a good decision, and I have my training instructor to thank for that.

Case Review

In the dark, an officer chased an offender who fled from an automobile. The offender ran into the rear yard of a residence. The officer stated:

An officer in my agency had been killed several months earlier in a foot chase just like this one. I have been involved in several shootings, and I didn't want to instigate another. This incident seemed like it was occurring in slow motion. When that happened to me before, I had a tendency to try to make things go faster. I had recently received



Schemas are the kinds of filters that the brain uses to collect and make sense of information.

in-service training on conducting foot pursuits. Our trainers made sure we were fully aware of the dangers of going around blind corners, especially in the dark. So instead of rushing to get this guy, I let the sensation of the slow motion continue. I refused to get in a rush, and I simply took my time. I stopped at the corner of the house and listened. After several seconds, I heard the suspect climb over a fence. It was only then that I proceeded into the rear yard, when I knew it was safe to do so. Your safety comes first in these situations.

The offender was apprehended without incident several minutes later in possession of a handgun. When questioned afterward, the offender stated that he had waited for the officer several times during the foot pursuit and had planned to shoot him. When the officer did not appear when and where the offender anticipated, he attempted to escape. The officer stated, "That s— was waiting to ambush me. He probably would have been successful, too, if we hadn't received that training."

Schemas as Filters of Experiences

To understand perception, recall, and memory it is necessary to consider not only biology, but also environment and psychology. If humans functioned only at the level of biology, on the level of their evolutionary primitive

brain, they would have no control over their experiences, no understanding of why they experience circumstances the way they do, and certainly no way to mitigate some of the biological forces that affect their experiences. There would be little difference between human brains and those of horses, cows, cats, and dogs. That, however, is not the case. Humans have a layer on the top of their brains—the cerebral cortex—that most other organisms do not, at least not one as well developed as it is in humans. It is in the cerebral cortex that biology, environment, and psychology interact; this interaction will determine, to a large extent, whether biological, environmental, or psychological factors will take precedence during an encounter.

The brain attends to only about 100 of the 1 billion stimuli per second that it receives. Moreover, because of the interplay between environmental factors and the person's psychology, the brain actually processes only about one-half of those 100. The following paragraphs describe how, according to some scientists, this process takes place.

Social scientists use the term *schemas*, which are the kinds of filters that the brain uses to collect and make sense of information.¹⁴ As multiple stimuli of sights, sounds, smells, and feelings enter the brain, these filters try to collect information consistent with a person's experiences, training, hopes, expectations, and biases. People

make sense of the various stimuli by pulling together those that they need for their own preservation (especially in highly charged emergency situations) and those that are consistent, or that can be made consistent by how they perceive them, with what they already know.

Social scientists also have shown that these schemas, or filters, assist us in trying to make sense out of these millions of stimuli by assembling or constructing them in ways consistent with expectations, hopes, biases, and experiences. The brain can be thought of as a large, complicated maze. The materials found in this maze are the incoming stimuli from the environment: the waves of light hitting the retina, the length and duration of sound waves that create pulses within the ear, and the smells that trigger olfactory sensations. When people put together all of these sounds, sights, tactile sensations, smells, and various tastes, their brains attempt to make sense out of the environment (that is, to perceive and understand in an orderly way what is happening). However, they must recognize that perception is not a final product with which the brain makes sense out of those stimuli. The final product is a perception endowed with meaning. The meanings people attach to their perceptions produce the final perception. The meanings that they place on the various stimuli can be helpful and accurate or misleading and inaccurate; or they can offer a much distorted perception of what is in the environment.¹⁵

A couple of examples can help explain how this may occur. As discussed earlier, the brain filters out vast amounts of information during a fight-or-flight set of circumstances. By focusing on the most immediate threat, the brain can exclude other stimuli available in the environment. Although this undoubtedly was a great help to the caveman fighting a saber-toothed tiger, it also may have been the cause of his genes being taken out of the gene pool if another tiger was just around the corner. This example has real meaning for the law enforcement officer. As described in a case reviewed above, an officer was shot by a second, unnoticed offender in a restaurant. By focusing only on the immediate threat and allowing the normal and natural tunnel vision to dominate, the officer missed the second, even more dangerous threat. This second threat was more dangerous because the first robber had his back to the officer, making him less threatening than the second.

