Appendix 2: The collection and processing of forensic evidence (Biological)

Key research: Hall and Player (2008) Will the introduction of an emotional context affect fingerprint analysis and decision-making?

Previous research and context to the study
- The role of the fingerprint expert is to ascertain if the friction ridge detail in a set of fingerprints is ‘sufficiently similar’ to that found at a crime scene
- Fingerprints can sometimes be of poor quality (e.g. smudging) and therefore judgements can be subjective/prone to human error
- Early research focused on how the emotional context can impact upon decision-making. This research is limited in applicability as it involved non-expert samples.

Aim
- To see if trained fingerprint experts are affected by the emotional context of a case. More specifically, to see if:
  1) The written report supplied with fingerprint evidence would affect an expert’s interpretation of a poor quality mark
  2) Fingerprint experts would be emotionally affected by the circumstances of the case.

Method/Design
- Field experiment
- Independent measures design, random allocation:
  1) Low emotional context – allegation of forgery (victimless crime)
  2) High emotional context – allegation of murder.

Participants
- A self-selecting sample of 70 fingerprint experts all working for Metropolitan Police Fingerprint Bureau
- The mean length of experience as a Fingerprint Expert was 11 years
- The majority were active practitioners (e.g. crimes ranging from burglaries to homicide), with the minority no longer active (e.g. in a managerial role).

Procedure
- Fingerprint (right forefinger) from a volunteer inked onto paper and then scanned onto a £50 note
- Background of note obscured the ridge detail hence the fingerprint was of poor quality
- Participants provided with an envelope with one of the test marks, a 10-print fingerprint form, and a sheet of paper telling them that the print was of the right forefinger
- Ps asked to consider if the print was a match, not a match or if there was insufficient detail to decide
- Ps asked if they had referred to the crime scene report and if it had affected their analysis.
Results

• 57/70 stated they had read the crime scene examination report prior to examining the prints. Thirty of these were from the high-context scenario group.

• 52% of the 30 Ps from the 'high emotional context' scenario who had read the crime scene report said they were affected by the information read. This was significantly different from the 6% who had read the crime scene report and said they were affected by the low emotional context scenario.

• No significant difference between the final decisions made by the two groups.

• No significant difference between the two groups as to whether the experts would feel confident in presenting the evidence in court.

Conclusions

• Unlike earlier research using 'non-experts', the emotional context has no effect on the experts' final opinions about a fingerprint match.

• Fingerprint experts are able to deal with the fingerprint analysis in a non-emotional manner.

• Further research needed e.g. into length of service and seriousness of the crime.

Evaluation Issues

• Psychology as a science
• Hypothesis testing
• Self report

• Demand characteristics
• Ecological validity