Criminal Investigative Failures
Avoiding the Pitfalls

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As one of the most commonly depicted characters in novels, films, and television shows, the police detective solves complex criminal investigations through deductive skills, high-tech forensics, specialized computer programs, hard work, and luck. In these fictional accounts, good wins, evil loses, and justice triumphs. But, in the real world, investigations do not always turn out that way. Sometimes, the case stays open, the criminal remains at large, and justice is denied.

Failures in the criminal investigative process can have serious consequences. Unsolved crimes, unsuccessful prosecutions, unpunished offenders, and wrongful convictions bring the criminal justice system into disrepute. In addition, with the cost of some major investigations climbing into the hundreds of thousands, even millions, of dollars, wasted efforts can prove extremely expensive.

Most investigators, however, are competent, dedicated professionals who want to solve their cases and arrest the right people. So, what causes a major crime investigation to fail or a
criminal prosecution to focus on an innocent person? The answer lies primarily in the subtle hazards or traps that can make the process go awry. Some of the brightest scientists, judges, and detectives have fallen victim to these pitfalls. No one is immune. Researchers in the fields of cognitive psychology, forensic statistics, intelligence analysis, law, and the philosophy of science, however, have suggested some possible explanations, often grouping them into the three areas of cognitive biases, probability errors, and organizational traps. Like cascading failures in airplane crashes, an unsuccessful investigation often has more than one contributing cause.

To fully examine these pitfalls, the *FBI Law Enforcement Bulletin* presents this article in two parts. The first covers cognitive biases that can lead to criminal investigative failures and some strategies that can combat their occurrence.

**COGNITIVE BIASES**

*Perception and Memory Limitations*

People do not objectively survey their worlds. Rather, their experiences and expectations influence the decoding of sensory input (imperfect at best). Individuals view the world through different lenses, a filtering process that creates mind-sets. Quick to form but resistant to change, mind-sets, while neither good nor bad, serve a purpose that under certain conditions can become problematic. Because perception is based on both awareness and understanding, humans often perceive what they expect to, thereby making premature conclusions dangerous. Communication becomes doubly subjective as it involves two people. What the speaker means, what that person says, what the listener hears, and how that individual interprets the communication may not be the same. Subjective words, such as *tall, young, likely,* and *dangerous,* have various meanings depending on the situation and the experiences of the speaker and the listener.

What individuals remember depends upon what they believe. The brain does not objectively record data. Instead, memories are subjective interpretations, rarely reinterpreted even when circumstances change. New information becomes assimilated with old, which has more influence on the new than vice versa. Because people tend to remember positives and forget negatives, investigators may become ensnared in belief perseverance wherein they place more weight on evidence that supports their hypothesis than on clues that weaken it. Remaining impartial and open-minded is the best way to accurately assess new information.

Research has shown that people can hold only five to
nine items in their conscious memories at one time. Information stored in long-term memory can be difficult to recall, and investigators may easily forget details irrelevant to their investigative theory, particularly in a complex case. Even if the information later becomes important, it can remain lost because of a failure to develop the neural pathways necessary for retrieval.

Intuition

Most cognitive functioning occurs outside conscious awareness, including perception, information processing, memory, and some methods of decision making. Humans employ two types of decision making, the intuitive and the rational. Intuition falls between the automatic operations of perception and the deliberate processes of reasoning. Often misunderstood, intuition is not a paranormal ability or a form of extrasensory perception. Although it operates at a below-consciousness level, intuition still is based on normal sensory input.

Argentinean race car driver Juan Fangio had an interesting intuitive experience during the 1950 Monaco Grand Prix. Braking as he exited a tunnel instead of maintaining speed for an upcoming straightaway, Fangio, unlike many other drivers, avoided a serious accident that had occurred around the next corner. Why had he braked? After much thought, Fangio figured out what had happened. Spectators invariably watched the race cars roar out of the tunnel, alerted by the echoing thunder of their engines. On the second lap, however, they were looking the other way, watching the accident scene. Fangio had fleetingly observed a change in the color of the area of the stands in his peripheral vision. A normally light section from people’s faces had become dark from the hair on the back of their heads. Fangio, concentrating on his driving, only noticed this change at a below-consciousness level. But, at racing speeds, change meant risk, and Fangio automatically braked. Intuition helped him avoid the accident and win the race.

