*“A good investigator needs to be conscious of his or her own thinking, and that thinking needs to be an intentional process.”*

It is too bad we can not just provide you with a basic template to follow every time you needed to conduct a criminal investigation; but it is not that simple. Criminal investigations can be imprecise undertakings, often performed in reaction to unpredictable and still-evolving events with incomplete information to guide the process. As such, it is impossible to teach or learn a precise methodology that can be applied in every case. Still, there are important concepts, legal rules, and processes that must be respected in every investigation. This book outlines these concepts, rules, and processes with the goal of providing practical tools to ensure successful investigative processes and investigative practices. Most importantly, this book informs you on how to approach the investigative process using “investigative thinking.” In this first chapter, we set the foundation for the book by calling attention to five important topics:

1. Criminal investigation as a thinking process
2. The need to think through the process
3. Towards modern-day investigation
4. The path to becoming an investigator
5. Understanding the investigative mind

**Topic 1: Criminal Investigation as a Thinking Process**

Criminal investigation is a multi-faceted, problem-solving challenge. Arriving at the scene of a crime, an officer is often required to rapidly make critical decisions, sometimes involving life and death, based on limited information in a dynamic environment of active and still evolving events. After a criminal event is over, the investigator is expected to preserve the crime scene, collect the evidence, and devise an investigative plan that will lead to the forming of reasonable grounds to identify and arrest the person or persons responsible for the crime. To meet these challenges, police investigators, through training and experience, learn investigative processes to develop investigative plans and prioritize responses.

In this book, these investigative responses, information analyses, and plan-making skills are broken out using illustrations of both tactical and strategic investigative thinking. The aim of the book is to guide you into the structured practices of tactical investigative response and strategic investigative thinking.

Criminal investigation is not just a set of task skills, it is equally a set of thinking skills. To become an effective investigator, these skills need to be consciously understood and developed to the point where they are deliberately engaged to work through the problem-solving process that is criminal investigation. Trained thinking and response can be difficult to adapt into our personal repertoires because we are all conditioned to be much less formal and less evidence driven in our everyday thinking. Still, as human beings, we are all born investigators of sorts. As Taber (2006) pointed out in his book, *Beyond Constructivism*, people constantly construct knowledge, and, in our daily lives, we function in a perpetual state of assessing the information that is presented to us. Interpreting the perceptions of what we see and what we hear allows us reach conclusions about the world around us (Taber, 2006). Some people are critically analytical and want to see evidence to confirm their beliefs, while others are prepared to accept information at face value until they are presented facts that disprove their previously held beliefs. Either strategy is generally acceptable for ordinary people in their everyday lives.

**Topic 2: The Need to Think Through the Process**

Diametrically opposing the analysis processes of everyday people, in the role of a police investigator, the process of discovering, interpreting, and determining the validity of information is different and this difference is critical. As an investigator, it is no longer sufficient to use the strategies that ordinary people use every day. Instead, it is incumbent on investigators to critically assess all the information they encounter because every investigation is an accountable process in which the investigator is not just making a determination about the validity and truth of the information for personal confirmation of a belief. Rather, the police investigator is responsible and empowered under the law to make determinations that could significantly affect the lives of those being investigated as well as the victims of crime.

The investigator’s interpretation of information and evidence commonly requires answers to many questions that can lead critical of decisions, actions, and outcomes, such as:

* What must be done to protect the life and safety of persons?
* Should force, up to and including deadly force, be used to resolve a situation?
* Who will become the focus or subject of a criminal investigation?
* What is the best plan to apprehend the person or persons responsible for a criminal act?
* Will someone be subjected to a search of their person or of their home?
* Will someone be subjected to detention or arrest and questioning for a criminal act?
* Will someone have a criminal charge sworn against them?
* Will someone be subjected to a criminal trial?
* Will someone’s liberty as a free person be at risk?
* Will justice be served?
* Will the community be protected?

