

## **FINGERPRINTS** **EXPERTS AND EVIDENCE**

This appendix aims to provide an overview of fingerprint evidence and the role of the fingerprint expert in providing 'opinion' on the comparison of fingerprint marks.

### **Fingerprint Impressions**

Fingerprint impressions are made by the end joints of the fingers and are reverse reproductions of the skin surface. That surface comprises an intricate pattern of ridges that form before birth and remain unchanged, other than in size or as a consequence of disease or injury, throughout an individual's life. Pattern variations on the skin are unlimited and it is universally accepted that no two fingerprint patterns are identical. It is therefore possible to identify an individual by comparing their fingerprints with an impression, either held on record or found in connection with a crime scene.

### **Standards for Identification**

Comparison of fingerprints and impressions considers individual ridge characteristics, within the fingerprint pattern, and their position in relation to each other.

In the UK, positive identification is based on a (numeric) '16 point standard'. This means that if a fingerprint is found by a Fingerprint Expert (see below) to have 16 points in sequence that match a finger impression taken from a known person and none in disagreement, then this is sufficient to prove identity. Additionally, it has been held that where two finger impressions are laid down together and there are a minimum of ten points in sequence and agreement in both marks, then this is also sufficiency of evidence to prove the identification.

In cases of serious crime, finger impressions with less than 16 points of comparison have been referred to in court by senior fingerprint personnel. In cases such as this, the matter of identification and the weight of the evidence has been left for the court to decide.

Whilst there is a common perception that 'fingerprint identification' is a science and that fingerprint evidence is 'irrefutable', challenge in several cases has been on the basis of contradictory opinion offered by Fingerprint Experts, including:

- the prominent case of Gilbert McNamee (Hyde Park bomb) where, ultimately, 13 Fingerprint Experts passed opinion, to the Royal Court of Justice, ranging from Identical to Insufficient (points of comparison) to Not Identical.

### **Definition of Fingerprint Expert**

A fingerprint expert is one who has adequate training, scientific knowledge and understanding, as well as structured practice and experience in ridge comparison and identification, allowing him or her to give professional opinion in relation to fingerprints, palm prints and foot prints in court.

This role can be distinguished from that of a Scenes of Crime Examiner (SOCO). A SOCO is a professionally trained individual routinely deployed to locate, examine and interpret a range of scenes and, where appropriate, to recover physical evidence, including fingerprint impressions, from them.

In some Forces, these distinct roles are carried out by the same individual.

### **Qualification as Fingerprint Expert**

Qualification as a fingerprint expert within SCRO is subject to:

- Successful completion of SCRO and NTCSSCI (National Training Centre) fingerprint training courses;
- Satisfactory assessment by supervisors who have responsibility for “mentoring” the trainee during their work-based experience;
- Having satisfied the criteria of a minimum qualifying period (currently 5 years).

[Note: The minimum qualifying period no longer applies in England and Wales where a competency based criteria is applied.]

On satisfying all of the above criteria, application is made to the Scottish Executive, Criminal Justice Department to have the individual added to the list of Authorised Forensic Scientists (for the purposes of Section 26 (2) of the Criminal Justice (Scotland) Act 1980 and Section 280 (5) of the Criminal Procedure (Scotland) Act 1995).

### **Responsibilities of a Fingerprint Expert**

In outline, a Fingerprint Expert is responsible for:

- Recognition and classification of fingerprint patterns to allow search and comparison;
- Examination of fingerprints (marks) from scenes of crime to assess quality and suitability for comparison;
- Comparing the marks from scenes of crime against fingerprints of person suspected of having committed crime;
- Comparing the marks from scenes of crime against fingerprints of persons having legitimate access to the scene, for elimination purposes;
- The preparation and presentation of expert opinion on fingerprint evidence in court.

## **Expert Opinion**

At the comparison stage the ridge detail in the fingerprint mark is visually compared to a sample fingerprint impression for configuration, sequence and relationship. This comparison is objective.

Following comparison, the Expert evaluates the clarity of the print and assesses the quantity and quality of ridge detail which is in agreement or disagreement.

An opinion is then formed, by the Expert which will determine that:

- the mark is uniquely compatible with the sample;
- there is insufficient detail to confirm identification (i.e. less than 16 points);
- the marks do not match.

This opinion is subjective and based on the Expert's knowledge and ability, as articulated by Roderick MacAuley, Barrister, Crown Prosecution Policy Service Division:

'Due to such technicalities as the crucial 'coincident' sequence and the fact that because marks are not copy book standard, finger mark and print comparison is a series of decisions requiring skilled judgment.

In short, fingerprint comparison is not an exact science. Indeed if it was then identification would be a matter of statistical analysis only and we wouldn't need the skills of the experts at all. Identification by fingerprints whether based on 8, 12, 16 or 24 points is a matter of opinion not fact. It has always therefore been open to the defence to challenge fingerprint evidence, even where it apparently meets the national standard.'

*(Fingerprint Whorld, Vol 22 No 84 P78)*

The issue of science versus opinion was raised in the USA in 1999 at the 'Daubert Hearing'. The defendant had raised the issue as to whether or not an opinion of individualisation could be made from the evaluation of small areas of latent fingerprints.

Testimony by both prosecution and defence was presented with the Judge ruling that there is a scientific basis to fingerprint identification.

The fingerprint experts who gave evidence asked for Judicial notice to be taken of 3 factors:

1. Human friction ridges are unique and permanent;
2. Human friction ridge skin arrangements are unique and permanent;
3. Individualisation; that is – positive identification can result from comparison of ridges, skin or impressions containing a sufficient quality (clarity) and quantity of unique friction ridge detail.

Judicial notice was taken of 1 and 2, not however of 3, and it was held that this was for the jury in the court to decide. The jury instruction on expert witness testimony included:

*'...consider each expert opinion received in evidence in this case and give it such weight as you may think it deserves. You should consider the testimony of expert witnesses just as you consider other evidence in the case. If you should decide that the opinion of an expert witness is not based upon sufficient education or experience, or if you should conclude that the reasons given in support of the opinion are not sound, or if you should conclude that the opinion is outweighed by other evidence, you may disregard the opinion in part or in its entirety.'*

### **Redefining the Standards for Identification**

Whilst the 'numeric' standard continues to be applied across the UK, and some European Countries, others, notably in North America, apply non-numeric standards, based more on principles which determine the quality and sufficiency of the 'ridge detail' rather than a numeric sufficiency.

In England and Wales the drive towards a non-numeric standard is well advanced and the target date, for transition from numeric to non-numeric standards, is October 2000.

The matter is also under consideration in Scotland.