Automatic and effortless, intuition also is fast and powerful and learned slowly. Because of its implicit nature, intuition is difficult to control or modify, can be influenced by emotion, and often is error prone. Typically, intuition involves the use of heuristics (cognitive shortcuts). By contrast, reasoning is slow and effortful, vulnerable to interference, and easily disrupted. But, it is flexible and controllable and can overrule intuition.

Different situations require different types of judgment. With unreliable and incomplete data or under chaotic and uncertain conditions, intuitive decision making is preferable. Such situations occur in street policing or on the military battlefield. However, individuals certainly do not intuitively fill out their income tax returns. Therefore, with reliable and adequate data and time for proper analysis, reasoning produces the best results. Complex and rule-bound tasks, such as major investigations or courtroom prosecutions, require careful analysis and sound logic.

Heuristics and Biases

Clear and rational thinking does not come easily. People sometimes exhibit limited rationality in the face of life’s complexities because the brain is not wired to deal effectively with uncertainty. Individuals, therefore, employ
heuristics—rules of thumb that substitute simple questions for more complex ones—that typically operate at an intuitive level and work well most of the time. Under certain conditions, however, heuristics can lead to cognitive biases, mental errors resulting from simplified information processing. Like optical illusions, cognitive biases are consistent and predictable and can result in distorted judgments and faulty analyses. To add to the problem, research has shown a poor correlation between confidence and accuracy. Past a certain point, increased information leads to greater confidence in the analyses but not necessarily greater accuracy.

Psychological researchers have identified many heuristics and biases. Some of these can prove particularly problematic for criminal investigators.

*Anchoring*

The anchoring heuristic refers to the strong influence of the starting point or first approximation on the final estimate. The prevailing situation and the information available at the time determine the first approximation. Limited or incorrect data will skew the starting point, jeopardizing the path to a correct conclusion. Unfortunately, many murder cases first appear to be something other than what they are.

*Tunnel Vision and Satisficing*

Tunnel vision (or incrementalism) develops from a narrow focus on a limited range of alternatives. “It results in the [police] officer becoming so focused upon an individual or incident that no other person or incident registers in the officer’s thoughts. Thus, tunnel vision can result in the elimination of other suspects who should be investigated. Equally, events that could lead to other suspects are eliminated from the officer’s thinking.” Satisficing is the selection of the first alternative that appears good enough. These heuristics might work well for simple errands, such as buying a hammer, but they are ill suited to the task of solving complex investigations.

The murder of an attractive 23-year-old female whose 2-year-old son was the only witness can illustrate these hazards. Detectives received a tip regarding a man who, for the next year, became their investigative focus. After a covert operation to obtain further incriminating information, they finally arrested him. At the trial, the judge quickly threw out most of the prosecution’s evidence, calling the covert operation misconceived. The charges were withdrawn, and the man was released. One detective later commented, “Maybe the team got an idée fixe. Maybe they got stuck thinking it had to be [him]. No one dared to challenge that thinking until it got to the judge. But, it’s a terrible mess.” Several years later, enhanced DNA from the victim’s clothing pointed toward a psychopath now detained indefinitely in a secure hospital.

*Availability*

Availability refers to the ease by which previous examples come to mind. People make judgments based only on what they remember, not on the totality of their experiences. They can recall recent and vivid events easily but find disagreeable events difficult to remember. Individuals use the availability heuristic for determining how common or likely something is. Limited experience, therefore, can result
in incorrect estimates of likelihood. The availability heuristic proves particularly problematic in investigations of rare crimes, such as child sex homicides.

Framing

The presentation of information influences its interpretation. Called framing, this implies that information always is understood within a context. An artificial or inappropriate context, however, can distort understanding. Dramatic examples of framing often take place in the courtroom, where opposing counsel present and argue variant positions on the particular events in dispute.