Significant to these possible outcomes, the investigator must always be ready to explain their thinking and actions to the court. For example, when an investigator is asked by a court, “How did you reach that conclusion to take your chosen course of action?” an investigator must be able to articulate their thinking process and lay out the facts and evidence that were considered to reach their conclusions and form the reasonable grounds for their actions and their investigative decision-making process. For an investigator speaking to the court, this process needs to be clear and validated through the articulation of evidence-based thinking and legally justifiable action. Thinking must illustrate an evidence-based path to forming reasonable grounds for belief and subsequent action. Thinking must also demonstrate consideration of the statutory law and case law relevant to the matter being investigated.

Considering this accountability to outcomes, it is essential for police investigators to have both the task skills and the thinking skills to collect and analyze evidence at a level that will be acceptable to the criminal justice system. Investigation is the collection and analysis of evidence. To be acceptable to the court, it must be done in a structured way that abides by the legal rules and the appropriate processes of evidence collection. Additionally, it must be a process the investigator has documented and can recall and articulate in detail to demonstrate the validity of the investigation.

Obviously, it is not possible for someone to remain in a constant state of vigilance where they are always critically assessing, documenting, and determining the validity of every piece of information they encounter. However, when on duty, it is frequently necessary for a police investigator to do this. For a police investigator, this needs to be a conscious process of being mentally engaged and “switched on” to a more vigilant level of information collection, assessment, and validation while on duty. A police investigator must master this higher and more accountable level of analytical thinking for both tactical and strategic investigative response. The “switched on” police investigator must:

* Respond appropriately to situations where they must protect the life and safety of persons
* Gather the maximum available evidence and information from people and locations
* Recognize the possible offence or offences being depicted by the fact pattern
* Preserve and document all evidence and information
* Critically analyze all available information and evidence
* Develop an effective investigative plan
* Strategically act by developing reasonable grounds to either identify and arrest those responsible for criminal acts, or to eliminate those who are wrongfully suspected

Most traditional police training provides new officers with many hours of instruction in the task skills of investigation. However, the learning of investigative thinking skills is expected to develop through field experience, learning from mistakes, and on the job mentoring. This learning does not always happen effectively, and the public expectations of the justice system are evolving in a model where there is little tolerance for a mistake-based learning.

The criminal investigation of serious crimes has always drawn a substantial level of interest, concern, and even apprehensive fascination from the public, the media, and the justice system. Police actions and investigations have been chronicled and dissected by commissions of inquiry and the media.  From the crimes of the serial killers like Paul Bernardo (Campbell, 1996), and Robert Pickton (Oppal, 2013) to the historical wrongful convictions of David Milgaard (MacCallum, 2008) and Guy Paul Morin (Kaufman, 1998), true life crimes are scrutinized and the investigations of those crimes are examined and critically assessed.

When critiquing past investigations, the same types of questions are frequently asked:

* Is it possible that the wrong person was arrested or convicted?
* Is it possible that other persons were involved?
* Were all the possible suspects properly eliminated?
* Was information properly shared among police agencies?
* Did the investigators miss something?
* Was all the evidence found?
* Was the evidence properly interpreted?
* Were the investigative theories properly developed and followed to the correct conclusion?
* Was tunnel vision happening and misdirecting the investigation?

Today, transparency throughout the criminal justice system and public disclosure of evidence through investigative media reports make it much easier for the public and the media to examine the investigative process. Public and media access to information about police investigative techniques and forensic tools has created an audience that is more familiar and sophisticated about police work. The ability of both social and traditional media to allow public debate has created a societal awareness where a higher standard for the investigation of serious crimes is now an expectation.

One only needs to look at the historical and contemporary judicial reviews and public inquiries to appreciate that there is an expectation for police investigators and police organizations to maintain and demonstrate a high level of competency. In a judicial review, it is often too late if an investigator discovers that they have pursued the wrong theory or they have failed to analyze a piece of critical information or evidence. These situations can be career-altering or even career-ending. A good investigator needs to be conscious of his or her-own thinking, and that thinking needs to be an intentional process.

**Topic 3: Towards Modern-Day Investigation**

Today, criminal investigation is a broad term encompassing a wide range of specialities that aim to determine how events occurred, and to establish an evidence-based fact pattern to prove the guilt or innocence of an accused person in a criminal event. In some cases, where a person is found committing the criminal act and apprehended at the scene, the criminal investigation is not a complex undertaking. However, in cases where the criminal event is discovered after the fact, or when the culprit is not readily apparent, the process of criminal investigation becomes more complex and protracted.

