

Beyond Mayfield: Wrongful Convictions Due to Fingerprint Errors and Lessons Learned



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United Flight 173



United Flight 173



United Flight 173



- Death toll¹
 - 8 passengers
 - Flight attendant
 - Flight engineer
- 24 passengers and crew with serious injuries

Let's Break it Down!

- Captain Broom
 - Experienced



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 - “Certified” in his field



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Let's Break it Down!

- Captain Broom
 - Experienced
 - “Certified” in his field
 - Followed all protocols and procedures
 - Exercised great caution



Let's Break it Down!

- Captain Broom
 - Experienced
 - “Certified” in his field
 - Followed all protocols and procedures
 - Exercised great caution
 - Crashed the plane



What Happened Next?

- FAA changed regulations
- Implemented innovative training
- Published exhaustive assessments

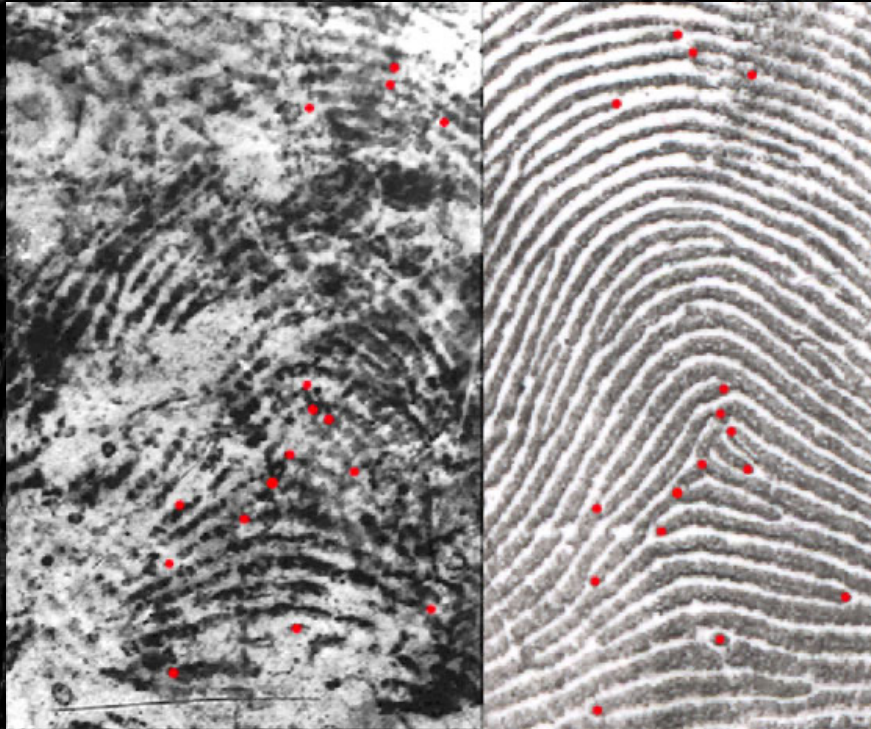


Studying cases of error allows us to...

- Understand how errors occur
- Take steps to limit the possibility of similar errors in the future



Mayfield & McKie



- Errors are not limited to
 - Western adversarial system
 - Countries with holistic standards for fingerprint analysis
 - Uncertified examiners or unaccredited laboratories
 - Unverified same source attributions
 - Cases without defense experts

Wrongful Convictions

- **Faulty** or **misleading** forensics has been shown to be the second leading cause of wrongful convictions across the United States.²
 - Evidence is **faulty** when the science does not support the conclusions testified to under oath.
 - Evidence is **misleading** when the conclusions are expressed with an inappropriate degree of confidence or when limitations are not sufficiently communicated to the fact finder.



Stephan Cowans

- Massachusetts (1997)
 - Police officer shot twice
 - Witness watching from a window
 - Subject flees, dropping a baseball cap
 - Subject forcibly entered a home
 - Drank from a glass mug
 - Left a gun, t-shirt

STORY TIME



Stephan Cowans

- Eyewitness identification – photo array lineup
- Woman and her daughter did not identify Cowans from the lineup.