Representativeness

People often estimate the likelihood of an event by recalling a comparable incident and assuming the likelihood of the two are similar. This representativeness heuristic is partly prompted by the urge to categorize everything. Similarity in one aspect, however, does not imply similarity in others. For many years, Ted Bundy and his crimes drove the public's image of the typical serial killer case—sexual murders of women committed by an intelligent and mobile white male. But, not all serial murders are sex driven, and not all victims are female. Many serial murderers are nonwhite and below average in intelligence, and most commit their crimes within their home metropolitan area.

Cause and Effect Biases

Perceptions of cause and effect are susceptible to several mental biases. Crime linkage could be undermined if an investigator fails to differentiate internal (psychological) from external (situational) causes of behavior when examining offender modus operandi. The level of force used by a rapist, for example, may be contingent on the degree of victim resistance.

The identity fallacy holds that big events must have big causes. Conspiracy theories often are rooted in this belief. Many have found it difficult to accept that a loner like Lee Harvey Oswald, using a $21.45 rifle ($12.78 for the rifle plus the cost of the scope), could assassinate John F. Kennedy, the president of the most powerful nation in the world. Instead, it remains more psychologically comfortable to believe in complicated conspiracy theories.

Illusory correlations can prove misleading on several levels. Events may appear correlated when, in fact, they are not. And, even if they are connected, correlation does not always equal causation. The relationship may be spurious or caused by an intervening event. For instance, in a series of burglary rapes on the south side of a city, police theorized that the offender stalked his victims from a local supermarket where all of the women had shopped. However, this supermarket, the only one in the city, was so large that most people living in the area had gone there. Living on the south side, therefore, influenced both shopping and victimization patterns. There was no direct connection between the two, and their relationship was strictly spurious. As it turned out, the offender found his victims by prowling residential neighborhoods at night, looking through windows for women living alone.

Biases in Evaluation of Evidence

Problems with physical evidence usually result from misinterpretation, not from the
actual analysis. A police shooting in Alexandria, Egypt, after the First World War provides an intriguing example that also illustrates the risk of ignoring context. During a foot pursuit, a police officer shot a robber who refused to halt (permissible under the law at the time). The criminal escaped but was later found dead. The officer stated he had fired only once. During the postmortem examination, however, the local doctor discovered two bullet wounds, one entering the front of the robber’s left thigh and still lodged in the leg muscle, and the other entering the back and exiting the abdomen. The doctor concluded, “He was shot twice... First from the front at rather long range, secondly in the back—probably after he had fallen on his face.” Based on these findings, the officer was arrested and charged with murder. Fortunately, Sir Sydney Smith, the famous professor of forensic medicine, examined the robber’s clothing and considered context—the influence of body position and posture. The officer had told the truth. The single shot had entered the robber’s back, penetrated his torso, exited his abdomen, and entered his front thigh, which was lifted high while he was running. Smith tested his theory by reconstructing the shooting using a dummy and the robber’s clothing and later confirmed it by exhuming the subject’s body. This represents a classic case of interpretation error involving physical evidence.

Confirmation (or verification) bias constitutes a type of selective thinking whereby individuals notice or search for evidence that confirms their theory while ignoring or refusing to look for contradicting information. Efforts to only verify and not falsify a hypothesis often fail. After all, a single item of refuting data (e.g., DNA exclusion) can outweigh a mass of evidence against a suspect. The components of confirmation bias include failure to seek evidence (e.g., a suspect’s alibi) that would disprove the theory, failure to use such information if found, failure to consider alternative hypotheses, and failure to evaluate evidence diagnosticity.