Although in both cases the criminal investigator must follow practices of identifying, collecting, recording, and preserving evidence; in the case of the unknown suspect, additional thinking skills of analysis, theory development, and validation of facts must be put to work.

The craft of criminal investigation has been evolving since the birth of modern policing in the mid-1700s when the Chief Magistrate of Bow Street, Henry Fielding, organized a group of volunteer plainclothes citizens and tasked them to attend the scenes of criminal events and investigate crimes. This group became known as the Bow Street Runners. Their existence speaks to an early recognition that attending a crime scene to gather information was a timely and effective strategy to discover the truth of what happened (Hitchcock, 2015).

From these early investigators, one of the first significant cases using forensic evidence-based investigation was recorded. To summarize the account by McCrery (2013) in his book *Silent Witness*; in one notable recorded case in 1784, the Bow Street Runners removed a torn piece of paper wadding from a bullet wound in the head of a murder victim who had been shot at point-blank range. In this early era of firearms, flintlock muskets and pistols required muzzle loading. To muzzle load a weapon, gunpowder would be poured down the barrel of the weapon, and then a piece of “wadding paper” would be tamped into place on top of the gunpowder using a long metal rod. The wadding paper used in this loading process was merely a piece of thick dry paper, usually torn from a larger sheet of paper kept by the shooter to reload again for the next shot. The musket ball bullet would be pushed down the barrel on top of the wadding paper. When the gun was fired, the wadding paper would be expelled by the exploding gunpowder, thus pushing the lead ball-bullet out of the barrel as a deadly projectile. This loading process required the shooter to be in possession of dry gunpowder, wadding paper, and musket balls to reload and make the weapon ready to fire. The Bow Street Runners considered this weapon loading practice and knew their shooter might be in possession of wadding paper. Upon searching their prime suspect, they did find him in possession of that kind of paper and, in a clever forensic innovation for their time, they physically matched the torn edges of wadding paper found in the victim’s wound to a larger sheet of wadding paper found in the pocket of their suspect. From this evidence, the accused was convicted of murder (McCrery, 2013).

This use of forensic physical matching is an example of circumstantial forensic evidence being used to link a suspect to an offence. This type of early forensic evidence also illustrates the beginnings of what exists today as a broad variety of forensic sciences to aid investigators in the development of evidence. This is also the beginning of forensic evidence being recognized as an investigative tool. In 1892, not long after the Bow Street Runners investigation, Sir Francis Galton published his book on the study of fingerprints. In 1900, Galton’s work was used by Sir William Henry who developed and implemented the Henry System of fingerprint classification, which is the basis of the fingerprint classifications system still in use today (Henry, 1900).

Only a few years earlier, in 1886, the use of photography for the first Rogues Gallery of criminal photographs was implemented by the New York City Police Department. This first Rogues Gallery was an organized collection of photographs of known criminals taken at the time of their most recent conviction for a crime (Byrnes, 2015). Prior to this organized collection of criminal photos, facial characteristics on wanted posters had been limited to sketch artists’ renderings. With the advances evolving in photography, having the ability to preserve an actual picture of the suspect’s face amounted to a significant leap forward. With this innovation of photography, the use of mugshots and photographic identification of suspects through facial recognition began to evolve.

These early forensic innovations in the evolution of criminal investigation (such as physical matching, fingerprint identification, and facial recognition systems) demonstrate a need for investigators to develop the knowledge and skills to locate and utilize physical evidence that enables circumstantial links between people, places, and events to prove the facts of criminal cases. Physical evidence is the buried treasure for criminal investigators. Physical evidence can be collected, preserved, analyzed, and used in court to establish a fact. Physical evidence can be used to connect an accused to their victim or used at a crime scene to establish guilt or innocence. Forensic evidence may prove a point in fact that confirms or contradicts the alibi of an accused, or one that corroborates or contradicts the testimony of a witness.

