Leaving traces behind...

Though forensic science encompasses many scientific disciplines, there is a common link that unites them and enables them to contribute to the solving of crimes. This link, known as Locard’s principle, states that “every contact leaves a trace”. In other words, a criminal will always carry away with him or her, some trace from the scene of the crime and will always leave some trace behind. Whether that evidence is biological in nature such as DNA, hair or pollen; whether it is “impression evidence” such as shoe prints, tyre marks or bite marks; whether it is soil or fibres or whether it is chemical in nature such as gunshot residue or paint, there is a scientific discipline that can find it and using modern analytical techniques can link the crime to the perpetrator.

Investigation of blood patterns

Analysis of blood patterns left at a crime scene can provide information about how a violent crime was committed. In particular the analysis can help to reveal how and where the victim was attacked (the region of origin).

Facial approximation

Facial approximation can also be undertaken to generate further leads to identify bodies when no other evidence is available. “Over the past ten years there has been a considerable increase in the number of verified relationships concerning how the skull relates to the surface appearance of the face” (Hayes, 2013).

One such example involves the remarkable recent revelation linking together the murder of a 2-year old child, whose discarded remains were discovered in a suitcase near Wynarka in outback South Australia several months ago, with the discovery in 2010 of the skeletal remains of a young woman in the Belanglo State Forest in New South Wales.

Dr Susan Hayes, who graduated from Murdoch University with an Honours degree in Human Communication and a Graduate Diploma in Education, and subsequently trained as a facial anthropologist, was instrumental in designing and teaching the facial approximation component of the forensic degree at Murdoch. Her unique manual has no equal and is used extensively both within the University to teach in the forensic science programme and in Murdoch’s “Outreach” programmes.

Sue was approached by the NSW Police to assist in the identification of skeletal remains discovered by trail bike riders in the Belanglo State Forest in 2010. The remains were clearly those of a young woman and had been lying in the forest for anywhere between 6 months and 10 years. She had been wearing a pink and white T-shirt made by a company called Chain Reaction which marketed their products in NSW some 10 years earlier. The T-shirt had an “Angel” motive on it, so the young woman was code-named “Angel” from then on. Sue spent many weeks carrying out a facial approximation on the skull of the unidentified woman and even consulted a hair dresser in an attempt to predict the hair style that may have been worn by a young woman with shoulder-length hair in the 1990s. In spite of the facial approximation being circulated worldwide, no positive leads were obtained and there was nothing in the missing persons’ records in NSW to provide a clue to the young woman’s identity.
In 2011, Sue flew back to Perth to teach the facial approximation course at Murdoch University and even compared her approximation of “Angel’s” face with photographs of missing young women in Perth, but there was no match. The case of the unidentified “Angel” remained a mystery until October 21, 2015.

The horrific discovery in July this year of the bones of a baby girl in a discarded suitcase near the Karoonda highway in South Australia provided the vital clue to “Angel’s” identity. DNA analysis showed that Angel was the young girl’s mother and, as a consequence, both victims were identified.

The horrible reality, though, is that the police are dealing with a double murder involving skeletal remains discovered 5 years apart in two different States.

We hope for the sake of the family of Karlie (Angel) and Khandalyce (her daughter) that those responsible for this double murder are brought to justice and that closure can be obtained for the family and all involved in the investigation of this dreadful crime.

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