In the earlier example of the two people who decided to play tennis and then shop (although one of them thought they were going to shop and then play ten-

nis), each of them recalled what they hoped to do first. They processed the information in a way consistent with their respective wants and desires. There was only one conversation, and both of them were present for it. How could they come up with two very different conclusions from the same conversation? Their own personal desires affected the way they perceived and recalled that conversation.

Personality Traits and Schemas

In the *Killed in the Line of Duty* study, 22 of the 50 participants who were interviewed and killed a police officer, were diagnosed as having antisocial personality disorders (ASPD). As explained in that publication, an individual with ASPD sees the world as a hostile, threatening place. People with ASPD experience their environment through this hostile or threatening filter or schema. This is no defense for their actions or behavior, but it does give some understanding about why they sometimes are so dangerous. The theory is that if the world is so hostile and dangerous and everyone is out to take advantage of me or harm me in some way, I will make a preemptive strike and protect myself. This, of course, represents only part of the equation. One of the other salient points about individuals with ASPD is their sense of entitlement. Whatever they want—whether it is the other person's property or the other person's life—they often feel entitled to have it.¹⁶ Not only do they simply take what they want, but they do not consider the act as stealing. Many would pass a lie detector test if asked about stealing, even when their criminal histories show multiple arrests for theft. These schemas of entitlement, that the world is hostile, that everyone is out to take advantage of me, and that everyone is out to get me, all contribute to the reason why many people with ASPD present threats to society, especially to law enforcement officers.

Of the individuals diagnosed as ASPD in the *Killed in the Line of Duty* study shot and killed an officer because, in the mind of the killer, "something bad was going to happen." He related to others in the car, "I'm going to shoot him." When another passenger asked him, "Did you say you're gonna shoot him?" He responded, "Yes. I'm going to kill him." During his interview, the killer stated, "If the officer didn't stop me, he'd be alive today." Interestingly, he blamed the officer for his own death. Essentially, he saw the officer as simply an obstacle in his path that needed to be removed.

In the current study, an offender attacked an officer with a handgun during a pursuit. After emptying the magazine in his handgun and striking the officer numerous times, the offender reported:

I thought it was done. To tell you the truth, I didn't even really think about it. I was just, I didn't think about killing or not killing. It was the target that I needed to stop from chasing me. And, after I emptied my clip, I assumed it was done. Like I said, he was chasing me and he needed to be stopped and so I did. I mean, I didn't think about him as a person or a police officer. He was just an obstacle.

An offender who critically injured an officer later discussed what he was thinking at the time of the incident. He stated, "I didn't want to hurt the officer. It was not about me and the officer. It was about me and a lifetime of nothing in a cell—in a jail. It wasn't about the officer. It wasn't nothing personal to the officer; the officer was just making a routine stop. For me, it was my life. It was the end of my life as I know it." During a video session, the offender later advised the investigators that he wanted to apologize to the wounded officer. When given the opportunity to do so, the offender stated:

I can't take it back. I feel like I've done all I can possibly do. If I could see that officer right now, I would probably ask for forgiveness from the officer. I'd also pray that with God's help, the officer could find some kind of way to forgive me sometime in her life. I have to live with this the rest of my life whether I'm in the penitentiary or not. I've paid a price. They've given me sixty years. The officer is still walking around living her life. I've lost my wife, my children, and my life. I have to live with this everyday. I wouldn't ask this kind of torture on anybody.

Law Enforcement Schemas

As seen, schemas affect the behavior of offenders. But, law enforcement officers have schemas, too, that can assist them in their duties. However, these schemas also can affect the way they perceive or do not perceive threats in their environment. Certain descriptors have been consistent throughout the *Killed in the Line of Duty* and *In the Line of Fire* studies, as well as the current one. These descriptors are part of the fabric that builds each officer's individual schema.

The investigators found five descriptors of officers that remained constant throughout all three of their studies: 1) friendly, 2) hard working, 3) service oriented, 4) did not follow departmental rules and procedures, and 5) felt that they could "read" others and situations. The investigators also determined that each study revealed specific descriptors not common to the other two. In the 1992 study, *Killed in the Line of Duty*, three distinct descriptors emerged: 1) tended to use less force than others felt they would use in similar circumstances, 2) tended to look for good in others, and 3) appeared laid back and easygoing. In the *In the Line of Fire* study, the additional descriptors of officers involved their willingness to use force when justified and their survivor mindset. In the current study, the descriptors included the two additional ones from the *In the Line of Fire* study and being prepared to react.

