Criminal identification

Police can be confronted by a dilemma when suspects are identified in lineups, mugshots, and composites. For witnesses are often confident about their memory for faces, and juries trust their evidence. But experience has shown that relying on eyewitness identification alone can lead to wrongful convictions.

PHOTOFIT COMPOSITES ▲
Until recently, investigators built up images of suspects' faces from a jigsaw puzzle of facial features, but the system was inflexible and the result hardly seamless.

COMPUTER VISION
Modern systems that run on desktop PCs provide a far greater choice of components than photofit composites. Also, it is possible to "tweak" standard features so that they resemble a description more closely.
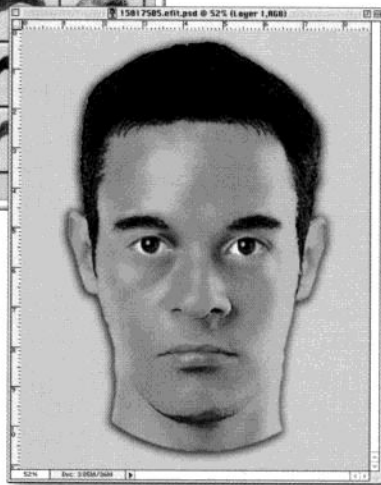
It is a familiar story: a convenience store is held up at gunpoint; the robber gets away, but the cashier is convinced she would recognize the man again.

A traditional way of making the identification is to parade a suspect in front of the witness with at least eight "foils" of similar appearance. Care is needed to make sure the choice is as objective as possible. The suspect must be given the opportunity to take any place he wishes in the lineup. It is important that the witness is told that if they are not sure of their identification, they do not have to pick anyone out; otherwise, they may choose the lineup member who most closely resembles the criminal they saw.

Look in the book

Lineups are an effective way of pursuing a case when investigators believe they know who was involved in a crime. But what do they do when there is no obvious suspect?

A mugshot search is one answer: witnesses try to pick out the suspect from photographs of known offenders. However, this approach has several drawbacks. First, a comprehensive search is possible only in small communities where there are few enough offenders for a witness to view them all. Second, it is a "convicts only" ID parade, so an incorrect choice can steer police attention toward an innocent ex-offender. (By contrast, choosing a foil in a lineup is inconsequential.) Finally, a mugshot search weakens the validity of a later lineup.

If both these approaches fail or are impractical, creating a likeness of the offender can move an investigation forward. Today's police forces are most likely to do this using a painting-by-numbers face-composite system. Witnesses pick facial features and hair from a computer menu, to build up a likeness that can be used in public appeals for information.

SKETCHING THE SUSPECT

Though computer composites look slick, forensic artists feel that nothing will ever replace the sketchpad. They argue persuasively that artists are more flexible than software, and that witnesses relax when talking to them, and tell them more. Anecdotal evidence supports this: when a bomb destroyed a government building in Oklahoma City in 1995, a forensic artist used witness descriptions to create a likeness of the man who hired the van used in the bombing, and the picture led to the identification of the bomber, Timothy McVeigh.

SKETCH SUCCESS
A former colleague and a hotel manager both identified McVeigh (right, in a police mugshot) from a forensic artist's sketch (below).

SUSPECTS ON PARADE ▶
This mock lineup contains five quite different-looking individuals. In reality, lineup members must be of similar height, build, and race; otherwise, objectivity may be compromised.

Fallible memory

Unfortunately, all of these methods of identification suffer from the same handicap: the witness's memory. Everyone overestimates their ability to recognize faces, even in ideal conditions. And in crimes involving violence—whether actual or threatened—victims concentrate more intently on the weapon than on the face of the person holding it. The jury system exacerbates these shortcomings. Jurors may attach great weight to an eyewitness identification, even when there is forensic evidence that contradicts it.

Legal challenges to convictions based on unreliable identification evidence have prompted governments to bring in legislation to tighten up ID procedures, and encouraged police to concentrate on solid forensic evidence.

Unblinking witnesses

Superficially, CCTV seems to address many of the failings of human memory, but video surveillance is not the objective witness we would like it to be. Video images are often degraded and indistinct, and matching real faces to those on a screen is tricky. In an attempt to make
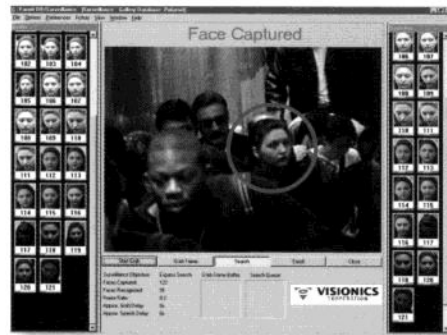
A FACE IN THE CROWD ▲
Facial recognition software helps CCTV camera operators to spot criminals whose faces are stored in a database, and presents them with a "shortlist" of possible matches.

matches harder to challenge in court, photoanthropometry measures distances between "landmarks" on the faces of suspects captured on film or video, and compares them with the same landmarks on a mugshot. Computerized facial recognition aims to automate this process. The evidential value of video images is likely to improve as technology advances, but rather than "tracking" individuals, it will probably just be used to identify a suspect at a particular location.
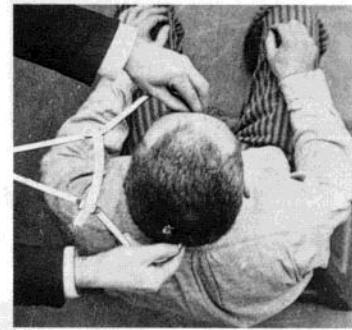
Alphonse Bertillon 1853–1914

As a clerk in the Paris police records office, Alphonse Bertillon developed the idea that criminals could be identified by "anthropometry"— measurement of their heads and bodies. He later pioneered the use of the "portrait parlé" (a methodical description of the face) to identify criminals, and photography to document villains and crime scenes. Bertillon's ID systems were very influential in France, but ultimately eclipsed by the fingerprint files, which he dismissed as ineffective.