Testimony Issues in a Post – PCAST World

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Cali Forensics

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CUGI Annual Education Conference

Outline of Presentation

- My contentious case - post PCAST report release
- How you can prepare for rigorous testimony
- Brief points from the PCAST Report
- Follow up on my case

Background

- General case info
  - Prelim
    - Continuance
      - Expert summoned
        - Motion
          - 801 hearing
            - Trial

SDPD Case Approach

- Used to be request driven
  - Would wait to work cases upon request from the Detective

- Pro-active approach
  - Receive evidence from the field/CSU, get assigned and work them proactively

General case info...

- 459 PC (BURGLARY)
- One latent print envelope submitted with *two elimination exemplars and two latent print cards:*

    - *SURFACE: lower window frame and inner lower left side of the window.*
        - One **LPC** deemed **NV**
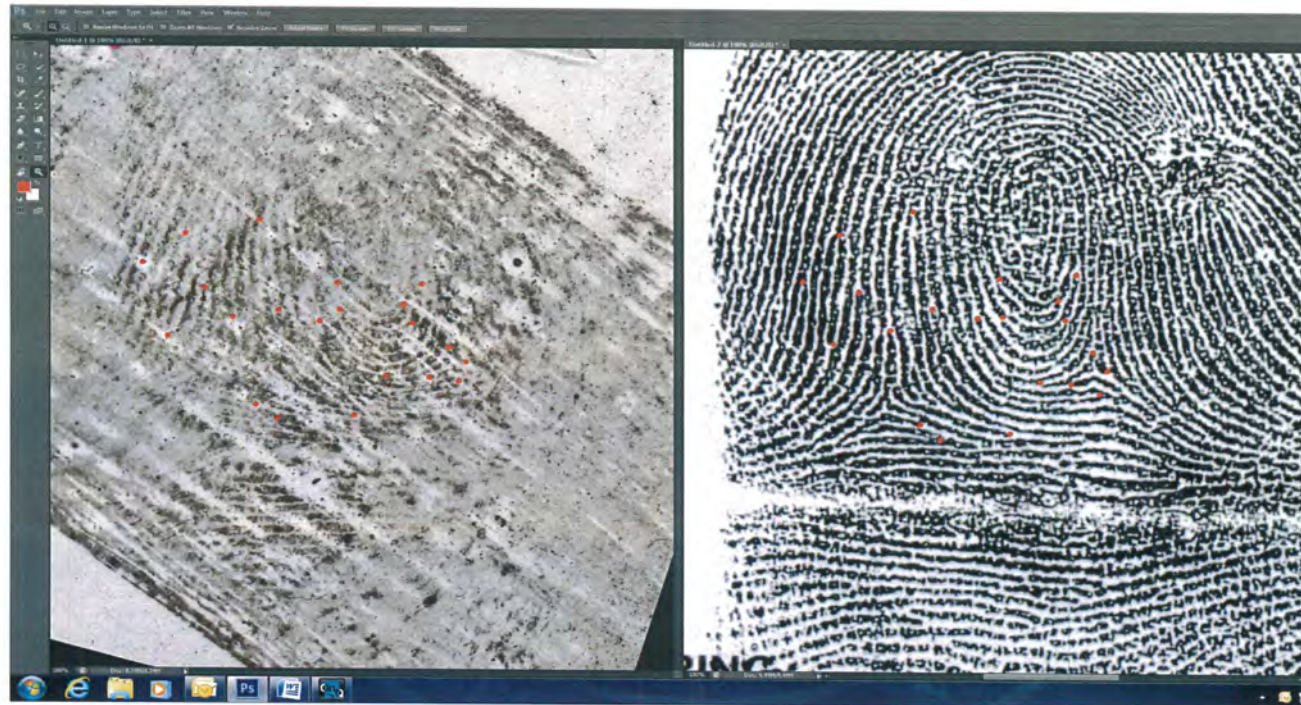   - One **LPC** with one **ALPS** quality impression

General case info...

o Two elimination prints submitted – *NOT COMPARED*

• Discretion of the examiner

o Exemplars were not complete so I did not compare

• This became an issue in the hearing and trial

o Impression searched through the LOCAL database

• HIT

Data observed Primary Examiner - 21 pts

Data Observed for Verifier - 21 pts

VERIFICATION

LPC 01 Impression A   #4/Right Ring o

Over the years SDPD has added more to their case packets….