Sometimes, data that appears to support one theory (or suspect) actually has little diagnostic value because it also equally applies to other theories (or suspects). For example, during the trial of a man accused of murdering a 9-year-old neighbor, the prosecutor suggested that his failure to attend the child’s funeral was evidence of consciousness of guilt. Defense counsel argued that his attendance could just as easily been adduced as indicative of guilt because detectives typically try to identify those who attend a murder victim’s

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**Strategies to Help Avoid Investigative Failures**

- Ensure managerial awareness of these problems through case study-based training.
- Encourage an atmosphere of open inquiry, ensuring investigative managers remain impartial and neutral.
- If possible, defer reaching conclusions until sufficient data has been collected.
- Consider different perspectives and encourage cross-fertilization of ideas, thereby avoiding tunnel vision.
- Organize brainstorming sessions and seek creativity, rather than consensus.
- Ensure that investigative managers willingly accept objections, doubts, and criticisms from team members.
funeral in the hope that the killer shows up. The man was convicted but later exonerated through DNA testing. A public inquiry found that the man’s “failure to attend the funeral or funeral home was worthless evidence and ought not be have been admitted.... The leading of this evidence demonstrated that the prosecution sought to squeeze every drop out of the information available to them, to support their case.” In other words, the evidence had no diagnostically.

Studies have shown vivid information has more influence than abstract data. Personal accounts carry more weight than statistical information, even though the latter is compiled from many personal accounts. The vividness of eyewitness descriptions often overwhelms other information. For instance, authorities have pursued major investigations based on graphic allegations from “victims” of organized satanic cults and “eyewitnesses” seeking attention.

Investigators often fail to account for the absence of evidence, something that can prove quite important under certain circumstances. In Sir Arthur Conan Doyle’s Silver Blaze, Inspector Gregory asks Sherlock Holmes, “Is there any point to which you would wish to draw my attention?” Holmes replies, “To the curious incident of the dog in the nighttime.” Gregory says, “The dog did nothing in the nighttime.” Holmes responds, “That was the curious incident.” Holmes meant that the dog would have barked at a stranger. Because he did not, the culprit was likely a member of the household.

Finally, impressions remain even after the initial evidence they were based on is discounted. Often termed the “curse of knowledge,” this can lead to contrived theories that people cling to in the face of no evidence to support them. Such convoluted ideas violate Occam’s razor, also known as the “Principle of Parsimony.” It states that when more than one possible explanation exists for an event, it is best to choose the simplest (i.e., the one with the fewest assumptions) and to avoid making the situation more complicated than necessary. Investigators should adopt Occam’s razor, an important guiding principle in science, to their profession. Complex theories make for interesting mystery novels but have limited value in the real world.

**CONCLUSION**

“I’m not sure I agree with you 100 percent on your police work, there, Lou.” Perhaps, real investigators can learn from fictional ones who rarely jump to conclusions. While often a plot device to help heighten suspense, the identity of the offender becomes known only at the end of the story. This offers the important lesson of keeping all options open. After all, the wrong mind-set and a limited organizational approach undermines the potential benefits of advanced forensic techniques, comprehensive criminal databases, and highly skilled police personnel. By recognizing cognitive biases and employing strategies to counter their influence, law enforcement agencies can take steps to avoid investigative failures.

Part two of this article will focus on probability errors and organizational traps. It also will offer recommendations and additional strategies for avoiding these hazards.

**Endnotes**

1 For interesting examples of change blindness in visual perception, see J.K. O’Regan and A. Noé, *Experience Is Not Something We Feel but Something We Do: A Principled Way of Explaining Sensory Phenomenology, with Change Blindness and Other Empirical Consequences,*
The vividness of eyewitness descriptions often overwhelms other information.

Over the course of his 21-year policing career, the author worked assignments in organized crime intelligence, emergency response, patrol, and crime prevention. His interest in the subject of criminal investigative failures originates from various unsolved major crime cases for which he has consulted. Currently, he is working on a book on the topic. He thanks those detectives who willingly discussed what went wrong in their investigations and dedicates this article to them.
Part one of this article focused on cognitive biases and how they can contribute to criminal investigative failures. Part two presents probability errors and organizational traps that can lead investigations astray. It also offers recommendations and additional strategies that investigators may find helpful.

