Forensic Science Disciplines and *Daubert*: A Trend Toward "Split Testimony"

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Introduction

- Review of federal admissibility standards
- Interpretations of the *Daubert* “reliability” standard
- Case outcomes
  - Handwriting
  - Firearms and Toolmarks
  - Latent prints
- The common thread

Federal Admissibility Standards

Frye v. United States (1923)

- "Just when a scientific principle or discovery crosses the line between experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while the courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have general acceptance in the particular field to which it belongs."

Federal Admissibility Standards

Federal Rules of Evidence (1975)

- Rule 401:
  - "Relevant evidence" means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.
- Rule 402:
  - All relevant evidence is admissible… Evidence which is not relevant is not admissible.
- Rule 403:
  - …evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury…

Federal Admissibility Standards

Federal Rules of Evidence (1975)

- Rule 702 (original):
  - If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education, may testify thereto in the form of an opinion or otherwise.

Federal Admissibility Standards

Federal Rules of Evidence

- Rule 702 (amended post-*Daubert*):
  - If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if
  - (1) the testimony is based upon sufficient facts or data,
  - (2) the testimony is the product of reliable principles and methods, and
  - (3) the witness has applied the principles and methods reliably to the facts of the case.

Federal Admissibility Standards

Daubert v. Merrell-Dow Pharmaceuticals, Inc. (1993)

- *…Frye* made "general acceptance" the exclusive test for admitting expert scientific testimony. That austere standard, absent from, and incompatible with, the Federal Rules of Evidence, should not be applied in federal trials.
  - *Frye's* "general acceptance" test was superseded by the Rules' adoption.
- That the *Frye* test was displaced by the Federal Rules of Evidence does not mean that the Rules themselves place no limits on the admissibility of purportedly scientific evidence…under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.

Federal Admissibility Standards

Daubert v. Merrell-Dow Pharmaceuticals, Inc.

- The *Daubert* factors:
  - Testing of technique
  - Peer review and publication
  - Known or potential error rate
  - Existence and maintenance of standards
  - General acceptance

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Federal Admissibility Standards

Daubert v. Merrell-Dow Pharmaceuticals, Inc.

- The *Daubert* factors:
  - Testing of technique
  - Peer review and publication
  - Known or potential error rate
  - Existence and maintenance of standards
  - General acceptance
- Is this a checklist?
  - The inquiry envisioned by Rule 702 is, we emphasize, a flexible one. Its overarching subject is the scientific validity – and thus the evidentiary relevance and reliability – of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.

Federal Admissibility Standards

Kumho Tire Co., Ltd. v. Carmichael (1999)

- …it would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between "scientific" knowledge and "technical" or "other specialized" knowledge. There is no clear line that divides the one from the others.
- Neither is there a convincing need to make such distinctions.
- We conclude that *Daubert's* general holding – setting forth the trial judge's general "gatekeeping" obligation – applies not only to testimony based on "scientific" knowledge, but also to testimony based on "technical" and "other specialized" knowledge.

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Federal Admissibility Standards

The *Daubert* "Reliability" Standard

- *Daubert v. Merrell-Dow Pharmaceuticals, Inc.* (1993)
  - Provided five-factor "checklist" for scientific (only?) testimony
- *Kumho Tire Co., Ltd. V. Carmichael* (1999)
  - Clarified that the five *Daubert* factors can apply to any expert testimony at the judge's discretion

- What happened in between?
  - Messy split between U.S. federal circuits
  - Consider *U.S. v. Starzecpyzel* (1995)

Interpretations of the *Daubert* "Reliability" Standard

U.S. v. Starzecpyzel (1995)

- …the Court now concludes that *Daubert*, which focuses on the "junk science" problem, is largely irrelevant to the challenged testimony. The *Daubert* hearing established that forensic document examination, which clothes itself with the trappings of science, does not rest on carefully articulated postulates, does not employ rigorous methodology, and has not convincingly documented the accuracy of its determinations. The Court might very well have concluded that forensic document examination constitutes precisely the sort of junk science that *Daubert* addressed.