· · ·

TRANSPARENCY

This print was not on the 'margin' of the decision-making threshold…

- That margin where we see variability amongst examiners
  - 6-8/9 range

- 21 points
  - Orientation known
  - Anatomical source known
  - Focal points estimated (delta and core)

  - Thought this would not create as much contention

Preliminary Hearing

July 19, 2016

PRELIMINARY HEARING

- Deputy District Attorney: New District Attorney
  - (NO experience with FP cases)

  - Typical Voir Dire
    - Accreditation, how many times I have testified, process, etc…

    - Evidence:
      - Process of receiving evidence, analysis, *suitability* (and what is that) process of searching a print and what you do if you get a HIT

PRELIMINARY HEARING

- Defense Attorney:
  - Evidence:
    - What is deemed 'suitable'?
      - SDPD has a suitability criteria for:
        - AFIS searches
        - Comparisons
          - Give us something to measure and articulate in court
    - How many clear points were found on the latent prior to being put into AFIS?
      - Counted this on the stand (17)
      - Then he wanted me to count how many points were in the known

PRELIMINARY HEARING

DEFENSE ATTORNEY
o Candidates List: (BIAS)
- What is the scoring system based on?
- How many of the other candidates did I compare to this print?

o Are fingerprints subjective?

o What is confirmation bias? (give an example)

PRELIMINARY HEARING

o Verification: (BIAS)
  - What information my verifier gets
    o Blind verification

o NAS report:
    o Fingerprints are fallible

o Erroneous ID: (BIAS)
  - Mayfield

Preliminary Hearing was <u>PRE-PCAST</u> release

Receive subpoena for the Trial
- Called the DA
  - Knew it was going to be contentious based on:
    - Prelim
      - Line of questioning by the defense
      - "1 ID" on the case
        - No DNA or other physical evidence

District attorney says…

He thinks it is going to be continued

Case gets continued....

About a week later...

PCAST Report is released…

. . .

OH F*&$SHIZZLE!!!

Several weeks later...

- Pre-Trial Meeting with DDA
  o Different DA than the Prelim
- Go over case at his office
- DA states that the defense has an outside expert

DDA:
"Uhhhh – It's Simon Cole"

Simon Cole

Professor of Criminology, Law &
Society

Ph.D, UC IRVINE

Criminology, Law & society

Science, technology, law & criminal
justice

Several critics within the fingerprint discipline...

To name a few:
- o Simon Cole
- o Ralph & Lyn Haber
- o Itiel Dror

Initial thoughts...

- Simon would be testifying in the trial
    - Methodology (ACE-V)
    - Error rates
    - Reliability

Not so bad…could be worse
    - It's not a 'MOTION'

Preparation for trial

- Review of studies
  - Ace-V (validity)
  - Black and White Box
  - Bias

    - And everything else on the planet regarding latent prints!
      - Or do we really?

Keep it simple

- When preparing, narrow down what you will REALLY need to focus on by:
  - Looking at transcripts
  - Looking at the most contentious areas in TODAY'S FP world:
    - Error rates
    - Bias
    - Methodology
    - Subjective vs. Objective

Friday, November 11, 2016
Veterans Day

- Holiday – Day off and I am having a lovely breakfast downtown

  o Phone 'pings' - email

DA emails me that a motion has been filed...

801 Hearing (Motions in Limine)

And the "real" preparation begins…

4 Days to Prepare!

- Found out about motion on Friday and hearing was the following Tuesday
  - Continual preparation is key to avoiding cognitive overload!

How do you prepare for a hearing like this?

. . .

How I prepared:

- Transcripts from prelim
- Motion
- Review NAS, PCAST, Mayfield (OIG)
- Review black box, white box studies
- Review bias studies
- Review SWGFAST documents
- Double-Loop podcast

Double-Loop Podcast

- Glenn Langenburg and Eric Ray
  - Suncloud

- Cover an array of topics
  - LOTS OF GOLD nuggets!!

Narrow down your focus…

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Don't overload yourself with too much.

