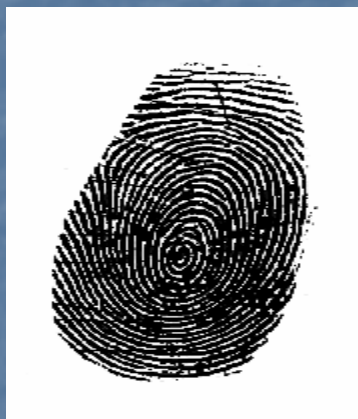


The opinions, findings, and conclusions or recommendations in this presentation are those of the author and do not necessarily reflect the views of any associated agencies



The Admissibility Status of Latent Print Evidence – Has the Problem Really Gone Away? And Whose Problem is it?

American Academy of Forensic Sciences February 20, 2004
Anjali R. Swienton, M.F.S, J.D.

Is there still a problem?

- n Numerous challenges
- n To date, none have been granted
- n The underlying question – does the current status of fingerprint examination research satisfy the legal admissibility standard? remains

Editorial in Science

"It's not that fingerprint analysis is unreliable. The problem, rather, is that its reliability is unverified either by statistical models of fingerprint variation or by consistent data on error rates."

Dr. Don Kennedy

Fingerprint Comparison

Based on assumptions of uniqueness and permanence of friction ridge patterns

- n Underlying assumptions are not at issue
 - n Judicial notice
 - n Data from embryological development and statistical studies
- n Comparison techniques used to make identifications are

Lab vs. the courtroom

When techniques used in the lab are brought into the courtroom, must play by the rules of the court

For scientific or technical testimony, those rules include satisfying *Daubert* and reliability

DNA Wars as a Model

- n First use of DNA in criminal trials in late 1980's
- n Technology was merely science used in research applied to human identification
- n Didn't fully anticipate questions courts would ask
- n NRC I&II
- n Had to go back to the lab and do the research to provide the data courts demanded

Mistakes do happen

- n 142 wrongfully convicted have been exonerated by DNA testing to date
- n Shirley McKie case in Scotland
- n No way to know how many may be wrongfully incarcerated because of a bad latent print identification

So Where's the Problem?

- n Absolute Identification - when match is called the examiner is claiming that the latent print necessarily came from the individual in question to the exclusion of all other fingers in the world.
- n "Zero error rate"
- n No uniform standards for making comparisons and identifications
- n Subjectivity aspect of identifications

Byron Mitchell case

- n *United States v. Mitchell, Cr. No. 96-407*
- n First *Daubert* challenge
- n 1999 Philadelphia
- n Defense motion denied

ACE-V

- n **Analysis** – determine whether available ridge detail is sufficient, quantitatively and qualitatively, for individualization
- n **Comparison** - Systematically compare various friction ridge arrangements and shapes including relative pore position where possible

ACE-V

- n **Evaluation** - evaluate whether the concordance is of sufficient quantity and quality to permit a conclusion that they were made by the same portion of friction skin.
 - n Final decision is subjective
- n **Verification** - every individualization must be confirmed by another qualified examiner working independently

Daubert Factors

- n Testing
- n Error Rate
- n Standards Controlling the Technique's Operation
- n Peer Review
- n General Acceptance

Plaza I

The question:

Are fingerprint identifications scientifically reliable under FRE 702 and *Daubert* factors?

All scientific testimony must be relevant and reliable...derived by the scientific method.

179 F. Supp.2d 492

January 7, 2002

Testing

Gov claims technique has been tested for 100 years by being admitted in court.

Pollack:

- n this does not test the technique
- n adversarial testing in court is not what the *Daubert* court meant
- n scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified

Error Rate

Gov divides error into methodology and practitioner error.

Claim methodology error is irrelevant and that practitioner error can be detected and corrected by another qualified examiner

If scientific method is followed, error in the analysis and comparative process will be zero

FBI Survey in Mitchell Case

Prints sent to 53 labs

34 responded

8 failed to make identification.

Sent enlarged prints back for re-examination.

All labs successfully identified prints.

Reasons given for labs' failure to make original identifications

- n Examiner didn't know survey was related to a *Daubert* hearing
- n Photos of 10-print cards or latent prints were insufficiently clear
- n 3 of the examiners just screwed up
- n Inexperience
- n Insufficient time
- n Examiner attitude toward the survey was not as serious as it should have been
- n It was late in the day and examiner was probably tired

Error Rate

Pollack:

Can't have a fingerprint examination without an examiner. People make errors, therefore, there has to be an error rate associated with the process. The rate of those errors has to be an important part of evaluating whether or not the process works

Standards Controlling the Techniques

- n History of different number of Galton point requirements country to country
- n No mandatory qualification standards for individuals to become fingerprint examiners, no uniform certification process
- n *With such a high degree of subjectivity (in making final identity decisions) – difficult to see how fingerprint identification is controlled by any clearly discernible set of standards to which most examiners subscribe*