STORY TIME



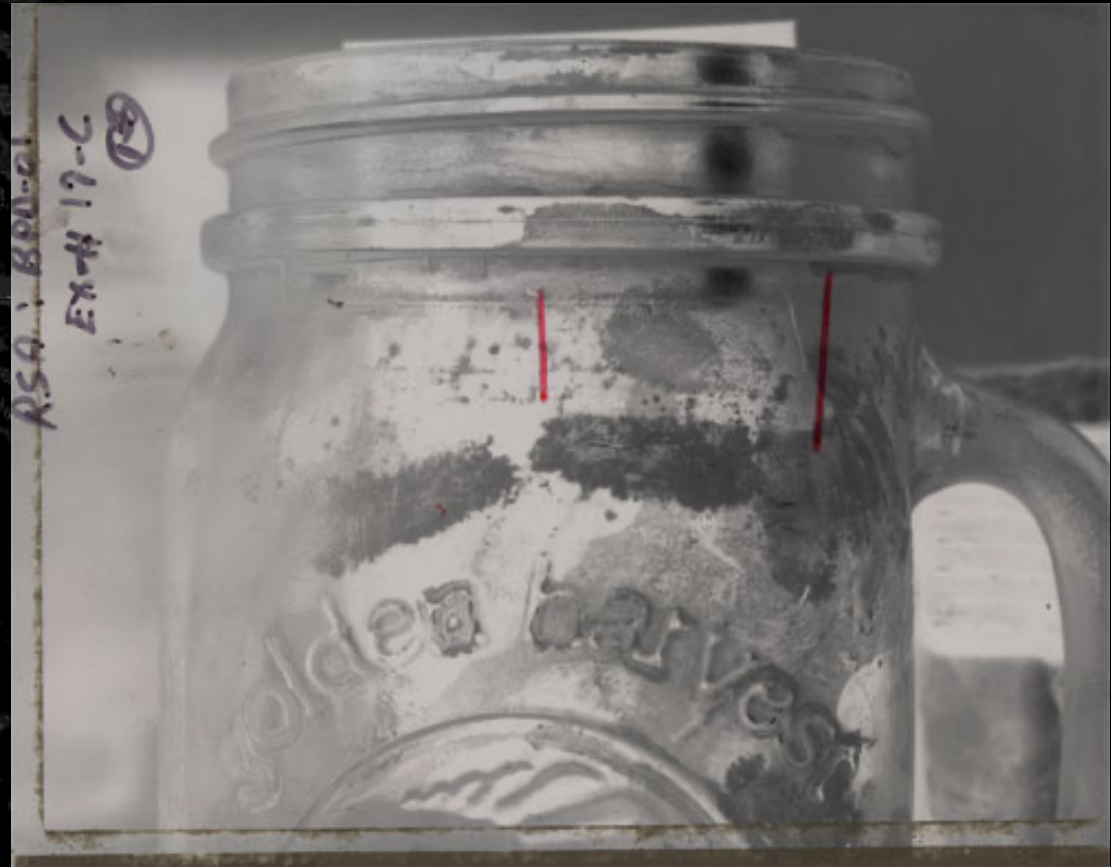
Stephan Cowans

- Cowans was arrested
- Latent print from the mug ID'd to Cowans
 - 16 corresponding minutiae
- Verified by a 2nd examiner
 - Verified by two defense experts
- Convicted in 1998

