

FINGERPRINTS AND EXPERT IDENTIFICATION EVIDENCE: MARKERS OF UNRELIABILITY

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A NEAR MAGICAL QUALITY

... fingerprint evidence has been afforded a near magical quality in our culture. In essence, we have adopted a cultural assumption that a government representative's assertion that a defendant's fingerprint was found at a crime scene is an infallible fact, and not merely the examiner's opinion. As a consequence, fingerprint evidence is often all that is needed to convict a defendant, even in the absence of any other evidence of guilt. Unfortunately, our societal acceptance of the infallibility of examiners' opinions appears to be misplaced.

State v Quintana (2004) UT App 103 P.3d 168, Thorne J., [13]-[14].

CHALLENGING FINGERPRINT IDENTIFICATION EVIDENCE

- 1) Object to the admissibility of the expert evidence lead by the prosecution.
- 2) Cross-examine the prosecution expert.
- 3) Call expert evidence in the defence case.
- 4) Seek directions and warnings at the close of the case pursuant to section 165 of the *Uniform Evidence Act* that fingerprint identification evidence is a type of evidence that may be unreliable.

OBJECTING TO THE EVIDENCE

- 1) s 79 of the *Uniform Evidence Act*
 - a) Specialised knowledge based on training, study or experience; AND
 - b) Opinion based wholly or substantially on that specialised knowledge.
- 2) The expert must provide a rational basis for the opinion and criteria with which to judge its validity: *Makita v Sprowles* (2001) 52 NSWLR 705).
- 3) s 137 of the *Uniform Evidence Act*
 - a) Must refuse to admit evidence adduced by prosecutor if probative value is outweighed by danger of unfair prejudice.
 - b) NB: controversy between jurisdictions in relation to whether reliability of evidence is relevant to this provision.

FACTORS POINTING TO UNRELIABILITY

- 1) Key assumptions and methods lack scientific foundation.
- 2) The method and ultimate decision-making are highly subjective in nature.
- 3) There are inherent limitations to the comparison and matching of fingerprints.
- 4) Mistakes are made but the rate of error is essentially unknown.
- 5) Human judgment is affected by bias in various forms.

ASSUMPTIONS

“Uniqueness and persistence ... do not imply that anyone can reliably discern whether or not two friction ridge impressions were made by the same person. Uniqueness does not guarantee that prints from two different people are always sufficiently different that they cannot be confused, or that two impressions made by the same finger will also be sufficiently similar to be discerned as coming from the same source.”

Strengthening Forensic Science in the United States, NAS Report 2009.

HIGHLY SUBJECTIVE ACE-V METHOD

Analysis: a judgment about whether the latent print is of a sufficient size and level of detail to warrant comparison with a known print.

Comparison: ‘visually “measuring,” and comparing ... the details that correspond’ between the crime scene print and the known print.

Evaluation: ultimate determination of whether a crime scene print can be attributed to a known person, whether that person can be excluded as the source of the crime scene print, or whether the material is insufficient meaning an inconclusive result.

Verification: second examiner carries out the verification stage by performing the ACE process again (often not blind).

CRITICISM OF ACE-V

- It is merely a ‘broadly stated framework’.
- It does not ‘qualify as a validated method’.
- It is ‘too broad to ensure repeatability and transparency’.
- Even if two analysts follow the method, there is no guarantee they will reach the same conclusion.
- To follow the ACE-V method ‘does not imply that one is proceeding in a scientific manner or producing reliable results.’

Strengthening Forensic Science in the United States, NAS Report.

LACK OF SCIENTIFIC METHOD FOR SOURCE IDENTIFICATION

With the exception of nuclear DNA analysis... no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.

Strengthening Forensic Science in the United States, NAS Report

INHERENT LIMITATIONS

- Fragment or partial impression.
- Smudged or imperfect.
- Level of detail adversely affected by:
 - mechanics of contact,
 - nature of the surface touched, or
 - technique used to develop a print.
- Distortion due to pressure and skin elasticity.
- Frequent inevitable differences between impressions mean that an examiner must decide and justify whether any given difference is ‘a *true* dissimilarity, or whether the apparent dissimilarity can be discounted as an artefact or resulting from distortion.’

MISTAKES ARE MADE BUT ERROR RATE REMAINS UNKNOWN

“There is no methodology without a practitioner, any more than there is automobile without a driver, and claiming to have an error rate without the practitioner is akin to calculating the crash rate of an automobile, provided it is not driven.”

Simon Cole, *More Than Zero*

HUMAN JUDGMENT IS AFFECTED BY BIAS

‘We unconsciously pick up cues from our environment and factor them in an unstated way into our mental analyses’.

Without proper safeguards in place, the danger that a form of bias will influence a result is unacceptable, particularly given that human judgment and decision-making is commonly affected in subtle ways of which we are not consciously aware and in ways that ‘cannot be willed away’.

Strengthening Forensic Science in the United States, NAS Report

DIRECTIONS

Australia:

- Currently no suggested direction in relation to fingerprint identification evidence.

Emerging international views:

- USA: a jury should be instructed that there is no basis to believe that fingerprint examiners are infallible, that their testimony is informed opinion, but not fact.

State v Quintana (2004) UT App 103 P.3d 168 (Thorne J)

- UK: necessary for a judge to warn the jury that the fingerprint evidence is opinion evidence only, that the expert's opinion is not conclusive and that it is for the jury to determine whether guilt is proved in light of all the evidence.

R v Buckley (Robert John) (1999) 163 JP 561 (Rose LJ)