Many of these descriptors reflect superior qualities that are exactly what law enforcement agencies want their officers to possess. It is good to treat citizens with respect. It is a very positive and sought out characteristic to be hard working. It also is a fine quality to be friendly. However, when these qualities mix with being laid back and easygoing, combine with looking for good in others, and merge with feelings of being able to "read" others and situations and cause officers to drop their guard when they perceive good in others, this can become—and, in fact, did become—the recipe for disaster. In several cases, it appeared that the officer, looking for good in others, perceived cooperation by the suspect as indicative of a lack of threat. But, all the time, the offender was planning to overpower the officer and escape. In the current study, this became evident in a number of encounters.

Case Review

An officer, seriously assaulted while guarding a prisoner, described the inmate as "a male subject in his thirties who was sitting very quietly and passively in the cell area." After removing the prisoner from the cell and accompanying him to different treatment areas in the hospital, the officer stated:

He never said a word. The only conversation we had was, I gave him commands like go here; do this; stand here; sit here. He complied without saying a word. He was completely cooperative. This is what we would call a model inmate. They do what you want them to do. They're compliant.

I made the assumption that I'm not going to have any problem with this guy.

The prisoner said that the officer was:

A nice guy and I didn't have anything against him personally. He sits me in a chair for about ten to fifteen minutes. He unhandcuffed me so I could get some X-rays. I had been thinking about escape for about twenty days. He then walked me down this hallway and there wasn't no one around, no one, no police or other people. And, it was just me and him. The gun was on my side between me and him where it's easy for me to grab and get a hold of. Once he took the handcuffs off me and walked me around and stuff, I was seeing how things were getting more relaxed and easy to adapt to. You know, to get away, escape, whatever. I went for it. I was going to shoot him and get him out of the way.

Case Review

An officer failed to wait for assistance before attempting to make a misdemeanor arrest. The offender removed the officer's handgun and shot him numerous times. The officer later reported:

I assumed he was nonviolent." When asked to give a further assessment about how he formed this opinion of the offender's dangerousness, the officer replied, "He was considerably smaller than I was. I believe that he was resigned to the fact that he was going to jail. He just kind of looked down, put his head down, and that's when I opened the door and told him to step out, which he did. I didn't feel he was a major threat. I thought I could handle him. I then reached for my cuffs with my left hand. As I was bringing the cuffs out, he raised his right hand back up, kind of raised it up, and said, 'Wait a minute.' I instantly pushed his arm back down, forced it back behind him, and started pushing him more into the truck. Kind of almost simultaneously, he spun around and grabbed for my gun with his left hand. As I saw the attack coming, I grabbed his left hand with both my hands and pushed it back and somewhat turned my hip away to get my gun further away from his hand. As I did that he came around my back with his right hand and just snagged the weapon right out of the holster.

The offender related:

I didn't want to go back to jail if I could help it. I had violated probation in another state. When the officer turned me around, it helped push me to the edge. As I was turning around, I looked and saw his weapon holstered and noticed it was a button-buckle type set up where, to open it, you would have to pull on the button and it would pop off, and you can release the weapon. And, for some reason, I knew in that moment that I could disarm this officer. I unbuttoned the holster and, with my free arm, I reached around him and that's when I pulled his sidearm out from behind him.

Investigators' Comments

The officers' schemas in the situations described above involved seeing those who eventually assaulted them as being essentially nonthreatening or good people. The officers based this perception on either the offenders' compliance or their general appearance. The officers' perception of this quality of goodness was confirmed in their minds when they saw the suspect cooperating. Consequently, the officers allowed their guard to drop because they perceived the person and the situation as less than dangerous. The conviction that this schema is accurate is further fed by the officers' belief that they can accurately read people and situations.

Academy and in-service trainers should assume that recruits possess schemas about the community they serve and the various individuals who comprise it. Their individual schemas may be accurate, inaccurate, partially accurate, or partially inaccurate, but they do exist. Trainers should assume that officers can benefit from having their schemas challenged to ascertain if any would negatively impact their job performance, their partner's safety, or their own safety.