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Interpretations of the *Daubert* "Reliability" Standard

U.S. v. Starzecpyzel (1995)

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Interpretations of the *Daubert* "Reliability" Standard

U.S. v. Starzecpyzel (1995)

- Yet…forensic document examination *does* involve true expertise, which may prove helpful to a fact finder. (FRE 702)
- (The Court therefore treats forensic document expertise under the "technical, or other specialized knowledge" branch of Rule 702, which is apparently not governed by *Daubert*)
- FDE testimony…does suffer from a substantial problem of prejudice, which is the subject of Fed.R.Evid. 403…likely perception by jurors that FDEs are scientists
- This perception might arise from several sources, such as…the overly precise manner in which FDEs describe their level of confidence in their opinions…

Interpretations of the *Daubert* "Reliability" Standard

U.S. v. Starzecpyzel (1995)

- This court failed handwriting under *Daubert* but admitted it anyway under FRE 702 as "technical" knowledge – became a trend in some circuits and disciplines, and not others
- Splits between federal circuits over whether *Daubert* applies only to scientific testimony, or to all expert testimony – did fingerprints sit this one out?
- *Starzecpyzel* is a precursor for future prejudice challenges under FRE 403 to many "identification" disciplines on the grounds that opinions are being overstated

Federal Admissibility Standards

How Important are the *Daubert* Factors?

- *Kumho* was supposed to wrap up disagreements between the circuits about whether *Daubert* applies to nonscientific expert testimony, but it didn't really do this
- Determining whether to use the *Daubert* factors for any expertise still requires the court to determine if the individual factors are appropriate
- Consistency is not very high
- *Starzecpyzel* is just one of many courts to admit testimony regardless of *Daubert* failings

Federal Admissibility Standards

How Important are the *Daubert* Factors?

- So what's happening post-*Kumho*?
- Judicial scrutiny is on, but judges remain reluctant to dismiss established fields of forensic science
- Trend is to allow expert to demonstrate observations, but prohibit "identification" under FRE 403
  - Judges recognize comparative disciplines, and believe that these skills do exist, but…
  - …cannot ignore lack of validation for "identification" conclusion
  - This has everything to do with DNA
- Let's see some example cases

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“Split Testimony” Cases

- Handwriting
- Firearms/Toolmarks
- Latent Prints

- (These don’t make up the full list of *Daubert* challenges: most result in admissibility and just a few result in complete exclusion of testimony)

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Handwriting "Split Testimony" Cases

- *U.S. v. Hines* (1999)
- …one thing is clear: when [the QDE] says, "I conclude that Hines wrote the robbery note," she may well be going beyond her expertise…That leap [to identification] may not at all be justified by the underlying data; and in the context of this case, is extraordinarily prejudicial. [FRE 403]
- …testimony meets Fed.R.Evid. 702's requirements to the extent that she restricts her testimony to similarities or dissimilarities between the known exemplars and the robbery note. However, she may not render an ultimate conclusion on who penned the unknown writing.

Handwriting "Split Testimony" Cases

- *U.S. v. Rutherford* (2000)
- …testimony meets the requirements of Rule 702 to the extent that he limits his testimony to identifying and explaining the similarities and dissimilarities between the known exemplars and the questioned documents. FDE…is precluded from rendering any ultimate conclusions on authorship of the questioned documents and is similarly precluded from testifying to the degree of confidence or certainty on which his opinions are based.

Handwriting "Split Testimony" Cases

- *U.S. v. Oskowitz* (2003)
- The expert may not…give the opinion that a handwriting sample was written by a particular person, because the handwriting analysis field does not pass *Daubert/Kumho* muster sufficiently to permit such an authoritative and potentially prejudicial statement. [FRE 403]
- …the proper scope of… [the QDE's testimony] …extends to explaining to the jury the similarities and differences between a known example of Oskowitz's handwriting and a disputed tax return. Jurors may then make a decision on the ultimate question of authorship…

Firearms/Toolmarks "Split Testimony" Cases

- *U.S. v. Green, et al* (2005)
- …is a seasoned examiner of firearms and toolmarks; he may be able to identify marks that a lay observer would not. But while I will allow…to testify as to his observations, I will not allow him to conclude that the match…permits "the exclusion of all other guns" as the source of the shell casings.