-Frustrated

-Overwhelmed

-Lack of retention and more…

"Cliff Notes" - Testimony

- If you don't' have some testimony notes to review prior to court, I would _highly_ suggest putting some together:

  - o Nuggets from each study
    - Including limitations
  - o Cliff notes on history, biology, history of methodology, etc…

    - Will be very helpful to you with last minute motions/contentious cases

MOTION

- 17 pages
- Several Exhibits
  - o Cole's CV
  - o NAS, HF Report, PCAST, OIG Report (Mayfield)
  - o Article on erroneous ID(Cowan case – 2004)
  - o Article on erroneous ID (mistaken identity of deceased person –2002)

MOTION

II.

MOTION TO EXCLUDE TESTIMONY AND EVIDENCE OF THE ACE-V METHOD OF LATENT FINGERPRINT ANALYSIS AND ANY LATENT PRINT CONCLUSIONS OR IDENTIFICATION BY RACHELLE BABLER UNDER THE *KELLY-FRYE* STANDARD BECAUSE THE ACE-V METHOD IS NOT SCIENTIFICALLY VALID.

MOTION

A. ▆▆▆▆▆▆▆ requests an Evidence Code §801 hearing to determine the admissibility of the latent fingerprint evidence and testimony.

California evidence code §402(b) provides that "the court may hear and determine the question of admissibility of evidence out of the presence or hearing of the jury." (Evid. Code §402(b).)

Evidence code §801(b) provides that if a witness is testifying as an expert, his testimony in the form of an opinion is limited to such an opinion as is "based on matter (including his special knowledge, skill, experience, training, and education) perceived by or personally known to the witness or made known to him at or before the hearing, whether or not admissible, that is of a type that reasonably may be relied upon by an expert forming an opinion upon a subject to which his testimony relates…" (Evid. Code §801(b).)

MOTION

Based on the new reports and information referenced in *In Limine Motion III* and information from Ms. Babler's testimony at the preliminary hearing, Ms. Babler's testimony about the ACE-V method of fingerprint comparison may not reasonably be relied upon in accordance with Evidence Code §801(b). There have only been a total of two properly conducted studies to determine the accuracy of latent fingerprint analysis and the results of these found that false positive rates can be as high as 1 in 18 cases or as low as 1 in 306 cases (*See In Limine Motion III*, subsection C.) Multiple scholars and academics have found latent fingerprint analysis to unreliable (*See In Limine Motion III, subsection D.*)

Is ACE-V scientifically valid?

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How would you answer this?

MOTION

III.

IF THE COURT DOES ALLOW MS. BABLER TO TESTIFY, THE COURT SHOULD FORBID HER FROM (1) TESTIFYING THAT FINGERPRINT EVIDENCE HAS A ZERO ERROR RATE; (2) THAT ALL BUT ▮▮▮▮▮▮▮ ARE EXCLUDED AS THE SOURCE OF THE LATENT PRINT, AND (3) THAT THE LATENT PRINT BELONGS EXCLUSIVELY TO ▮▮▮▮▮

702 and 801 Hearing

- Have usually seen 702 (evidentiary hearings) in the past
  - Challenging fingerprints as a 'science'

    - 801 hearing is based on 'hearsay'
      - What the declarant does "not" make while testifying at the current trial

Todays challenges seem to be geared towards the examiners testimony, not the fingerprint evidence being unique or persistent...

o Simon said he wasn't contesting that fingerprints are not unique and persistent

o It was more the issues of:
- Reliability
- Methodology
- Error rates
- Overstating conclusions

MOTION

IV.

IF THE MOTION TO EXCLUDE MS. BABLER AND THE FINGERPRINT COMPARISON IS DENIED THE DEFENSE REQUESTS THAT DR. SIMON COLE BE PERMITTED TO TESTIFY AS AN EXPERT ON THE FALLABILITY AND ERROR RATES ASSOCIATED WITH LATENT FINGERPRINT ANALYSIS AT TRIAL IN ACCORDANCE WITH MR. ▮▮▮▮▮▮ SIXTH AMENDMENT RIGHT TO PRESENT A COMPLETE DEFENSE.

Come Monday...there was a mix up in court rooms assigned...

My case gets continued a few weeks

Prolong the misery or breathe a little?