Another significant development in forensic evidence from the 1800s started with the work of French criminal investigator Alphonse Bertillon who developed the Bertillon system of recording measurements of physical evidence (Petherick, 2010). One of Bertillon’s students, Dr. Edmond Locard, a medical doctor during the First World War, went on to further Bertillon’s work with his own theory that a person always leaves some trace of themselves at a crime scene and always takes some trace of the crime scene with them when they leave. This theory became known as “Locard’s Exchange Theory” (Petherick, 2010). To this day, Locard’s theory forms the foundational concepts of evidence transfer theory.

Today, the ability of forensic experts to identify suspects and to examine physical evidence has increased exponentially when compared to early policing. Scientific discoveries in a wide range of disciplines have contributed to the development and evolution of forensic specialities in physical matching, chemical analysis, fingerprints, barefoot morphology, odontology, toxicology, ballistics, hair and fibre, biometric analysis, entomology, and, most recently, DNA analysis.

Many of these forensic science specialties require years of training and practice by the practitioner to develop the necessary level of expertise whereby the courts will accept the evidence of comparisons and subsequent expert conclusions. Obviously, it is not possible for a modern-day investigator to become a proficient practitioner in all of these specialties. However, the modern-day investigator must strive to be a forensic resource generalist with an understanding of the tools available and must be specialist in the deployment of those tools to build the forensic case.

In a criminal investigation, there is often a multitude competing possibilities guiding the theory development of how a criminal incident occurred with circumstantial links pointing to who committed the crime. Competing theories and possibilities need to be examined and evaluated against the existing facts and physical evidence. Ultimately, only strong circumstantial evidence in the form of physical exhibits, testimony from credible witnesses, or a confession from the accused may satisfy the court beyond a reasonable doubt. Critically, the quality of an investigation and the competency of the investigators will be demonstrated through the manner in which that evidence was located, preserved, analyzed, interpreted, and presented.

In the past, police officers generally took their primary roles as first responders and keepers of the peace. Criminal investigation was only a limited component of those duties. Now, given the accessibility to a wide range of effective forensic tools, any police officer, regardless of their assignment, could find themselves presented with a scenario that requires some degree of investigative skill. The expectation of police investigators is that they be well-trained with the knowledge and skills to respond and investigate crime. These skills will include:

* Critical Incident Response
* Interpretation of criminal law and offence recognition
* Crime scene management
* Evidence identification and preservation
* Engaging forensic tools for evidence analysis
* Witness assessment and interviewing
* Suspect questioning and interrogation
* Case preparation and documentation
* Evidence presentation in court

In addition to these task skills of process and practice, investigators must also have strategic analytical thinking skills for risk assessment and effective incident response. They must have the ability to apply deductive, inductive, and quantitative reasoning to examine evidence and form reasonable grounds to identify and arrest suspects.

Engaging these higher-level thinking skills is the measure of expertise and professionalism for investigators. As our current justice system continues to change and evolve, it relies more and more on information technology and forensic science. With this evolution, the need for investigators to demonstrate higher levels of expertise will continue to grow.

**Topic 4: The Path to Becoming an Investigator**

For many people, their idea of what an investigator does is based on what they see, hear, and read in the media, movies, TV, and books. These depictions characterize personas ranging from dysfunctional violent rebels fighting for justice by their own rules, to by-the-book forensic investigators who get the job done clinically using advanced science and technology. The truth is, good investigation and real-life investigators are unlikely to make a captivating fictional script. Professional investigators and competent investigation is about the tedious processes of fact-finding and sorting through evidence and information. It is about eliminating possibilities, validating events, and recording evidence, all the while engaging in an intentional process of thinking, analyzing, and strategically working towards predetermined goals; not to mention extensive note taking and report writing.

Sometimes, new police investigators are, at first, deluded by fictional representations, only to find out, by experience, that the real job, although having moments of action, satisfaction, and excitement, is more about hard work and deliberate attention to detail.

