The investigative process

Forensic science is a versatile and enormously powerful tool in the investigation of a crime. But science alone is not enough to catch criminals. To be successful, forensic techniques must be combined with the knowledge, experience, and intuition of detectives, uniformed police, and civilian experts and administrators.

A crime is committed in a cosmopolitan city—any member of the local, or even national, population might be the culprit; they may even have fled the country. Investigators need to eliminate potential suspects systematically, to cut them down to a manageable list to interview.

There is no single way to do this. Criminal records and forensic databases can help identify similar crimes, and perhaps provide a list of known criminals who might be suspects. Also, a forensic investigation of the crime scene can provide pointers. Victims and witnesses of crimes frequently give police valuable information that can lead them to a suspect. Finally, where it appears that nobody saw the crime, publicity and a media appeal can sometimes persuade reluctant witnesses to come forward.

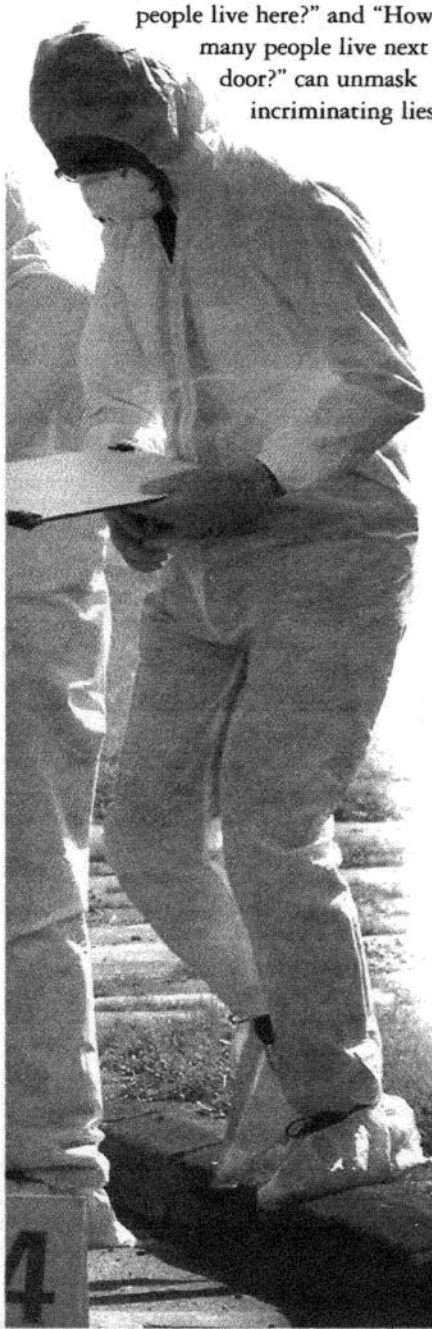
Healthy skepticism

Victims and witnesses often provide information about a perpetrator's sex and age, and this can obviously reduce the size of the suspect pool by half or more. However, acting on this information is not as straightforward as it might appear. Witness statements need to be scrutinized, if not skeptically, then with an understanding of their limitations. For example, if a witness states, "I saw a woman walk away from the crime scene," then it might seem reasonable to eliminate men from the enquiry. But what if the witness noticed a man with long, blond hair, and assumed he was female? Experience has shown that witness perceptions and memory can be inaccurate in other respects, so when witnesses refer to "a 25-year-old," investigators look for suspects between the ages of 12 and 40.

Vital assumptions

If witness or victim statements fail to eliminate suspects, investigators need to make assumptions that narrow down the initial field. For example, most crimes occur in the neighborhood of the culprit's home—so investigations tend to begin around the crime scene. Local house-to-house inquiries can often elicit apparently unconnected information that later proves crucial.

Seeking corroboration helps in this process: by asking the same question of many different people, investigators assess reliability and perhaps motives of witnesses. For example, knocking on enough doors and asking, "How many people live here?" and "How many people live next door?" can unmask incriminating lies.



Everyone is a suspect

The search for a suspect is comprehensive and impartial. It even includes the person reporting the crime, since murderers often turn out to be the very people who "find" the body. Nobody is ruled out, however unlikely their guilt may seem, however disturbing the implications, and however much their accusation might conflict with popular preconceptions.

The abduction and murder of children provides an instructive, if harrowing, example of this principle. "Stranger danger" attracts intense media interest—but only because such cases are rare. In the overwhelming majority of crimes, the perpetrator is known to the victim.

This knowledge led investigators to doubt Lindy Chamberlain's claim that a dingo had taken her baby (see p. 64), but this notorious Australian case also neatly illustrates the risk of preconceived ideas. Investigators who jump to conclusions are more inclined to overlook evidence that conflicts with their initial views. The longer an assumption guides an investigation, the more difficult it is to set it aside and consider alternatives. In the "Dingo Baby" case, failure to do this led to a miscarriage of justice.

Diligent detectives learn to question even apparently reliable evidence. For example, it is tempting to regard a suspect's confession as cast-iron proof of guilt, yet someone may confess to a crime they did not commit to protect the real perpetrator, or to hide a greater crime. Further probing, as well as corroborating evidence, is essential to prove that the person confessing is actually the culprit.

Proving guilt conclusively

Proof beyond reasonable doubt secures convictions. Investigators are now learning that forensic science can provide such proof with a level of objectivity and plausibility often lacking in other forms of evidence. Today, forensic science plays a vital part at every stage in an investigation, from crime scene to court.

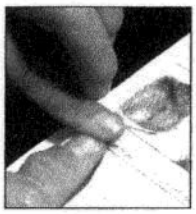
◀ **SHOOTING SCENE**
By systematically cataloging evidence at the scene of a shooting, SOCOs (scene of crime officers) create a foundation on which to build the investigation.

THE ROLE OF FORENSICS

The chapters that follow take a thematic look at the diverse disciplines of forensic science, showing how each one helps to guide a crime investigation toward an arrest and conviction.

◀ **AT THE CRIME SCENE**
Evidence that investigators initially overlook at the crime scene may be irretrievably lost, or inadmissible in court.

THE VICTIM ▶
Cases where a victim is killed require a special kind of investigation, in which the corpse of the victim is a major source of clues.

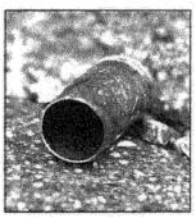


◀ **HUMAN IDENTIFICATION**
Forensic techniques, from fingerprinting to DNA, can help to discover the identity of both the suspect and the victim.

THE SUSPECT ▶
Tracking down a suspect may involve psychology, as well as the assessment of the memory and judgment of fallible eyewitnesses.

◀ **ANALYSIS OF EVIDENCE**
To find vital clues that could close a case, crime labs use sophisticated tests and instruments to sift through evidence.

LETHAL AGENTS ▶
Death comes in many guises, and forensic technology helps to trace the whole range—from the speeding bullet to the tiniest drop of poison.



The final chapter of the book considers so-called "white-collar crimes," including forgery of works of art, currency, and documents, computer crime, and criminal damage to wildlife and the environment.