Peer Review

Courts have claimed that the verification phase of ACE-V process constitutes peer review

Peer Review

Pollack:

- n numerous writings exist that discuss fingerprint identification techniques but it is not apparent that their publication constitutes submission to the scrutiny of the scientific community in the Daubert sense*
- n when identification decisions are made subjectively, another subjective opinion rendered in concordance by another examiner does not make the initial conclusion scientific, or constitute peer review*

General Acceptance

Gov claims that because fingerprints have been admitted in court for over 100 years they have been accepted

General Acceptance

Pollack:

- n general acceptance by fingerprint examiner community does not meet the standard set by FRE 702. Fingerprint examiners do not constitute a scientific community in the *Daubert* sense
- n general acceptance does not help show that an expert's testimony is reliable where the discipline itself lacks reliability
- n fingerprint examinations are generally accepted among fingerprint examiners but that in itself is not enough

The Ruling

Up to the evaluation stage, a fingerprint examiner's testimony is descriptive, not judgmental. Allow testimony of how prints were obtained and any similarities observed, but no testimony to ultimate conclusions of identity

Plaza II

Government filed motion to re-hear the case, Pollack agreed. This time he came to the conclusion that although the technique still failed on testing, the other factors (error rate, peer Review and publication and general acceptance) were met by finding that fingerprint identification was not a science

188 F.Supp.2d 549

March 13, 2002

Testing

Still not met (though Pollack addresses this in his ruling)

Error Rate

FBI proficiency tests scored high from 1995 to date.

Proficiency tests are less demanding than desirable, but defense offered no proof that certified FBI examiners as a group have not achieved at least an acceptable level of competence

Error Rate

In the absence of actual data on rate of error, since FBI examiners rarely make mistakes on proficiency tests, it stands to reason that they rarely make mistakes when presenting ACE-V testimony in court

Standards

Pollack:

Standards prescribed for qualification as an FBI examiner are clear

However, the *Daubert* criteria for standards refer to standards for the **techniques** themselves, not the examiner. This is not addressed in the opinion at all

Peer Review

Fingerprint examiners are not scientists so forensic journals in which their writings on fingerprint identifications appear are not scientific in the *Daubert* sense. This should not go against the utility of their work

General Acceptance

General acceptance should not be discounted because examiners have technical knowledge and are thus not members of the scientific community (he had already deemed general acceptance satisfied in Plaza I)

Subjectivity

Pollack disagreed with himself, stating there are many situations in which an expert's manifestly subjective opinion is regarded as admissible evidence in an American courtroom

The Ruling

- n Contrary to my opinion in my January 7 opinion, I am now persuaded that the standards which control the opening of a competent fingerprint examiner are sufficiently widely agreed upon to satisfy Daubert's requirements*
- n Scientific tests of ACE-V would clearly aid in measuring ACE-V's reliability, but as of today, no such tests are in hand. For NIJ or other institutions ...to sponsor such research would be all to the good. But to postpone present in-court utilization of this "bedrock forensic identifier" pending such research would be to make the best the enemy of the good*

Ruling I vs. II

	I	II
Testing	N	N
Peer Review	N	Y
Error Rate	N	Y
Standards	N	Y
General Accept	Y	Y
Admit Testimony	N	Y

So Where Does This Leave Us?

Current public interests like security and justice demand that only the best and most reliable science be proffered in court. Pollack's suggestion is a good first step, but the reality is, that until courts demand proof, examiners have no incentive to do the research.

No way to know how many wrongfully incarcerated there may be who are there, at least in part, due to fingerprint examinations

Cowen

- n Stephen Cowens – officer shooting in Boston 1997.
- n Cowens was convicted on eyewitness evidence and a left thumb print with a 16 point match confirmed by 2 BPD examiners.
- n Earlier this month DNA testing performed on several evidence items exonerated him
- n The fingerprint was reexamined and found not to match him

Science vs. Law

- n Science is an ongoing collaborative process
- n Law seeks final resolution through the adversarial system
- n Science seeks truth
- n Law seeks justice
- n Both will be served by conducting research on the ACE-V technique

Science for Science's Sake

- n Science teaches that you can't know the answers until you ask the questions.
- n Science is a process or method by which factual statements or predictions are devised, tested, evaluated, revised, replaced, rejected or accepted.
- n In light of a concrete case where we know something went wrong (Cowen), we must look into the what, why and how

Who should be responsible for conducting the research?

- n The greater the stakes in property, lives and liberty, the more incentive the system should have to ensure that only proven reliable methods are being testified to in court.
- n Responsibility as scientists who testify in court to provide it.
- n Responsibility of judges who admit the testimony to demand it.

Daubert and FRE 702 provide guidance for admissibility of expert evidence

Courts can continue to say that fingerprint analysis is reliable, but that alone does not make it so. Only scientific testing will provide the empirical data to prove it.

THANK YOU!