Another common misnomer about the job is the conception that investigation is the exclusive domain of a police officer. Although this may have been true in the earlier evolution of the investigative craft, it has become much less the case today. This change is a result of the enactment of many regulatory compliance statutes that require investigative knowledge, skills, and thinking. Compliance investigators maintain adherence to regulated activities which often involve legal compliance for industries where non-compliance can pose significant risks that threaten the lives and safety of people or the environment. These regulated activities are often responsibilities of the highest order. What starts as a regulatory violation can escalate into criminal conduct. The investigative skills of compliance investigators and inspectors must be capable of meeting the same tests of competency as the police.

Not just anyone can become an investigator. There are certain personal traits that tend to be found in good investigators. Among these traits are:

* Being passionate about following the facts to discover the truth, with a goal of contributing to the process of justice
* Being detail-oriented and observant of the facts and the timelines of events
* Being a flexible thinker, avoiding tunnel vision, and being capable of concurrently examining alternate theories while objectively using evidence as the measure to confirm or disconfirm validity of theories
* Being patient and capable of maintaining a long-term commitment to reaching a conclusion
* Being tenacious and not allowing setbacks and false leads to deter continued efforts
* Being knowledgeable and skilled at the tasks, process, and procedure while respecting legal authorities and the limitations to take action
* Being self-aware of bias and intuitive responses, and seeking evidence to support gut-feelings
* Being trained in the processes of critical thinking that provide reliable analysis of evidence that can later be described and articulated in reports and court testimony

Considering this list of traits, we can appreciate that good investigators are people with particular attitudes, aptitudes, and intentional thinking processes. These traits all form part of the investigative mindset. Although you cannot teach someone to be passionate about discovering the truth, anyone who has these traits can work towards developing and refining their other traits and skills to become an investigator. Developing the mindset is a learning journey, and the first step of this journey is to become intentionally aware of and engaged in your own thinking processes.

Toward this point, the investigator must always be mindful of the proposition of Shah and Oppenheimer (2008) in their book *Heuristics Made Easy: An Effort Reduction Framework*. Shah and Opprenheimer remind us that people have learned to become quick thinkers using mental short cuts, known as heuristics, in an effort to make decisions quickly and problem solve the challenges we encounter. They offer the proposition that heuristics reduce work in decision-making by giving the user the ability to scrutinize a few signals and/or alternative choices in decision-making, thus diminishing the work of retrieving and storing information in memory. This streamlines the decision-making process by reducing the amount of integrated information necessary in making the choice or passing judgment (Shah, 2008).

In this book, we will point out that these heuristic shortcuts are often instinctive or intuitive reactions, as opposed to well-reasoned, evidence-based responses. Although they may serve us well in our everyday thinking, they must be monitored and recognized for their short-falls when we are required to investigate matters where the outcomes are critical.

To achieve the investigative mindset and be an objective investigator, it is important to be aware of the heuristic shortcuts and other negative investigative tendencies that can become obstacles to successful outcomes. For example, a good investigator needs to be focused on the objective of solving the case and making an arrest in a timely manner, but becoming too focused can lead to “tunnel vision,” which is the single-minded focus on a favourite suspect or theory to the extent that other suspects or alternate theories are ignored. Moreover, a good investigator needs to take responsibility and be accountable for the outcomes of the investigation; however, taken to the extreme, this can lead to an investigator taking complete ownership of the investigation to the exclusion of allowing the ideas of others to provide guidance and influence. Finally, a good investigator needs to be careful about how much information is shared with others. However, excessive secrecy can inhibit information sharing with those who might contribute to the successful conclusion of the case.

Thinking as an objective investigator, it is often necessary to consider and evaluate several competing theories or possibilities of how a crime was committed and who the suspect may be. Often, new investigators, or those uninitiated to the objective mindset, will focus on a favourite theory of events or a favourite suspect, and rush to be first to reach the conclusion and to make the arrest. There is a trap in shortcuts and the focused rush to make a fast arrest. In this trap, other viable suspects and theories are too quickly ignored or discarded. This sometimes leads to investigations being derailed by “tunnel vision.” Worse yet, tunnel vision can lead to the misinterpretation of evidence, ultimately leading to charges against an innocent person, while the guilty remain undiscovered.