STORY TIME



Stephan Cowans



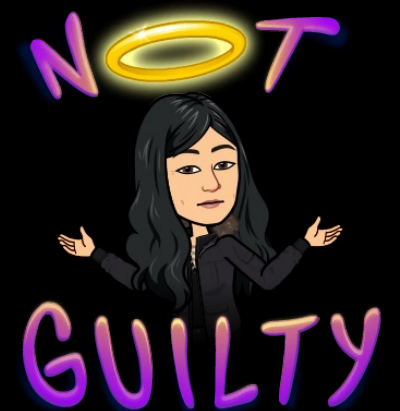
Stephan Cowans



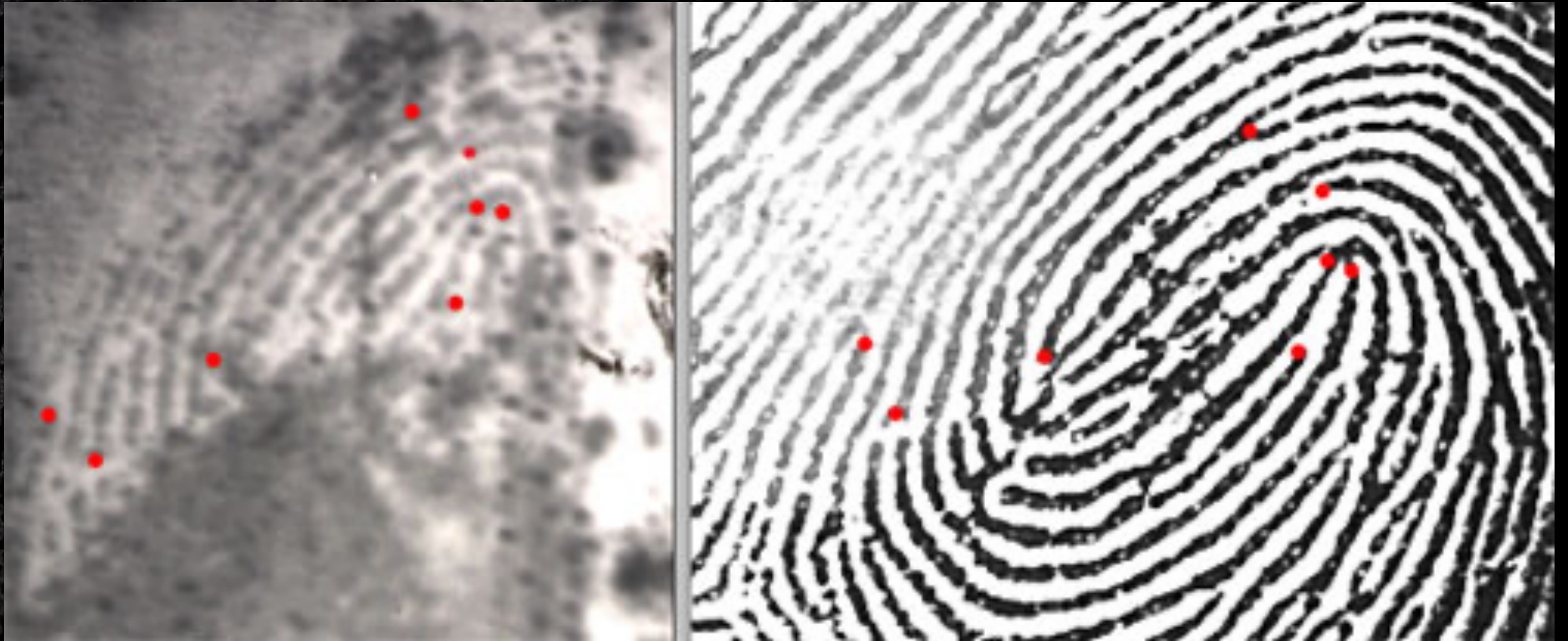
Erroneous ID: latent print from mug to Cowans #6 finger

Stephan Cowans

- Innocence project (2003)
- DNA profile from the baseball cap, sweatshirt and mug eliminated Cowans as a contributor⁴
- ID was re-examined by an independent expert and found to be erroneous⁴



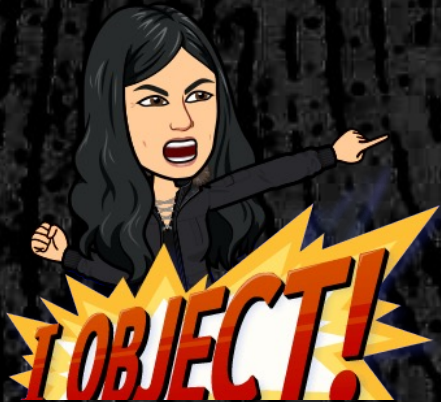
Stephan Cowans



ID: Latent from mug to (v) exclusionary prints [independent expert, 2004]