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Firearms/Toolmarks "Split Testimony" Cases

- *State of Maryland v. Whittingham* (2009)
- …more likely than not is way too low of a standard. But… to the exclusion of all firearms, is not the proper standard either.
- …prohibit the expert from testifying to any degree of conclusion, is 98 percent or to the exclusion of all other firearms, because I do not think that is probable.
- …the proper standard is…that that particular cartridge or bullet was fired from that particular firearm to a reasonable degree of practical certainty in the field of ballistics…

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Firearms/Toolmarks "Split Testimony" Cases

- *U.S. v. St. Gerard* (2010)
- …any testimony indicating that the shell casing must have come from the AK-47 would be unreliable.
- …the probative value of [the examiner's] proferred testimony that it would be practically impossible for a tool other than the seized AK-47 to have made the marks on the cartridge case would be substantially outweighed by the unfair prejudice associated with its unreliability. [MRE 403]

Firearms/Toolmarks "Split Testimony" Cases

- *U.S. v. St. Gerard* (2010)
- …the defense motion to exclude the testimony of [the examiner] that it would be a practical impossibility for the cartridge case to have been fired by any weapon other than the seized AK-47 is GRANTED. This ruling is limited solely to testimony concerning the level of certainty of the origin of the marks.

Latent Print “Split Testimony” Cases

- *U.S. v. Llera Plaza, et al* (2002)
- Original opinion precluded identification
- Revised opinion fully admits testimony, translating uniqueness of fingerprints into validity of latent print examination methodology

Latent Print "Split Testimony" Cases

- *U.S. v. Llera Plaza, et al* (original opinion) (2002)
- The government may present expert witness testimony (1) describing how the rolled and latent fingerprints at issue in this case were obtained, (2) identifying, and placing before the jury, the fingerprints and such magnifications thereof as may be required to show minute details, and (3) pointing out observed similarities (and differences) between any latent print and any rolled print the government contends are attributable to the same person. But no expert witness for any party will be permitted to testify that, in the opinion of the witness, a particular latent print is – or is not – the print of a particular person.

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Latent Print "Split Testimony" Cases

- *Maryland v. Rose* (2007)
- In conclusion, the proof presented by the State in this case regarding the ACE-V methodology of latent fingerprint identification showed that is was more likely so, than not so, that ACE-V was the type of procedure *Frye* was intended to banish, that is, a subjective, untested, unverifiable identification procedure that purports to be infallible…
- The State…shall not offer testimony that any latent fingerprint in this case is that of the Defendant.
  - Would Souder have allowed "split testimony"?

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Latent Print "Split Testimony" Cases

- *Maryland v. Johnson* (2008)
- There is indication in the State's proffer that they will seek to have the expert testify that, not only do the latent prints match the Defendant's known prints but also that no other person in the world's print could also match the latents, and that the examiner's confidence in the identification is absolute. This is a step too far based on what appears to be the currently validated science on the issue.
- He can point out the similarities and the differences, if any, between the latent print and the exemplar. This Court discerns no basis in the proffer for him to express an opinion that no other person could have a similar number of matching points or what the probability or lack of probability is of the existence of such persons.

The Common Thread

Why shy from *Daubert*?

- From *US v. Hines*, Judge Gertner's Memorandum and Order June 11, 1999
  - The fear that *Daubert* would place ill-suited responsibilities on lay judges prompted a number of states to retain *Frye*.
  - The Ninth Circuit panel handling the remand of *Daubert* was skeptical. The Court notes that "the judge's task under *Frye* was relatively simple: to determine whether the method employed by the experts is generally accepted in the scientific community"... (quote from *Daubert*)
  - The *Frye* test was perfectly suited to the court's competence. The judge did not have to be a scientist. He or she only had, in effect, to count the "scientific" votes; determine what the majority accepted. *Daubert/Kumho*, however, required a judge, a notable generalist, to second guess a scientist.

The Common Thread

- Most *Daubert* hearings in these three disciplines result in testimony being admitted and only in very few cases is testimony fully excluded
- Far more likely than testimony being fully excluded is the splitting of “observational” testimony and “identification” testimony, where “observational” testimony only is allowed
- This is being done *in the current environment* where no handwriting, firearms or latent print conclusions are formulated *directly* from statistical methods

The Common Thread

- It appears that the courts like latent prints, handwriting and firearms generally and readily admit both the evidence and discussion of similarities and differences by an examiner…
- …but have very specific problems with the examiner rendering "identification" conclusions in the absence of validation and statistics
- What to do?

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