When officers suddenly and without warning must face immediate, critical decisions, their brains respond with dichotomous thinking: do I stand my ground (fight), or do I run from the danger (flight)? *This is where sound, realistic law enforcement training becomes critical and lifesaving.*

Reactions to Trauma and Emergencies

Officers who have the opportunity to learn from high levels of stress that they experience during training benefit in many ways. Functions of the human cortex can influ-

ence the dichotomous thinking that occurs when people react during an emergency situation. If trained properly and prepared mentally, emotionally, and physically to respond adaptively to such emergencies, officers increase the number of options available to them. When training is realistic and engages fight-or-flight mechanisms, officers can become aware of their physical, psychological, and emotional reactions. The more often that officers experience such reactions during training, the more ability they will have to reduce the associated effects of increased heart and blood pressure, to more clearly and accurately appraise the situation, and to react in ways consistent with their training and skills.

Unlike officers who usually receive their training in the safe environment of an academy, offenders usually practice and train on the street. When asked if he had ever been shot before, one offender responded, "Do you mean shot by the police or shot by someone else?" Asked to elaborate, the offender described four separate circumstances during which he was shot: once by the police and three different times by rival gangs members. By the time he was involved in the confrontation with the officer, he had experience in recognizing his own reactions. As he said, "[I could] get my wits about me and decide to stay put and wait for him to come around the building." This seasoned offender effectively overrode his emotional reactions and decided what would be his best and most effective option.

Muting the Effects of Schemas

Psychological and physiological reactions to emergency situations appear to be wired into the human system. Although officers cannot exclude all such reactions, they can learn to recognize them, work with them, and, most important, use them adaptively to their advantage. Knowing that high-arousal and very intense situations can result in perceptual distortions, such as time distortion, tunnel vision, and auditory exclusion, officers can practice special breathing techniques and relaxation exercises to reduce the cognitive and emotional distortions that inevitably occur. Exposure to stressful, anxiety-producing scenarios in training allows officers to learn to reduce stress-related over- or under-reactions. By thus learning to reduce their levels of tension and anxiety, officers can become better able to appraise the entire situation. An officer trained in this way is prepared to avoid focusing solely on only one potential threat; he will scan the envi-

ronment and maintain vigilance in the event that a second or third suspect presents additional danger.

Mental, emotional, and physical preparation makes it possible for officers to consider appropriate options. For example, such training will help them realize when tactical retreats constitute the most intelligent and appropriate reaction. They will recognize, as did several officers who participated in interviews for the current study, the circumstances in which continuing a vehicle or foot chase would place them in too much danger.

The use-of-force continuum can help officers develop appropriate options in a high-stress situation. To decide what level of force to use, officers need to correctly perceive what is occurring in the environment. The appropriateness of their response to a threatening situation will be in direct proportion to the accuracy of their perception of the threat level. Overreacting or under-reacting could not only endanger members of the community but also cost the officers their lives.

In an incident that occurred during a traffic stop for a speeding violation, an officer approached a driver who stated that he did not have his driver's license, insurance papers, or registration. The officer removed the motorist from the vehicle, conducted a pat-down search, and recovered a driver's license from the man's rear pocket. The officer then instructed him to reenter and remain in his vehicle and to try to locate his registration and insurance papers. The officer returned to his police vehicle and began writing a citation when he noticed the motorist standing beside his window. The officer exited his patrol unit and was subsequently assaulted. The offender lied about not possessing a driver's license and did not comply with the officer's order to remain in his vehicle. Should the offender's initial behavior have indicated potential danger?

In another incident, an officer stopped an offender for speeding. The offender told the officer that he lived in another jurisdiction instead of the one displayed on his driver's license. A computer check revealed that the offender had an outstanding traffic warrant. The dispatcher advised the officer that the offender had a history of armed robbery. In further conversations with the officer, the offender stated multiple times, "I can't go to jail today." After discovering illicit drugs in the offender's vehicle, the officer ordered him to place his hands on his vehicle. The offender complied, but not completely. He placed one hand on the vehicle and partially turned around to question the officer. When the officer moved

closer, she was seriously assaulted and sustained life-threatening injuries. Should the information provided by the dispatcher, the statements made by the offender, and the offender's lack of compliance have alerted the officer to the offender's potential resistance to the arrest?