Stephan Cowans

- Results of inquiry
 - Inadequate practices and culture
 - Lack of training
 - Unit was a “dumping ground” for officers who were unfit for other duties
 - Punishment detail



Stephan Cowans



- Cowans stated to the press that “the evidence against him was so overwhelming that if he had been on the jury, he would have voted to convict himself.”⁵

Lana Canen

- Indiana (2002)
- Elderly woman was found deceased in her ransacked apartment⁶
- Canen and Andrew Royer identified as potential persons of interest

STORY TIME



Lana Canen

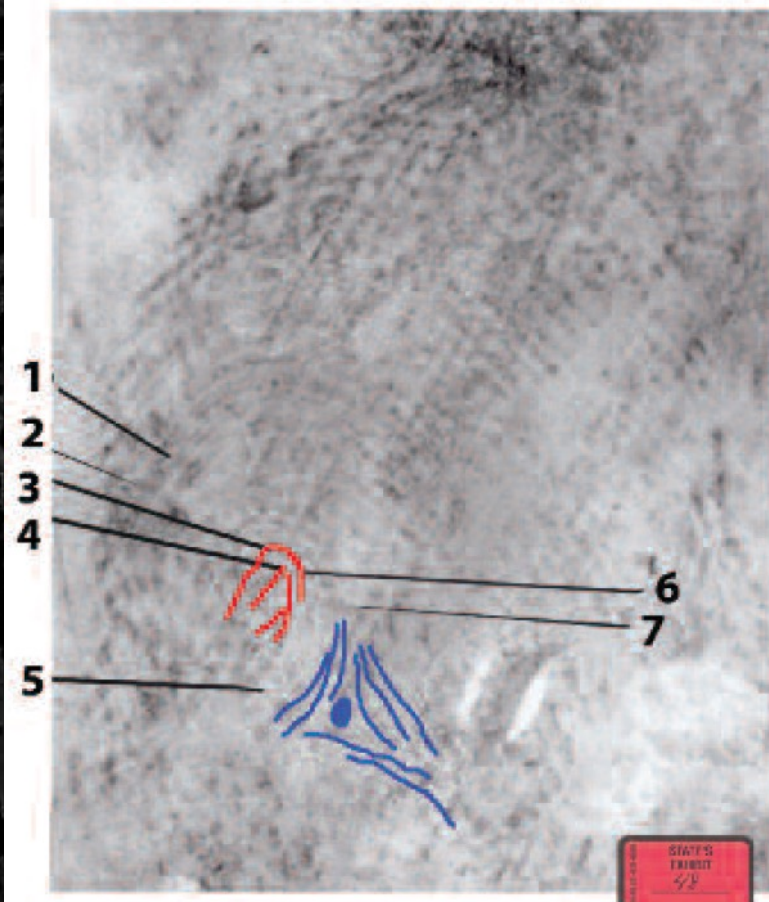
- One latent fingerprint from a plastic tub of prescription pill bottles ID'd to Canen
 - 7 corresponding minutiae
- Convicted of homicide in 2005
- Sentenced to 55 years