**PROBABILITY ERRORS**

**Probability and Psychology**

Anyone who has spent a few hours watching people gamble will realize that probability is a difficult concept for the human mind. Individuals often use heuristics—and suffer from biases—when dealing with probability. Police officers find it particularly hard to think probabilistically. Because of their street experiences, they prefer black and white, rather than shades of gray. Probability errors in criminal justice most often occur in the forensic sciences but also can happen in criminal profiling.

_Coincidences and the Law of Small Numbers_

A common problem with probability results from looking for patterns in, or drawing inferences from, a small number of incidents. For example, an analyst examines the dates for a series of 15 street robberies and observes that none of the crimes occurred on a Thursday. Is this pattern meaningful? Probably not. With only 15 crimes, chances are at least one day of the week will be free of robberies.

Skeptics often say they do not believe in coincidences. However, when looking for patterns within large numbers of items (i.e., events, suspects), coincidences are inevitable.
The comparison of Presidents Kennedy and Lincoln provides a well-known example. The list of remarkable similarities is strictly the product of chance (with 43 U.S. presidents, 903 possible comparisons are possible) and cherry picking (noting similarities, while ignoring differences).

What role does coincidence play in major crime investigations? If enough suspects are looked at, by sheer chance, some will circumstantially appear guilty. A few people will just be in the wrong place at the wrong time. Efforts to solve a crime by “working backwards” (i.e., from the suspect to the crime, rather than from the crime to the suspect) are susceptible to errors of coincidence. If you look hard enough, you can usually find some sort of connection. These types of errors often are seen in the proffered “solutions” to such famous cases as Jack the Ripper.

Coincidences can be a trap when offender modus operandi and similar fact evidence are used for crime linkage purposes. Trawl search problems occur when only similarities, and not differences, are examined. Comparisons of common similarities (e.g., vaginal intercourse in rape crimes) lack utility, while misspecifications of similarities can be misleading. Consider two juvenile murder strangulations involving body transportation and concealment.

While the similar crime characteristics suggest a link, more detailed examination reveals important inconsistencies. One victim was a 3-year-old male, manually strangled, his body found in a dumpster 100 yards from his house. The other victim was a 14-year-old female, strangled with a rope, her body found dumped in a river 20 miles from her home.

**Double Counting**

Extracting two elements of a crime from a common source and then erroneously treating them as separate aspects can mislead a criminal investigation. A rumor heard from more than one person does not necessarily verify the information as both individuals may have received it from the same source. Consider a behavioral profile of a child murderer. Amongst other details, the profile estimates the offender’s age and his vehicle type, derived from automobile insurance data. Using the profile, investigators evaluate two suspects—one matches both the age and vehicle criteria, and the other only the age. Who is the better suspect vis-à-vis the profile? Actually, they are equal. Derived from the age estimate, the vehicle type is not an independent profile element drawn from the crime scene (as opposed to a vehicle sighting by a witness). Treating age and vehicle type as two separate match points constitutes double counting.

**Conjunction Fallacy**

The conjunction fallacy occurs when investigators assign a higher probability to the

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overlap of two events than to either event separately. Probabilities are combined by multiplying them together, resulting in a product smaller than either initial probability (given noncertainty).\(^2\) Conjunction fallacies have occurred in DNA matching, offense-linkage analysis, and crime forecasting.\(^3\) Imagine that a witness reports seeing a vehicle flee a nighttime gas station robbery in which the clerk was shot dead. He states that he had only a quick glimpse but is reasonably sure the vehicle was a gray domestic minivan. How much weight should be placed on this description?

This question has two parts. First, what is the probability the witness actually saw the offender’s vehicle? In major crime cases, especially those involving significant publicity, the public’s desire to help or become involved is high, but their information often proves unreliable. A generous assumption gives the witness a 75 percent chance of actually having seen the robber’s vehicle. Second, how accurate is his vehicle description? The witness provides three descriptive elements. Assigning witness accuracy probabilities of 70 percent to the make, 90 percent to the type, and 60 percent to the color (under some streetlights, blue looks gray) puts the likelihood that the witness saw a gray American-made minivan at only 38 percent. The probability that the offender was driving such a vehicle is only 28 percent (the probability the witness actually saw the vehicle times the probability of witness accuracy). This does not mean his information is not valuable. Obviously, suspect vehicles that are gray domestic vans should be prioritized and investigated. The problem only occurs when other suspect vehicles (e.g., blue imported SUVs) are ignored.