Training and mental and physical preparation can help officers effectively process incoming stimuli, develop appropriate options, and act efficiently and safely. The effects of proper training and mental and physical preparation can be seen in the case of another traffic stop where officers observed that the offender did not immediately pull over. When he finally did, it was in a very dark, deserted area. The offender dipped his right shoulder as if placing or retrieving an item prior to the officers' approach. The offender did not comply with verbal commands given by one of the officers. Both officers were alerted by these behaviors and employed a contact-and-cover approach to the vehicle. When the offender attempted to raise a handgun in the direction of one of the officers, the second officer shot and incapacitated him. The officers correctly recognized the indicators of the potential dangerousness of the situation. As a consequence of their observations and tactics, the officers reacted properly and eliminated the threat with the appropriate amount of necessary force.

How Offenders Perceive Officers

Many offenders mentally prepare themselves for battle. The scenarios that follow are offered from the offenders' perspectives. The investigators neither agree with the offenders' assessments of the officers nor suggest that they are accurate. The offenders' words are presented verbatim. What the investigators found important was the offenders' *perceptions* of their reality, not necessarily because of the accuracy of them but because their perceptions *motivated* their behavior either to attempt to assault or not to attempt to assault the officers.

The first incident portrays an offender who had made up his mind that if confronted by the police, he would engage in gunfire. Because the offender had made this decision, his perception of the officer only slightly affected his behavior. During a foot pursuit, the offender ran around the corner of a building, pulled his handgun, and waited for the officer to appear. The offender later reported:

I wasn't going back to the penitentiary; that was my mind-set. I had made up my mind to use whatever violence I had to. I wasn't going back. It was

going to be either me or you. It was real simple. If it was a situation where I can see an out, I'll squeeze out any kind of way I can get out. If I got to shoot somebody, kill somebody, whatever. If I'm trying to get away, then get out of my way. It's real simple, just take me out. Take me down or I'm going to take you down. That was my mind-set. I run around the corner and I waited on him. He came around the corner, and I shot one time. He hollers, 'Oh,' and then he starts shooting. He starts shooting again; I start shooting again. He went down; I went down with him. I'm shooting at an angle. He's still shooting. I run out of bullets. I pop another clip. He's still shooting. I get up and go back to the hotel.

The offender in another incident described the officer who stopped him for a traffic violation as follows:

He seemed very lax, very bored. He didn't seem like he was keyed in on doing his job. It was just, you know, playing a role, just kind of going along. Because this is the thing he does from 9 to 5 or 7 to 11. It just didn't seem like it was something he really, really wanted to do. He showed very little, if any, enthusiasm that I recall, very little vigor. Like I said, it was just like plodding along. I don't remember observing that he was alert in any way. He, it appeared to me that he approached the vehicle like, 'There's no way this guy's going to do anything other than exactly what I tell him to do. Not because I'm in control of the situation but because it's just the way it is.'

The offender in the next incident used the skills he developed assessing his robbery victims to assess an officer. He advised:

The uniformed officer, his uniform, there were a lot of things about him. Immediately, being an armed robber you have to assess the situation of any armed robbery that you do. So, when I meet a person, maybe it's the con man in me, maybe it's the criminal in me, maybe it's a lot of things, but I assess people, I just do that. His uniform actually looked like it was freshly pressed. That tells you John Wayne syndrome, okay? You've got to look at a guy and see what you're dealing with. I figure this guy is packing a backup piece just simply because of the way he's standing, his stature.

Why Preparation Matters

It is extremely difficult to control one's biological, psychological, and emotional reactions to life-and-death circumstances. But it is even more difficult to do so without adequate, realistic, and prior training—along with proper mental and physical preparation. This kind of training is offered in many high-intensity situations, and it appears to be helpful. Students, for example, are taught how to respond to fire alarms. Research seems to indicate that in real-life situations, the people who perform the best in emergencies are those who have practiced frequently. The leaders in such situations appear to be the people who can override their emotional reactions, evaluate the situation, and respond effectively. In another example, among individuals feeling symptoms that make them think they are experiencing a heart attack, those who remain calm, move slowly, and seek medical assistance have a much greater probability of surviving than those who panic. The panic itself intensifies the symptoms and can result in exacerbating the attack.

Training often determines which persons survive and which ones suffer injury or death. Training that is realistic, repetitive, understandable, and believable potentially reduces the nonadaptive effects of evolution. In preparing for a highly charged emotional event, effective and realistic training can reduce its intensity (levels of arousal), allowing higher cognitive functioning to prevail.