STORY TIME

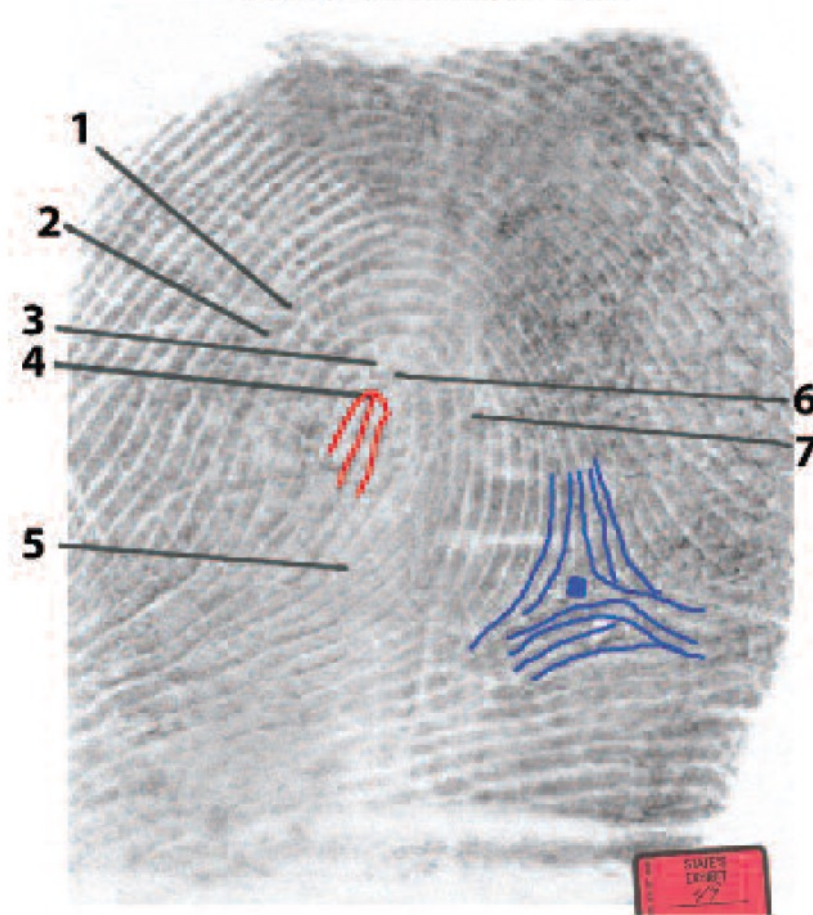


Lana Canen

Latent Print



Inked Print



Lana Canen

- 8 years in prison
- Independent defense expert exposed the error⁶
- Results of inquiry
 - Bias due to pressure from investigators
 - 1st investigation of that department's cold case unit
 - A lack of training



Mitigating Errors

- Implementation of scientifically sound procedures and protocols (SOPs and Standards)
- Thorough vetting of candidates during recruitment
- Training
- Continuous training for current fingerprint examiners
- A rigorous quality control program
- A culture that focuses on scientific rigor and embraces positive change in the discipline



Conclusions

- Many errors are found due to fortuitous circumstances
- Even those with the resources to hire defense experts are not immune to wrongful incarceration
- Fingerprint examiners should be able to address the procedures and policies their agencies have in place to mitigate errors
- Fingerprints represent people
- Focus on PURPOSE rather than PROCEDURE

Conclusions



Questions?



References

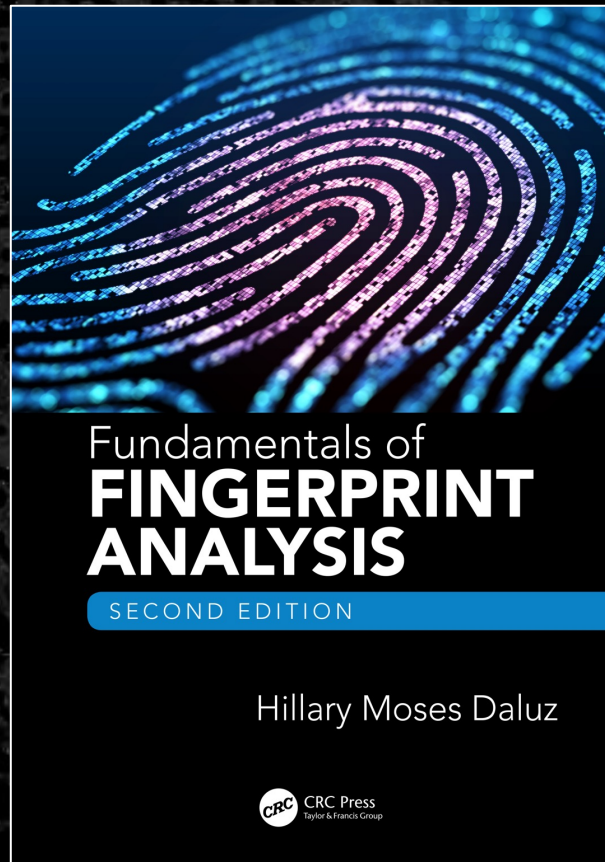
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COURTROOM TESTIMONY FOR FINGERPRINT EXAMINERS

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