**Errors of Thinking**

Research has identified two errors related to the issue of probability within the court context, the prosecutor’s fallacy and the defense attorney’s fallacy.\(^5\) The prosecutor’s fallacy occurs when people equate the probability of the evidence given guilt with the probability of guilt given the evidence. Put simply, while all cows are four-legged animals, not all four-legged animals are cows. This error (known as transposing the conditional) can occur in both forensic science and behavioral profiling. This is illustrated by the investigation into two bomb explosions that killed 21 people and injured 182.\(^6\) Police officers detained a group of men traveling to a funeral and had their hands examined for traces of nitroglycerine. A forensic scientist testified at their trial that he was “99 percent certain” the proportions of 16, 20, and 20 percent, and female offender proportions of 9, 10, and 16 percent. According to the 2000 census, the U.S. population is 75 percent white and 49 percent male. So, while disproportionately male, the only reason most serial killers in the United States are white is because most of the population is white. More important, all else being equal, serial killers are less likely to be white in predominantly black or Hispanic areas.

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**A lack of understanding of base rates can lead to misinterpreting research findings and forensic results.**

**Base Rates**

A lack of understanding of base rates can lead to misinterpreting research findings and forensic results.\(^4\) Consider the oft-quoted fact, “Serial killers are usually white males.” While technically correct, at least for the United States, this statement is incomplete. To understand it properly, the relevant base rates also must be considered. Three different studies of serial murderers found black offender
defendants had handled explosives. It was later disclosed, however, that many other substances could produce positive test results, including nitrocellulose found in paint, lacquer, playing cards, soil, gasoline, cigarettes, and soap. The defendants had played a game of cards on the train shortly before their arrest. Their convictions were overturned on appeal, partly as a result of the forensic evidence being discredited because the scientist had transposed the conditional.

The defense attorney's fallacy occurs when evidence is considered in isolation, rather than in totality. This type of error happened during O. J. Simpson's preliminary hearing. The prosecution presented evidence that blood from the murder scene, when analyzed using conventional grouping techniques, matched the accused, with characteristics shared by 1 in 400 people. The defense argued that an entire football stadium could be filled with people in Los Angeles who also would match; therefore, the evidence was useless. While the first part of the defense argument regarding the number of matches is correct, only a limited number of those people had relationships with the victims and even fewer had any reason for wanting to kill them. The probability of an individual filling all three categories (equal to the individual probabilities multiplied together) is very low. Consequently, the second part of the argument—that the evidence is useless—is incorrect.

**ORGANIZATIONAL TRAPS**

**Inertia, Momentum, and Roller Coasters**

Conservative in nature, law enforcement agencies can suffer from bureaucratic inertia, a lethargy or unwillingness to change, evolve, or act. Change is disruptive and requires effort, energy, time, and money. Most departments, however, have many competing demands with few, if any, spare resources. Inertia can slow an agency's response to a new crime problem, as the Green River Killer case demonstrated. Police admitted that they had no idea what they were getting into when they began their investigation, which took 20 years to complete.

Organizational momentum, the inability to change direction in the midst of a major investigation, is the converse problem. To redirect and shift its focus from an established theory of a crime or a particular suspect is particularly difficult when an agency has to admit publicly that the original direction was wrong. But, staying the course in light of compelling evidence pointing in a new direction can prove catastrophic. Police must strike a balance between stability and responsiveness. The mistaken witness report of a suspect white van in the sniper attacks in the Washington, D.C., area serves as an example. "It begs the question, did we publish composite pictures because witnesses saw the white van, or did we see the white van because we published the pictures? We should've paid more attention to the description of the Caprice and given it as much credibility as the van, but we didn't. In hindsight, it was a mistake made in the emotion of the moment. But, with all that we had set in place, we should've done better."  