Perception and Effects of Pain

Pain sensation is a complicated neurological and psychological experience.¹⁷ The discussion provided in this section is not intended to oversimplify the experience but, rather, to offer some insight into the intricate processes related to pain to explore some implications for law enforcement training.

The scientific literature pertaining to the study of pain points to several theories that attempt to explain how humans perceive and react to pain. One theory incorporates the three factors discussed above: biology, environment, and psychology. Simplistically stated, according to this theory, the pain stimulus moves from the source of pain (hitting a finger with a hammer) to the brain. The brain then sends this impulse back, resulting in the feeling of pain. Any tear, cut, bruise, or other trauma to the body produces certain hormones that act on pain-sensitive nerve fibers. Interestingly, however, two people who

receive very similar external injuries may respond quite differently. Pain thresholds differ from person to person. The amount of pain—or, in some cases, whether someone actually feels any pain—depends on such aspects as genetic predisposition to pain (number and quality of pain receptors); physical condition; emotional state, including the effects of alcohol and other drugs; and, importantly, concentrated focus of attention.

Psychiatrist John J. Ratey offers an explanation of how elements of biology, environment, and psychology come together to influence the experience of pain. He uses the example of professional boxers to describe the dynamic. When experienced and trained boxers are in the ring and focused on the fight, they often report not feeling the pain of the many hits they receive. However, when the fight has ended, whether they win or lose, boxers begin to feel the pain of the trauma they endured. For these boxers, the actual feeling of pain is delayed because of the combination of physical and mental conditioning; focused attention; and expectation of receiving punches to the head, neck, and torso. It is as if the body has more important matters to be concerned with during the fight and has closed off, if only for a time, feeling pain. Boxers consider it more important to focus on their movements and those of their opponents than to be distracted by pain. Part of the reason that boxers spar when they prepare for a real fight is to feel what it is like to hit and to be hit. They must be trained to take a hard punch and to keep fighting. Untrained and inexperienced boxers often experience shock and pain after being hit, thus causing them to lose focus. Once their focus is lost, defeat frequently follows.¹⁸

One way to understand the process of a delayed feeling of pain is to think back to childhood experiences. During childhood fights, some individuals responded like boxers in that they did not remember the pain of the actual hits received during the fight. It was not because they were trained athletes that predisposed them to blocking out the pain. Their brains, just like a boxer's, needed to focus on the immediate threat. Such a threat puts the body on full alert. The fight-or-flight mechanism engages as the hormones rush through the system. The changes that occur on a neurochemical level, as a result of these hormones racing through the body, affect the way the person perceives an event, encodes it, and then later recalls what occurred. At this point, if the physical and emotional sensations are too great, the system can break down. Even the fight-or-flight mechanism can be

overwhelmed. The result is that the organism freezes, "plays dead," or passes out (e.g., the fear response of some animals and some humans who become motionless during an overwhelmingly frightening experience).

In emergency situations, the organism can react by fight or flight or by completely shutting down. There also are various emotional and physical experiences in the middle of these two extremes that someone in an emergency situation might feel. What follows are statements by officers and offenders that include their descriptions of the felonious assaults. The differences and commonalities in their responses to pain stimuli are noteworthy.

In one incident, an offender shot an officer in the chest and fled the scene on foot. Before the offender could escape, the officer and his partner shot him approximately 10 to 13 times. The offender stated:

I was running and my leg buckled and kind of gave out on me, but I just kept running. You know, your leg buckles, but you're confused and you don't know why. I mean, I figured I was shot then, but there wasn't any pain. I was so nervous and scared that I'm just trying to get away. My mind wasn't on the pain or none of that.

The offender eventually reached a friend's home and recalled his friend's reaction, "He screamed, 'You're bleeding,' and was real hysterical about it and told me to lay down. I laid on the floor because I didn't want to get blood on their furniture." When asked about feeling pain from these multiple wounds, the offender related that he did not experience pain until he arrived at the hospital.

The officer who had been shot in the chest stated:

My first thought after the gun went off is that I might have to go to the hospital and get my chest pumped. I just thought they were apt to crack my chest and go in and get this bullet out and massage my heart. But, when I looked down, I couldn't see the bullet, not the marks anywhere. For a minute there, I just thought it was a bad punch, like he actually punched me and just ran off. But, he couldn't have just punched me though, I'm thinking again because, you know, I went deaf, just went blank. I couldn't hear nothing.