☹ ☺

December 5, 2017

801 Hearing

801 HEARING

- Judge
- DDA
- DPD
- Witnesses:
  - Rachelle Babler
  - Simon Cole

We can choose....

...to create whatever experience we want with what falls on our plate.

o Initially freaked out a bit but chose to embrace this as a huge opportunity to learn from this experience and to share.

Hearing started at 0900

- Simon testified first

- I testified second
  - Went until around 1600

Simon testifying...

- Describing a lot first (acronyms, agencies, etc...)
- Went over his CV, publications, etc...
  - Member of the consensus body for AAFS Standards Board
    - SDO – Standard Developing Organization
- HF Report, NAS, and Madrid Bombing
  - Methodology, strength of conclusions, etc...

  - **PCAST**

PCAST REPORT

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PCAST Report

- PCAST – The Presidents Council of Advisors on Science and Technology
  - Follow up for NAS– "where are are now"
    - Released on September 20, 2016

  - Year long study
  - Compiled and reviewed more than 2000 papers from various sources

  - Criticized-
    - No forensic practitioners/experts on that advisory board

PCAST

- "PCAST recommended that a consumer of evidence, such as a jury, be told that there are only two studies that attempt to measure the accuracy of latent print identification, and that the false positive error rates in those studies could be as high as 1 in 306 in one study and 1 in 18 in the other."

  - Noblis/FBI Black BOX
  - MIAMI DADE STUDY

PCAST

- PCAST took the FBI/NOBLIS Black Box Study and the MIAMI DADE Black Box Study and calculated an error rate through a formula knowns as a 'confidence interval' method.

  - o It's a standard and accepted way to report statistics
    - That method calculates the WORST case scenario for those studies
      - o It's NOT the most likely outcome

PCAST

"PCAST finds that latent fingerprint analysis is a foundationally valid subjective methodology—albeit with a false positive rate that is substantial and is likely to be higher than expected by many jurors based on longstanding claims about the infallibility of fingerprint analysis."

PCAST

- ## FBI/NOBLIS STUDY:
  - o False positives: 0.17% (over 17K decisions)
    - *With the follow-up FBI/NOBLIS Black Box study* when they added the "V" (verification), all False positives were caught

- ## MIAMI DADE STUDY:
  - o False positives: 3% (over 4K "ACE" decisions and 532 "ACE-V" decisions)
    - *When verification was added, all false positives were caught*
      - o *Possible clerical errors for several False positives (0.19%)*
        - 35 of 42

Design for each study was a little different as well…

FBI/NOBLIS (Mated Pairs)

MIAMI DADE (Non-Mated Pairs)

ISSUES BROUGHT UP BY THE DEFENSE

Candidates score

- Brought up SWGFASTs position statement on ranking/score
  - The score should not be taken into account

  I said initially in the prelim that I do not take the score into account.

SWGFAST Position Statement

*POSITION STATEMENT ON THE ROLE OF AFIS RANKS
AND SCORES AND THE ACE-V PROCESS*

Standard AFIS ranks and scores cannot currently be considered a mathematical model for assessing the likelihood or probability that a subject deposited a particular friction ridge impression. The purpose of this document is to clarify that AFIS ranks and scores have no role in formulating and stating conclusions based on ACE-V.

Ranks and scores are mechanisms of an AFIS system that provide information about a particular search relative to prospective candidates whose impressions are contained in the AFIS database. They provide possible matching candidates as determined by automated search mechanisms to an examiner.

AFIS does not replace the human expert role in Analysis, Comparison, Evaluation, or Verification (ACE-V). It is inappropriate to use AFIS scores in lieu of Evaluation or Verification decisions. If testifying in court to having followed the ACE-V methodology in response to a "lights-out" AFIS identification, the examiner must have performed a traditional ACE examination separate from the system determination. Additionally a second examiner must have conducted a Verification. This would also apply to searching latent prints in an AFIS database. A latent print examiner cannot use an AFIS system result as the verification step of ACE-V.

