

## Hall and Player (2008)

Will The Introduction Of An Emotional Context Affect Fingerprint Analysis and Decision-Making?

Background and aim: Dorr et al. (2005) gave university research students either good quality or incomplete, poor quality fingerprints to study and a low level or high level emotional stimuli. The results showed that students were affected by the emotional context and this interfered with their decisions, making them more likely to make misidentifications when analysing poor quality or ambiguous fingerprints.



This research raised the following questions:

- Would the same results be found with trained fingerprint experts?
- Are misidentifications made due to emotional bias?

Using the normal practices used by the **Metropolitan Police**, Hall and Player designed an experiment to test the effect of context on fingerprint identification by fingerprint experts. They set out to answer the following questions: Does the written report of a crime, as routinely supplied with the fingerprint evidence, affect a fingerprint expert's interpretation of a poor quality mark? Are the fingerprint experts **emotionally affected** by the circumstances of the case?

**Method:** This was a **laboratory experiment**, but designed to be as life-like as possible. The study took place during work time, in a typical **fingerprint examination room**. The **IV** was whether the participant was allocated to the low-context or the high-context group and the **DVs** were: whether the participant read the crime scene examination report prior to examining the fingerprint; whether the participant could make an identification; and whether the participant would be confident to present the fingerprint as evidence at court. The experiment used an **independent measures design**.

A volunteer's right forefinger was inked onto a piece of paper. This good quality clear mark was then scanned on to a computer and super-imposed on a scanned image of a £50 note. The finger mark was positioned so the background of the note obscured the majority of the ridge detail. The discernible detail within the finger mark was then further obscured. The finger mark and the corresponding set of fingerprint impressions were then given to participants who were asked to give their expert opinions as to whether there was a match. Each participant was allowed access to a fingerprint magnifying glass and an optical magnifying unit.



The volunteers were randomly allocated to groups and were asked to treat the experiment as they would a typical day and no time limit was put in place. The participants were assigned to either the low-emotional context or high-emotional context group. The low-context group of 35 participants were given a report referring to an allegation of forgery (a victimless crime). The modus operandi stated that a "Suspect entered premises and tried to pay for goods with a forged £50 note. The forgery was spotted by cashier. Suspect then decamped (left)". The 35 participants in the high-context group were given a report about an allegation of murder. The final wording on the report read "Suspect then fired two shots at victim before decamping". The participants completed a demographic information sheet detailing where they worked, how many years' experience as an expert they had and whether they had presented evidence at court. The experts were then asked to consider whether the mark was either an identification/match, not an identification/match, insufficient (not enough detail to undertake a comparison), or insufficient detail to establish identity. They were also asked to elaborate on their findings and then to complete a feedback sheet which asked whether they had referred to the crime scene examination report and if so what information they had read and whether they felt that the information contained on the report had affected their analysis and if so, how.

**Results:** Overall, 81.4% indicated that they had read the crime scene report before examining the prints. 52.6% of them were in the **high-context group** and 47.4% in the **low-context group**. 52% of those who had read the high-context scenario felt that they were affected by the information given on the examination report, compared to only 6% in the low-context scenario.

The **final decisions** made by the experts were **very similar** regardless of the emotional context and were **not statistically significant**. The only variation was whether they thought the mark had insufficient detail to undertake a comparison: 46% of experts in the low context scenario stated that they had some points in agreement but not enough to individualise, compared to 37% of the experts given a high context. 17% of those given the high context and 20% of those given the low-context scenario were **confident** enough to present the mark as a positive identification to the court; this was not a significant difference. Overall, the results showed that the manipulated finger marks lay at the boundary of making a conclusive match, confirming the mark to be **ambiguous**.

**Conclusions:** Although emotional context affects a fingerprint expert's analysis it **does not** have any effect on their final decisions. The severity of a case also affects analysis, but again does affect the expert's final decisions. Different crime-type contexts **do not significantly** affect experts' final decisions. When details of a crime are provided with finger marks, it is seen as **unnecessary** by experts. Fingerprint experts are **adept** at dealing with fingerprint analysis in a non-emotional, detached manner. But there may be motivating factors and bias in the collection and processing of forensic evidence.

## **Evaluation**

**Usefulness:** This study found that the emotional context of a situation did not affect the decision making of finger print experts and therefore such evidence is extremely **useful** and reliable enough to be used in court. However, despite such positive results



(although the **external validity** can be questioned), we should still exercise some caution as bias is always possible and therefore such evidence should be presented appropriately. It is also useful to note that expert evidence is much more **reliable** than non-expert evidence and should be treated accordingly.

**Individual/situational explanations**: These findings support the **individual** explanation side of the **debate**. Experts are not influenced by situational factors such as high or low emotional context and regardless of the case accurate decision are made by fingerprint experts. However, non-experts are influenced by **situational** factors and misidentification can occur.

**Sampling bias:** Participants in this study were volunteer fingerprint experts. Therefore, it could be argued that these were a certain type of expert, possibly those who were confident in their ability and were less likely to be influenced by the emotional context of a crime. Furthermore, they all worked for the Metropolitan and may not be representative of all police forces. Therefore this study **lacks population validity**.

## **Exam Style Questions**

Using the research by Hall and Player (1998), explain motivating factors and bias in the collection and processing of forensic evidence. (10)

Explain how the research by Hall and Player (1998) could be used to reduce bias in the collection and processing of forensic evidence. (10)