Still unsure about the extent of his injuries, the officer began to pursue the offender and emptied a magazine from his service handgun in an attempt to stop him.

In another incident, an offender attacked several

officers and was shot in the chest six times with .38-caliber service ammunition. One of the officers advised:

The suspect became very agitated. Meanwhile, we find out later on that he's high on heroin, PCP, and cocaine. You name it, and he was doing it all. He was like unstoppable. I started discharging rounds at the suspect. I struck him probably six times. Maybe three times in the face before he went down, and he still tried to get up. I remember running over to the suspect and screaming, 'Stay down,' until he expired on the scene.

In a third incident, an officer was shot six times. He continued, however, to function in spite of receiving these wounds. He drew his service weapon and returned fire. He stated, "I felt no pain at all, and I made the bad guy change from offense to defense. It got him off me and going the other way." The officer's ability to function after having been hit six times prevented the offender from returning and, in the officer's words, "finishing me off."

A highly intoxicated offender who attempted to commit suicide by cop related, "I can remember being shot the first time. Where the rest of the rounds went, I had no idea because I was enraged by them. The mere fact that shooting me was all it took." He recalled thinking at that point, "Now the party's over. Everyone's gonna get it now. And, I just started walking toward them." He went on to say that he neither heard the shots nor felt the pain from four additional .45-caliber gunshot wounds he received. He stated that the bullets felt like bee stings. During the incident, he remained standing until he was arrested, although he did drop his weapon.

In numerous other cases examined for the current study, officers and offenders reported being shot and not feeling pain. However, in the following case, the very misperception of having been shot actually debilitated the offender. The offender, seated in a police transport vehicle, produced a handgun and exchanged gunfire with the transporting officer who had sought cover behind the vehicle. The officer discharged a round that entered the transport vehicle's trunk compartment and lodged in the rear seat that the offender was leaning against. The round penetrated the seat; however, it did not go entirely through. According to the offender, she felt the bullet impact the seat and push her arm. She believed that she had been struck with gunfire and immediately surrendered.

These scenarios indicate that there is no clear way to predict how an offender will react when shot. Law

enforcement training should address and correct the unrealistic expectations and assumptions promoted by Hollywood regarding what occurs when individuals are struck by gunfire.¹⁹ The news media, too, often propagate these misperceptions. In cities throughout the country, it is not unusual for the news media to emphasize—and criticize—the number of rounds that officers fire at offenders. In situations that call for the use of deadly force, however, officers must be willing and able to use the necessary force sufficient to protect themselves and others until the threat is eliminated.

Law enforcement training should reinforce the fact that officers can receive gun shot and other serious wounds yet continue to fight and function and, importantly, survive. This chapter includes many examples where officers who participated in the research for the current study and the *In the Line of Fire* study realized the necessity to use deadly force when confronted by an armed offender. This appropriate use of force enabled the officers to survive the felonious attacks.

Summary and Conclusions

Perception, even under the best circumstances, is a dynamic process. People process stimuli found in the environment on multiple levels before such stimuli become bits of meaningful information. This process

involves the effects of biology, past experiences, current expectations, biases, hopes, and medical and psychological conditions. Most people have encountered humorous, as well as serious, consequences resulting from the differing perceptions of a single event that friends, relatives, and coworkers experienced.

When an emergency arises, the complicated process of perception can result in confusion, fear, and chaos. Experiences, even when recorded on video and reviewed at a later time, can be remembered quite differently from the behaviors actually displayed. Individuals may focus on one important aspect of the emergency and neglect to perceive or recall many other significant or less important details. Auditory exclusion, tunnel vision, and time distortion are all normal biopsychosocial responses to anything that intensely threatens a person's life or livelihood.

Appropriate training can help to mitigate the effects of the biopsychosocial aspects that may lead to misperceptions and false memories. Training that incorporates realistic, timely, believable, and understandable scenarios of officers surviving violent encounters—and narratives of real-life experiences wherein officers survived during dangerous situations—can reduce the degree of misperception and false recollection. Such training can serve to prepare officers for violent encounters and can increase greatly their chances for survival.

Endnotes

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