My testimony

- Methodology used
- Regarding AFIS
  - suitability, entering, candidates list, score
- PCAST, NAS, Human Factors report
- Uniqueness and persistence
  - Not the contention in this case
- Black Box vs. White Box study
- OSAC Research needs
- Error rates and bias

TRIAL

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TRIAL

- Hearing - December 5, 2016
  - Testified - ~3 hours

- Trial – December 6 -9, 2016
  - Testified roughly ~2.5 hours over 2 days

TRIAL

- Not many witnesses

- Only evidence: Fingerprints

TRIAL

- Lots of similar questions to the hearing
- More detail of my case notes
  - Went through all case notes on a big screen to explain to the jury
- Line of questioning – bit off (DA)

TRIAL

- OSAC Research Needs:
- OSAC Research & Development Needs
  - o One of the OSAC's objectives is to inform the forensic science community of research needs that are uncovered during the OSAC's standards development activities. These research needs recommendations may be considered by other agencies and organizations when they develop their own agency research needs, and when soliciting funding for forensic science research.

TRIAL

Physics/Pattern Interpretation Scientific Area Committee

Bloodstain Pattern Analysis:

Behavior of Blood Outside the Body
- Addendum to Behavior of Blood Outside the Body

Bloodstain Pattern Classification
- Addendum to Bloodstain Pattern Classification

Examiner Reliability Study: Black and White Box Studies on Bloodstain Pattern Analysts
- Addendum to Examiner Reliability Study: Black and White Box Studies on Bloodstain Pattern Analysts

Interaction of Blood and Fabrics
- Addendum to Interaction of Blood and Fabrics

Firearms & Toolmarks:

Assessment of Examiners' Toolmark Categorization Accuracy

Blind Verifications Needs Assessment

Cognitive Bias: To What Extent Does It Affect Firearm and Toolmark Comparison Outcomes

TRIAL

Friction Ridge:

ACE-V Bias

Assessing the Sufficiency and Strength of Friction Ridge Features

Close Non-Match Assessment

Examiner Consistency During Friction Ridge Feature Mark-Up

Friction Ridge Statistical Modeling

Latent Fingerprint Image Quality Usage

TRIAL

- Simon testified after me
  - Wasn't able to watch (can watch each other in hearings but not trials)

TRIAL

- VERDICT: Not guilty

  o Print was on the outside window (could not place him inside)
  o Defense: Alibi

  o POLLED THE JURORS

STUDY GROUP FOLLOW UP

- Presented my case to the group
- District Attorney
  - Viewpoints on how to prepare
- Defense Attorney
  - Viewpoints on how he would cross and what he would look for

… and

Follow up with Simon

. . .

A few weeks ago…

- At TRI-DIVISION IAI presenting several topics
  o Simon was presenting

- SO WAS I! ON OUR CASE! ☺

Additional contentious cases in San Diego…

- Another SDPD LP Examiner
  - Papers filed right before she went on the stand
    - Trial
      - Another SDPD case with rigorous and lengthy testimony

    - Another AGENCY in the county
      - Similar line of questioning

      - SIMON just testified in another trial
        - Multiple ID's
        - GUILTY verdict

        - CANADA, CALIFORNIA, NEVADA

OSAC Response to the PCAST

- OSAC FRS reponse wasn't released until December 14, 2016 – about a week after my case

  o Is a well written response of 5 MAIN points brought up in the PCAST report

Organization of Scientific Area Committees
Friction Ridge Subcommittee

Response to Call for Additional References Regarding:

President's Council of Advisors on Science and Technology
REPORT TO THE PRESIDENT
Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods
14 December 2016

he Organization of Scientific Area Committees (OSAC) Friction Ridge Subcommittee (FRS) is thankful for
he attention of the President, and other relevant members of the Executive Office, including the
resident's Council of Advisors on Science and Technology (PCAST), to ensure forensic science methods
re adequately resourced, properly evaluated, and appropriately applied in practice to safeguard the

In closing

- If you have a motion/trial with Simon – don't freak out (like me ☺)

- Start preparing NOW
  - o Have had several examiners contact me re: cases they have/might have with Simon

- Be prepared – can't stress this enough
  - o Start cliff notes for testimony
  - o Study up on black/white box studies, cognitive NAS, Mayfield, PCAST and studies that show the reliability of examiners coming to correct conclusions

Long gone are the days…

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…in which you can just testify without having research or a study in your back pocket and/or transparent case notes.

JUST DO THE BEST YOU CAN!! ☺

. . .

The moral of my story is…

The Law of Attraction works!

. . .

If you need assistance:

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