GOODBYE TO ALL THAT, OR A FOOL'S ERRAND, BY ONE OF THE FOOLS: HOW I STOPPED WORRYING ABOUT COURT RESPONSES TO HANDWRITING IDENTIFICATION (AND “FORENSIC SCIENCE” IN GENERAL) AND LEARNED TO LOVE MISINTERPRETATIONS OF KUMHO TIRE V. CARMICHAEL

43 Tulsa L. Rev. 447 (2008)

The NAS Report: A Glass Nine-Tenths Full (This talk is about the other tenth).

Recommendation 5: The National Institute of Forensic Science (NIFS) should encourage research programs on human observer bias and sources of human error in forensic examinations. Such programs might include studies to determine whether and to what extent contextual bias in forensic practice (e.g. studies to determine whether and to what extent the results of forensic analyses are influenced by knowledge regarding the background of the suspect and the investigator's theory of the case). In addition, research on human error should be closely linked with research to characterize and quantify the amount of error. Based on the results of these studies, and in consultation with its advisory board, NIFS should develop standard operating procedures (that will lay the foundation for model protocols) to minimize, to the greatest extent reasonably possible, potential bias and sources of human error in forensic practice. These standard operating procedures should apply to all forensic analyses that may be used in litigation.

Sequential Unmasking: A Means of Minimizing Observer Effects in Forensic Science Practice

Dan Krane et al (Ford, Gilder , Inman, Jaimieson, Koppl, Kornfield, Rudin, Taylor and Thompson)

2008 JFS 1006

Procedural Bias in Forensic Examinations of Human Hair

Larry S. Miller

11 Law and Human Behavior 157

(1987)

56 hair identification tests were prepared.

Half the tests reflected the usual practice of presenting a known hair from a “suspect” and a single “questioned” hair from the crime scene, and asking if the two “matched”.
(a “show-up”)

The other half of the tests presented five “known” hairs from “suspects” to be compared to the “questioned” hair from the crime scene, and asked if the hair from the scene matched any of the suspects.
(a “line-up”)

In every test, the “crime scene” hair did not come from any of the “suspects,” though the hairs of all the “suspects” were selected to present characteristics not obviously dissimilar to the crime scene hair.

14 qualified examiners were given four tests each, two from each set of test designs

Erroneous declarations of “match” were found in 3.8% of the responses to the “line-up” condition, but in 30.4% of the responses to the “show-up” condition.

Still not convinced?

Visual hair comparison already known to be too unreliable to draw any general conclusion based on studying it?

Consider the Dror et al Study (2006 Forensic Sci. Int. 74-78)

Five experienced fingerprint examiners were asked by a colleague to evaluate the Mayfield prints after it was known that the FBI had misidentified them

In reality, they were given prints they themselves had found to match in actual cases

Four of the five now came to a different result.

One now said that the latent was too small and smudged to reach a conclusion

And three now concluded that the latent didn’t match the known, (when they had come to the opposite conclusion in the real case)

Think the n is too small?

Think the malleator is too unusual?

How about a replication using more normal context cueing.

Itiel Dror & David Charlton, Why Experts Make Errors

56 J. Forensic Identification 600

(2006)

6 experienced fingerprint examiners were given eight sets of two prints each by their supervisor.

All of the print pairs given each examiner were from previous cases where that examiner had declared that there was a sufficient basis to declare a match (four each) or an exclusion (four each)

In addition, each of these cases had been rated as to difficulty by the examiner when originally performing the comparison.

In four of the test cases presented (two of previous “match” [one hard, one easy] and two of previous “exclusion,” [one hard, one easy], no context information was provided, merely a request for comparison

In the other four cases (similarly distributed), not uncommon context information was given (“suspect has confessed, etc”).

The test thus resulted in 48 decisions (6 examiners X 8 comparisons each)

Of those 48 decisions, 6 were inconsistent with the previously rendered decision in the actual case. (12.5%)

Two of the six examiners gave results completely consistent with their previous decisions. The other four did not.

Three of the four remaining examiners changed one decision each, and the other examiner changed three.

Four of the changes were in tests where context information was supplied, and two were in cases where no context information was supplied

Five of the switches were in cases rated as difficult, but the one switch in an easy case (from match to exclusion) was in a case containing context information suggesting exclusion.

These effects are not limited to the “forensic identification skill” areas.

DNA in mixed sample situations

Even Forensic Pathology

A Forensic Scientist is not a Detective!

(And should resist wanting to be one!)