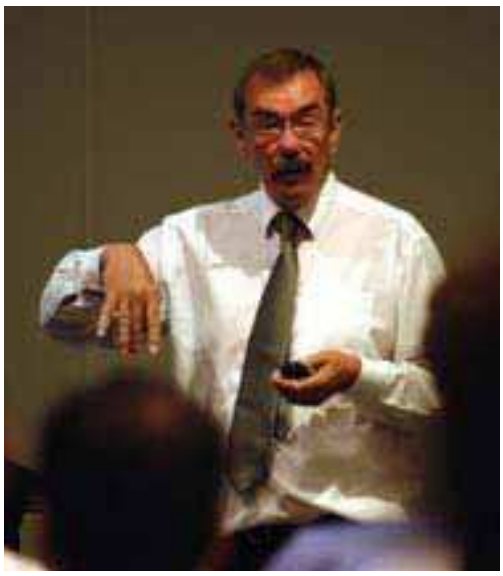
The missing link— *integrating forensics and investigations*

Photos - Brian Hartigan

Testing drugs in the canteen microwave; staking out criminals for cast-off hamburgers to capture DNA; dropping his trousers and scraping his own leg along a road to source distinctive scratch marks on a body — Andrew David Barclay is not your conventional forensic specialist.



British forensic specialist Andrew Barclay

An internationally recognised expert with a unique perspective on solving major crimes and cold cases, Mr Barclay is the recently-retired Head of Physical Evidence at the UK National Crime and Operations Faculty (NCOF).

He spearheaded a new concept in UK policing, the role of a scientific investigator or specialist adviser, bridging the gap between what investigators need and what science can ideally supply. In this role, he provided forensic overviews in more than 225 intractable investigations and cold cases. More than two thirds of those reviews led to convictions.

Detective Sergeant John McIntyre from the AFP's School of Community Policing, Learning and Development first met Mr Barclay at the 11th Symposium of the International Homicide Investigators Association (IHIA) held in Florida in 2004.

Attending the symposium on behalf of the AFP, Detective Sergeant McIntyre was impressed by Mr Barclay's informative and engaging presentations and recognised that he had valuable insights to offer. Contact was maintained and a plan for Mr Barclay to visit the AFP College was arranged to coincide with his time in Australia late last year as part of an international panel reviewing the investigation into the Claremont serial killings in Western Australia.

Around 150 AFP investigators and forensic staff attended the series of workshops and lectures presented by Mr Barclay while he was in Canberra.

Bridging the communication gap

According to Mr Barclay, the role of specialist adviser developed when he noticed a real gap between investigators and forensic staff.

"Too often the scientists didn't know the context and therefore the significance of their results, and the investigators didn't see the value of the science," he explained.

The first case Mr Barclay attended was an extreme example of poor communication where the scientists and investigators involved literally weren't talking to each other.

The case was an arson in which several people had died. The fire had not behaved in a normal way and as a result two opposing theories had been developed. Reviewing the crime scene photos, Mr Barclay noticed six extra hinges in the debris near the front door frame, where the fire was thought to have begun, something

initially overlooked by both scientists and investigators. It led to the discovery that a door from an upstairs bathroom had been placed diagonally against the front door earlier in the day, creating a kind of tent; this explained the fire's odd behaviour. It had been ignited at the front door but burnt slowly inside the 'tent' for some 45 minutes before spreading to the rest of the flat. The discovery cleared up the disagreement between investigators and forensic staff and released the deadlock in the investigation.

In another example, Mr Barclay reviewed the case of a young woman who was raped and died after collapsing in the snow. The review involved reinterpreting the sequence of events, motivation, victimology, offender profile, pathology and time of death.

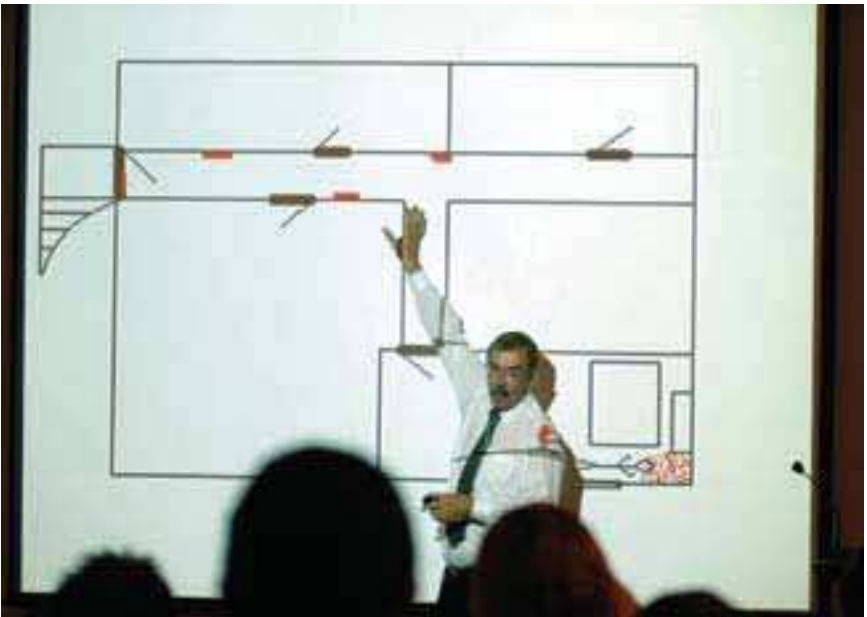
Several things did not add up: the young woman was sturdy and fit, not an easy target. There was an apparent low level of violence and no obvious cause of death. Her injuries were not severe enough to explain why she had collapsed at the back of the building near where the attack took place, unable to reach the door to raise the alarm.