Detectives working high-pressure murder cases often refer to investigative roller coasters, the ups and downs resulting from the pursuit of prime suspects. A problem can occur if suspect "Jones" emerges during the investigation of prime suspect "Smith." Investigators
typically see the viability of a new suspect relative to existing ones, so if Smith is the best current suspect, then Jones is relegated to a secondary status. When Smith is cleared, what happens to Jones? At best, Jones stays a secondary suspect; at worst, he will be overlooked altogether. Often discovered in cold case murder investigations, such suspects are obvious to the fresh eyes of new observers not subject to the psychological and organizational pressures that may have affected the original investigators.

Red Herrings and Rumors

In high-profile cases, the constant media attention brings forth a flood of public information, some of it relevant, most of it not. During the 3 weeks of the Washington, D.C., sniper case, for example, authorities received 100,000 calls, and more than 500 investigators pursued 16,000 leads. In such situations, the police run the risk of landing a red herring. Witness misinformation, compounded by organizational reluctance to accept that the witness may be wrong, has sent several high-profile investigations down the wrong path.

Suspect vehicle sightings appear particularly problematic and include several infamous examples, such as the white box truck/van seen so often during the sniper shootings in the Washington, D.C., area (the shooters drove a blue sedan). In addition, some red herrings can result from mischief or greed. During the Yorkshire Ripper inquiry in England, investigators received three letters and a cassette tape from a person claiming to be the killer. Experts analyzed the voice on the tape and concluded that the speaker likely came from the same area postmarked on the letters. The tape was not from the killer, however, and the focus on this location—75 miles north of where the real offender lived—hurt the investigation.

In major cases, particularly those involving large numbers of personnel and extending over long periods of time, internal rumors can pose a significant problem. A solidified rumor is gossip that has hardened into “fact” and taken as such by the investigative team. Most vulnerable are detectives who later join a prolonged investigation and, therefore, receive most of their information secondhand.

Investigators need to outline their assumptions. If an assumption later turns out to be invalid, then everything following from it must be rethought. As the human mind does not automatically reevaluate information, specific organizational procedures must be established to address this issue. Documenting assumptions facilitates this process and protects investigations from “creeping credibility,” which occurs when an idea or theory gains credence from the passing of time, rather than from supporting evidence. A possibility hardens into a probability and then crystallizes into “certain fact.”

Investigation teams must understand their knowledge base. They can assess validity only if they know the data source. Otherwise, the information may be a solidified rumor or the product of creeping credibility. Some teams catalogue case information using three factors that can facilitate effective information sharing, allowing everyone (both present and future) to work from the same foundation.

1) What they know (facts).
2) What they think they know (theories or conjectures).
3) What they would like to know (key issues requiring additional data).
Ego and Fatigue

Ego, both personal and organizational, can prevent an investigator from adjusting to new information or seeking alternative avenues of exploration. For example, a homicide sergeant in a large metropolitan area told the author that his detectives could decide within 5 minutes of arriving at a crime scene who had committed the murder and would be correct 95 percent of the time. While impressive, the remaining 5 percent equates to more than one missed call every month. Therefore, detectives must have the flexibility to admit their mistakes and avoid falling into the ego trap inherent in usually being right. Stubbornness often coincides with ego and proves equally problematic.

Fatigue, overwork, and stress, all endemic in high-profile crime investigations, also can create problems for police personnel. Research has shown that sleep can significantly improve insightfulness.14 “It’s necessary to be slightly underemployed if you are to do something significant.”15 Tiredness dulls even sharp minds. Critical assessment abilities drop in overworked and fatigued individuals, who start to engage in what has been termed “automatic believing.”

Groupthink

Groupthink, the reluctance to think critically and challenge the dominant theory, occurs in highly cohesive groups under pressure to make important decisions. First suggested after the disastrous Bay of Pigs invasion in Cuba,16 the main symptoms of groupthink include three fundamental aspects.

1) Power overestimation: belief in the group’s invulnerability (resulting in unwarranted optimism and risk taking); and belief in the morality of the group’s purpose (leading to ignoring the ethical consequences of decisions).

