2 WHAT PREVIOUS RESEARCH HAS FOUND

- Official reports have been asking the forensic community about the possibility of making forensic experts aware of possible cognitive contaminations during their work (National Institute for Standards and Training, 2012; U.S. National Institute of Justice, 2012; U.S. National Research Council of the National Academy of Sciences, 2009).

- Decision-making processes in forensics still need more research in topics such as the factors that affect examiners’ work in the laboratory or when providing testimony in court (Thompson, Tangen & McCarthy, 2014).

- In a recent study, Ulery, Hicklin, Buscaglia and Roberts (2012) demonstrated that examiners who do not repeat their examinations can have different quality standards from their peers.

- Another study (Ulery, Hicklin, Buscaglia & Roberts, 2011) shows that examiners frequently do not perform blind verification, which is not in accordance to ACE-V’s guidelines.

- Coen-Cagli and colleagues’ study (2009) have used technology such as eye-tracker to better understand how experts work. Another study, this time with fingerprint experts, made by Yu, Busey and Vanderkolk (2011) focused mainly on differences between senior experts and novices.

- The authors claim the possibility of having a reliable and accurate tool like eye-tracker to measure subjects with “high-quality empirical data” regarding their eye movements (p.212).

3 INDIVIDUAL INTERVIEWS

In order to have the examiners’ perspective for this study, I will conduct individual interviews with fingerprint examiners due to:

- There is a significant amount of research that appears to focus exclusively on examiners’ performance rather than their opinion, motivation and attitude towards the ACE-V Methodology process.

- This kind of information will contribute new knowledge to the existing literature since it will demonstrate what examiners think about their work!

POSSIBLE QUESTIONS TO DISCUSS

- How fingerprint examiners receive the guidelines from official reports?
- What kind of contextual information is necessary for examiners?
- Which are the ideal work conditions for fingerprint analysis?
- How important is research for examiners’ practice?
- Is it possible to provide forensic procedures in fingerprint analysis?

4 LABORATORY EXPERIMENTS

- Some of the experiments will be carried out using Eye-Link 1000 in order to obtain biometric data such as:

  - Eye movements when looking for minutiae;  - Time spent on the task.

- Laboratory experiments (with/without) Eye-Link 1000 will test how the current guidelines and research are important in fingerprint examiners’ work.

- The variables I am looking to research are related to cognitive contamination and will be split in two categories:

  - Internal cognitive contamination (eg, internal procedures within each lab).
  - External cognitive contamination (eg, suspect’s criminal record; type of Crime).

REFERENCES