

# A Review of Split Testimony Cases Resulting From Admissibility Challenges

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## INTRODUCTION

Forensic science is an evolving field, filled with continuing developments and constant improvement of practices and methods. Over the last two decades, this evolution has been accelerated by a number of factors, including: the advent of DNA analysis with its emphasis on statistics, the publication of numerous legal articles critical of the forensic sciences, the 1993 *Daubert v. Merrell Dow Pharmaceuticals, Inc.* and 1999 *Kumho Tire v. Carmichael* Supreme Court decisions, and most recently, the release of the National Academy of Sciences (NAS) report entitled "Strengthening Forensic Science in the United States: A Path Forward." Many of these developments have posed new challenges to long-established fields of forensic science, and in some cases, have raised questions about whether sufficient science exists to ensure future admissibility. The purpose of this discussion is not to debate the merits of these challenges, analyze the viewpoints of expert critics, or to determine whether it is possible to continue moving forward while conducting "business as usual," but to clarify the nature of these challenges so that they may be understood and addressed by practitioners. This will be done through a direct analysis of relevant court opinions where admissibility of expert testimony was challenged.

The various admissibility standards used in U.S. federal courts will be reviewed in order to provide foundational material. In particular, Federal Rules of Evidence 403 is the basis for many current legal challenges and will be discussed in detail. The case record will be explored in handwriting, fingerprints and firearms/toolmarks in order to provide not just the published results of admissibility challenges, but also a review

of the courts' viewpoints when admissibility was partially denied.

## REVIEW OF FEDERAL ADMISSIBILITY STANDARDS

### A. FRYE V. UNITED STATES

The evolution of U.S. federal court evidence admissibility standards has been ongoing for more than eight decades since the landmark 1923 case, *Frye v. United States* (1), established early standards for the admissibility of scientific evidence. Though that standard has since been superseded, it and several later standards still affect current practice and it is informative to discuss how they evolved. In *Frye*, the district court concluded that:

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 in which it belongs.

The key language in this standard-setting opinion outlines two points: first, that the standard for admissibility of scientific evidence was "general acceptance." Second, a point which is substantially more abstract, that this "general acceptance" was to be measured in "the particular field in which it belongs." Defining that "field" proved to be a challenge, and raised a number of questions about how narrow or wide the "field" was to be defined – for example, the *Frye* case dealt with the systolic blood pressure test, a precu-

rior of the polygraph. Naturally, practitioners of the test would attest to its validity, but financially disinterested scientists from related disciplines that could reasonably be expected to understand how the test worked, and who were qualified to assess whether it performed as claimed (physiologists and psychologists, for example) might not agree. Thus, the admissibility of scientific evidence under *Frye* can be dependent upon exactly which community is questioned about its validity. *Frye* became the subject of much criticism because it admitted widely accepted but poorly validated scientific evidence, but excluded novel but well-researched methods. *Frye* remained the controlling standard in federal courts until the advent of the Federal Rules of Evidence in 1975 and *Daubert* in 1993, and became known as the "general acceptance" standard. Some U.S. court systems (i.e. state courts) continue to use a "general acceptance" standard similar to *Frye*.

### B. FEDERAL RULES OF EVIDENCE

The Federal Rules of Evidence (the Rules or FRE) were legislatively enacted in 1975 to address a wide range of evidentiary questions and have since been subjected to modifications (2). Rules that are pertinent to the establishment of what became known as the FRE "relevancy" standard include FRE 702, 104(a), 401, 402 and 403. Rule 702 lays the foundation for the types of knowledge that can be the subject of expert testimony and states:

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.

The latter portions (numbered 1-3) of Rule 702 were not present in the 1975 FRE, and were added after the Daubert decision to reflect a greater emphasis on the reliability of expert testimony. Rule 104(a) establishes that courts are responsible for admissibility determinations and states:

Preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence shall be determined by the court...

Rule 401 defines relevant evidence: "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 states that relevant evidence is admissible: All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible.

Rules 104(a), 401 and 402 provide the foundation for an admissibility standard based on "relevancy" but do not describe specifically how relevancy is to be determined. However, Rule 403 provides some guidance on specific types of relevant evidence that may be excluded:

Although relevant, 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, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.