2) Close-mindedness: group rationalizations; discrediting of warning signs; and negative stereotyping of the group’s opponents (e.g., evil or stupid).

3) Uniformity pressures: conformity pressures (those who disagree with the dominant views or decisions are seen as disloyal); self-censorship (the withholding of dissenting views and counterarguments); shared illusions of unanimity (silence is perceived as consent, and an incorrect belief exists that everyone agrees with the group’s decision); and self-appointed mind guards (individuals who elect to shield the group from dissenting information).

Groupthink has several negative outcomes that spell disaster for a major investigation. Victims of this trap selectively gather information and fail to seek expert opinions.17 They
neglect to critically assess their ideas and examine few alternatives, if any, and do not develop contingency plans.

RECOMMENDATIONS

Police investigations can significantly benefit from the thoughts and opinions of independent experts. The British Home Office, frustrated over the lack of progress in the Yorkshire Ripper murder inquiry, formed an external review committee that included a civilian forensic scientist who studied the locations and times of the crimes and correctly concluded where the killer lived (despite the misleading letters and cassette tape mentioned earlier).  

Outside review also can play an important role. Police procedures in the United Kingdom require an independent review of unsolved homicide cases after 1 year. This produces two results. First, knowledge of this policy prompts detectives to leave no possibilities unexplored. Second, external reviewers are more apt to notice mistakes and omissions. This is the same basis as scholarly peer review, a foundation of scientific research.

As a final warning, research has suggested that even when individuals are aware of these problems, they still find them difficult to overcome. The dangers are especially great in high-profile cases of horrific crimes, such as sex or child murders.

Prosecutors and judges, as well as police officers, can fall prey to these traps. Training is an important first step, but insufficient by itself. Effort and vigilance also are required. Law enforcement agencies need to create formal organizational mechanisms to prevent these subtle hazards from derailing criminal investigations.

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CONCLUSION

Thankfully, most criminals are not masterminds, and, in many cases, the criminal investigation is a straightforward process. However, a major crime “whodunit” can be challenging and difficult. Certain factors identified with cognitive and organizational failures (low information levels, limited resources, and pressure to obtain quick results) are all too common in these investigations.

The criminal investigation process plays an important and special role in countries governed by the rule of law. Its function is to seek the truth, "without fear or favor." That task, integral to both public safety and justice concerns, must be conducted in an unbiased and professional manner. When it is not, the result is unsolved crimes, unapprehended offenders, and wrongful convictions. Understanding what can go wrong is the first step toward preventing a criminal investigative failure. +

Endnotes

2 There is an assumption of indepedence of events.
5 Supra note 4 (Robertson and Vignaux).
6 Supra note 4 (Robertson and Vignaux); and B. Wolffinden, Miscarriages of Justice (London, England: Hodder and Stoughton, 1988).
7 Supra note 4 (Robertson and Vignaux).
10 Ibid.


13 Studies of rumor propagation have shown that as a rumor spreads, its dramatic components are exaggerated, while its qualifiers diminish or disappear altogether; see, T. Shibutani, *Improvised News: A Sociological Study of Rumor* (Indianapolis, IN: Bobbs-Merrill, 1966).


15 Dr. James Watson, Nobel Laureate in Medicine and codiscoverer of DNA’s molecular structure, commenting on the importance of unstructured time in thinking.

16 Yale research psychologist Irving Janis.


19 While many other factors are involved, it is perhaps worth noting that homicide clearance rates in the United Kingdom are over 90 percent compared with 63 percent in the United States.


22 P. Stefox and K. Pease, “Cognition and Detection: Reluctant Bedfellows?”


For example, the Vancouver, British Columbia, Police Department assigned a deputy chief constable to review thoroughly what happened, as well as what failed to happen, after a problematic serial murder case.

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**Snap Shot**

**Call of the Wild**

The sound of sirens at the scene of an accident attracted and confused two coyotes.

Photos submitted by Peter A Marchica, III and taken in Joshua Tree, California.

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