To summarize the observations made by Kim Rossmo (2009) in his book on criminal investigative failures, tunnel vision and lost objectivity have been part of the findings in many public inquiries. Commissioners at public inquiries have concluded that, at times, investigators relentlessly pursue a favourite suspect. Sometimes an alternate suspect should have been apparent, or exculpatory evidence was present that should have caused the investigators to stop and re-evaluate their favourite suspect, but tunnel vision had set in and the objective investigative mindset had been lost (Rossmo, 2009).

Similarly and not totally unrelated to tunnel vision, other negative thinking responses also come into play, and can be observed in the behaviours of case ownership and excessive secrecy. It may seem that an investigator taking ownership for his or her investigation, and maintaining some degree of secrecy in the management of case related information, is completely acceptable and perhaps even desirable. However, as happens with any human behaviour, it can negatively influence the outcome of investigations. Information appropriately shared with the right people can often reveal connections that contribute to the evidence of a case, and investigators must remain open to this appropriate sharing. Many negative examples can be found where a police investigator, or even an investigative team, adopted the attitude that the conduct of an investigation is their own exclusive domain (Campbell, 1996). With that exclusive ownership, no one else is entitled or allowed to participate, and relevant information that needs to be shared with others can be jealously guarded. Opportunities are missed for other investigators to see details that could connect a similar fact pattern or make the connection to a viable suspect.

**Topic 5: Understanding the Investigative Mindset**

When we talk about the investigative mindset, in part, we are talking about the self-awareness and the organizational-awareness to avoid negative outcomes. Once learned and practiced, this awareness can be a safety net against destructive investigative practices (i.e. tunnel vision, case ownership, and excessive secrecy). Criminal investigation can require complex thinking where the investigator must assess and determine the validity of information and evidence to guide the investigative process. This thinking strives to move from a position of mere suspicion to one of reasonable grounds for belief to make an arrest and ultimately articulate evidence upon which the court can make a finding of guilt beyond a reasonable doubt. This is a conscious process of gathering and recording information, and thinking analytically to form reasonable grounds for belief supporting defendable actions of arrest and charges. From this conscious process, the investigator in court can articulate a mental map to describe how they derived their conclusions.

As we proceed towards learning the investigative thinking process, keep in mind that:

* Investigative thinking is disciplined thinking, and investigators must be consciously aware of and consciously in control of their own thinking
* This is a process of being intentionally engaged at a high level of analytical thinking
* This thinking process is strategically focused, prioritizing investigative plans and actions to achieve outcomes
* Developing a mental map, the investigator deliberately selects a path of the investigation will follow. He or she travels that path with the knowledge that the outcomes of the investigation will only be accepted by the court if the rationale for the path taken can be recalled accurately and articulated in detail

**Summary**

In this chapter, we have identified the investigative thinking processes as being distinctly different from the thinking processes used by most people in their everyday lives. The critical responsibilities that exist for police investigators in conducting their duties demand that investigators learn to think and respond in a structured and accountable manner. To this end, we have illustrated some of the common negative thinking processes that investigators must avoid, and we have looked at the traits and values that need to be pursued to become a criminal investigator. We have described structured and accountable thinking as the means to achieve an investigative mindset. You will find that investigative thinking and the investigative mindset are a theme throughout this book.

Study Questions

1. Provide two reasons why it is very important for a police investigator to routinely critically assess all of the information they encounter.
2. Provide two reasons why evidence gathered as part of an investigation must be collected in a structured way.
3. What do we mean when we say that an investigator must be “switched on”?
4. In a single sentence, summarize “Locard’s Exchange Theory” (Petherick, 2010).
5. List seven characteristics commonly found in good investigators.
6. What are the skills a modern-day officer must achieve to respond to events and investigate crimes?
7. What is the first step in developing an investigative mindset?
8. What is the level of forensic knowledge that a modern-day investigator must achieve to become an effective investigator?
9. Why must police investigators be mindful of the heuristic shortcuts discussed by Shaw and Oppenheimer (2008)?
10. In addition to heuristic shortcuts, what are the other three negative investigative tendencies that can become obstacles to successful investigative outcomes?
11. Why must investigators be mindful of excessive secrecy?