Rule 403 contains key language that is central to a discussion of admissibility of forensic pattern evidence, and has been cited as the foundation of an admissibility objection in several court cases. Traditionally, some pattern evidence disciplines have used language such as "to the exclusion of all others" to

describe the certainty of the conclusions offered; the use of such definitive and absolute language in the absence of supporting mathematics has been interpreted by some courts as both prejudicial and confusing, and therefore subject to exclusion under Rule 403.

The Federal Rules of Evidence made no mention of the Frye "general acceptance" standard and did not clarify how judges were to assess the relevance of evidence. Confusion over whether to employ "general acceptance"

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or "relevancy" as the standard for admitting expert testimony was ongoing from the advent of the FRE in 1975 until the 1993 Daubert decision.

### C. DAUBERT V. MERRELL-DOW PHARMACEUTICALS, INC.

The central focus of the 1993 Daubert v. Merrell-Dow Pharmaceuticals, Inc. Supreme Court case (3) was the determination that the Federal Rules of Evidence "relevancy" standard, and not the Frye "general acceptance" standard, should be the controlling standard for expert testimony in federal courts:

Given the Rules' permissive backdrop and their inclusion of a specific rule on expert testimony that does not mention "general acceptance," the assertion that the Rules somehow assimilated Frye is unconvincing. 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.

The Court goes on to affirm that trial judges have a responsibility to assess not only "relevance" of proposed expert testimony under the Federal Rules of Evidence, but also "reliability" of such testimony. Thus Daubert is described as simultaneously upholding the "relevancy" standard of the FRE and also establishing a new "reliability" standard. To that end the Court described a series of factors trial judges could use to assess reliability:

Faced with a proffer of expert scientific testimony, then, the trial judge must deter-

mine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue. We are confident that federal judges possess the capacity to undertake this review.

Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test. But some general observations are appropriate.

These "general observations" outlined by the Court are the now-famous five Daubert factors recommended as yardsticks for evaluating scientific testimony: whether the technique can and has been tested, whether the technique has been subjected to peer review and publication, the technique's known or potential rate of error, the existence and maintenance of standards controlling the technique, and a restated "general acceptance" test which, though no longer an exclusive standard as it was under Frye, is now incorporated into the Daubert reliability standard. The Court further emphasized that the reliability determination under Daubert was to be tailored to the circumstances:

The inquiry envisioned by Rule 702 is, we emphasize, a flexible one. Its overarching subject is the scientific validity – and thus the evidentiary 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.

So the Court described five factors useful for evaluating expert scientific testimony, but also stated that these five factors were to be a non-exhaustive list, to be applied as appropriate at the trial judge's discretion depending on what type of expert testimony was offered. Throughout the Daubert decision mention is made of "scientific" testimony as well as "ex-

pert” testimony - but it was not clear whether Daubert was intended to apply equally to both scientific and nonscientific testimony, or, in language more consistent with FRE 702, to apply equally to “scientific, technical or other specialized knowledge,” because the type of expertise referenced in Daubert was scientific expertise. This caused sufficient confusion to create a split between the federal circuits over how far the reach of Daubert extended, with some circuits applying Daubert to all types of expert testimony and others restricting it to testimony considered to be scientific in nature. This led to a second Supreme Court decision in 1999, *Kumho Tire v. Carmichael*, in which the Court addressed this confusion.

#### **D. KUMHO TIRE V. CARMICHAEL**

The main holdings of the 1999 Supreme Court decision in *Kumho Tire v. Carmichael* (4) were that the Daubert relevancy standard was to be applied broadly to all types of expert testimony, with the understanding that the Daubert checklist was not exclusive or exhaustive for determining reliability. The Court explained that judges have substantial discretion not just in the outcomes of reliability determinations, but also in how those reliability determinations are made:

This case requires us to decide how Daubert applies to the testimony of engineers and other experts who are not scientists. 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. See Fed. Rule Evid. 702. We also conclude that a trial court may consider one or more of the more specific factors that Daubert mentioned when doing so will help determine that testimony’s reliability. But, as the Court stated in Daubert, the test of reliability is “flexible,” and Daubert’s list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination.

Furthermore, with regard to differentiating between the various types of expertise outlined in FRE 702, the Court found that no such distinctions needed to be drawn:

Finally, it would prove difficult, if not im-

possible, 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. Disciplines such as engineering rest upon scientific knowledge. Pure scientific theory itself may depend for its development upon observation and properly engineered machinery. And conceptual efforts to distinguish the two are unlikely to produce clear legal lines capable of application in particular cases.