Again, a lack of communication between scientists and investigators had led to the significance of the victim's urine test result being overlooked. The result indicated the consumption of a large amount of alcohol, although this did not reconcile with witnesses' statements that the victim had only had two drinks at a party that night.

Test results indicated that at the time of the attack, the young woman would have been very drunk and unsteady on her feet. Further investigations revealed the attack had occurred several hours later than originally assumed. It was found that her attacker had not intended to kill her; rather she had collapsed and died of hypothermia.

Crime assessment vs crime scene assessment

NCOF has 13 scientists trained in investigative needs working as specialist advisers, with more being recruited to meet growing demand.



For serious crimes, they are involved from day one when they help to devise a forensic strategy, followed up with advice, guidance and support during the investigation. For major crimes, the specialist advisers are part of a Forensic Management Team which also comprises investigation, crime scene and laboratory representatives.

When lecturing UK crime scene staff as part of their training, Mr Barclay makes the distinction between the two roles.

"A crime scene person's job is to collect evidence intelligently," he said. "They need to think through what happened to maximise their targeting of the evidence. But they would normally move on after that phase, which is day one or day two.

"This is about assessing the whole of the case so that when you get results back like carbon monoxide levels or blood distribution patterns that don't make sense, the specialist advisor is still involved in that case and makes sure that it's taken into account.

"The job is to think of everything that can be done and make sure we've done as much of it as we can. It's a less cautious approach than traditional forensic science. It's about catching the things that fall through, thinking laterally, asking the questions and coming up with answers that others might miss.

"What we're talking about is crime assessment, not crime scene assessment. Crime assessment takes into account geographical profiling, behavioural stuff, pathology … everything."

Putting theory into practice

In 2002 Mr Barclay's comprehensive and very hands on approach helped to solve a 14-year-old case. A young prostitute was stabbed to death in a small, dark one-bedroom flat. Several members of a gang had originally been wrongly convicted and since been released from jail.

Mr Barclay reviewed the files and original crime scene photos where he noticed a blood pattern on the wall near the body inconsistent with blood distribution from the victim. He reasoned that it was possible the offender's hand had

slipped on the knife and he had cut himself, leaving a tell tale drip mark on wall.

Mr Barclay then visited the flat, which had since been bought and renovated. A thorough search revealed blood from an unknown male had dripped behind the skirting boards. The only way out of the room was a narrow corridor with a sharp left-hand turn. After re-enacting parts of the crime, more blood was discovered. Testing against a familial DNA database led police to the offender, who pleaded guilty and was convicted, 15 years after the murder took place.

Another very different case was the review of the investigation into the Omagh bombing two years after it occurred. Mr Barclay's approach was to review in detail the way the bomb was constructed and treat the case like a series of burglaries. He looked for similarities in the way in which several IRA bombs were made to find links between the lengths and types of fibres, wires, soldering style and glue. This helped to narrow down the search for the bombers.

An integrated approach

While they are scientists, the specialist adviser function has been adopted as a policing rather than forensics role and is controlled by the UK Association of Chief Police Officers.

The use of specialist advisers is now in place across the UK, with the concept also picking up speed in other countries such as the Netherlands and the US.

"Basically it's looking after physical intelligence during the investigative phase," Mr Barclay said.

"It's much more integrated as part of the investigation now, to the extent that consulting a specialist adviser is embodied in the UK murder manual."

This type of operational support in current and cold cases is proving extremely popular with senior investigators.

"Most lost opportunities result from lack of thought, not lack of technology," Mr Barclay said.

"Better communication between investigators and forensic staff means that crucial questions and valuable inferences are no longer overlooked."

More about the UK National Crime and Operations Faculty

In 1995 the National Crime Faculty (NCF) was established in the UK with the aim of supporting a totally integrated approach to the investigation and reduction of crime. This followed a review of the Yorkshire Ripper investigation which identified the need for a national UK focus to collate and disseminate good practice and new ideas in crime investigation.

The effectiveness of Andrew Barclay's presentation was enhanced with a generous injection of humour.

In 1998, the Chief Constables Council endorsed a National Operations Faculty, which was set up to provide professional knowledge and expertise to assist the Police Service in its operational police management and support all significant front line operational policing.

The two bodies merged to form the National Crime and Operations Faculty (NCOF) in December 2001. NCOF supplies an initial assessment in murder or serious assaults on request to all forces in the UK. It also assists with difficult cases including forensic overviews in the public interest, and reviews of cold cases and possible miscarriages of justice.