*Kumho Tire* clarified that the Daubert reliability standard applies to all types of expert testimony, even though specific factors from the checklist may or may not be appropriate for any given expertise. This decision removed a split between federal circuits regarding the application of Daubert, but has not necessarily resulted in great consistency among courts in general with regard to admissibility of various types of pattern evidence such as handwriting, fingerprints and firearms/toolmarks. This is partially due to differences in how courts view the various types of evidence, as well as to real differences in circumstances that vary from case to case, which have the potential to make each reliability determination unique. Consequently, the admissibility picture remains in flux and these fields remain subject to challenges from a variety of sources, including FRE 403, the Daubert factors, and the recent report from the NAS.

#### **BASIS FOR CHALLENGES**

Daubert has received substantial press, both positive and negative, and much attention has been paid to whether specific techniques do or do not “pass” one Daubert factor or another. It is clear when reading the opinion that Daubert’s reliability standard cannot be reasonably met in the absence of substantial background research – the language of the case appears to anticipate expert testimony based on traditional experimental science, with a substantial record of publication and community of interested scientists or practitioners that generate large amounts of data, and who are able to establish meaningful standards. It is well understood within the forensic field that many practitioners do not have strong backgrounds in the design of research projects, nor the time to conduct research while balancing a normal caseload.

However, it is not sufficient for practitioners of forensic science to merely be practitioners; they must also be capable of speaking on behalf of their disciplines and addressing challenges. These require familiarity with available background scientific materials, including completed research, pertinent publications, and research which is lacking. Daubert response kits and education on dealing with admissibility challenges are already available from various organizations within the forensic science community. Individual practitioners are, of course, strongly advised to take advantage of these resources and become educated on admissibility case precedents and foundational science in their respective disciplines. In fact, FRE 705 states:

The expert may testify in terms of opinion or inference and give reasons therefore without first testifying to the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross-examination.

Although it is a challenge to identify a comprehensive list of published cases to support the existence of any general trend, we believe that in the fields of handwriting, fingerprints and firearms/toolmarks, there exist three general outcomes of admissibility challenges. The first is for evidence to be admitted into court in full, as presented by the offering expert, either because the court has denied motions for a reliability review, or because a reliability review has been conducted and the testimony passed. This is the outcome for most cases. The second outcome, which represents a very small portion of published cases, is the complete exclusion of testimony. A few examples exist in mainstream casework, but in many instances total exclusion is restricted to cases with circumstances outside of ordinary practice – for example, a handwriting comparison of writing in a language unfamiliar to the document examiner (5), or use of the aggregate of information from two or more friction ridge impressions from the same hand which are consistent with simultaneity (6). These cases do not represent admissibility trends for more typical examples of expert testimony in these fields. The third outcome involves a tendency to split proposed testimony (generally into two component parts) where the court allows testimony regarding similarities and

differences between questioned and known samples, but prohibits testimony pertaining to the specific association of the questioned sample to the known. While this result is not nearly as common as total admissibility of testimony, it does appear to be more common than total exclusion of testimony. It is this third outcome that will be addressed in detail for two reasons: first, to discuss concepts of statistics and probability that explain the decision to split the testimony, and second, because the specific phrasing of conclusions by an individual examiner can directly influence the outcome of a Daubert review.

### **A. THE PREJUDICE CHALLENGE (FRE 403)**

A central theme in the above-mentioned "split-testimony" cases is the separation of conclusion testimony from observational testimony. Courts that only allow observational testimony in a particular case do so because they view the identification conclusion as unfairly prejudicial under FRE 403 and/or Daubert and, therefore, inadmissible. Again for completeness, Rule 403 reads:

Although relevant, 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, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.

It may come as a shock to many experienced forensic practitioners who are convinced of the validity of their techniques, and who view themselves as unbiased providers of information, that the legal system would characterize their conclusions as "unfairly prejudicial" or deny that sufficient grounds exist for identification conclusions to be reached. Yet the Daubert and Kumho decisions require the trial judge to act as a gatekeeper and review expert testimony for its relevance and reliability under the Daubert factors, and this review can extend even to techniques with a long record of admissibility. As the Daubert Court stated in the opinion, the main thrust of the inquiry should be flexible and aimed at determining whether sufficient grounds exist to support the proposed testimony.

Daubert suggests that admitted expert testimony should be scientifically supported - meaning that the principles underlying the testimony must be valid. What does this have

to do with the prejudice challenge and split testimony cases, regardless of whether the challenge is levied using FRE 403 or review under either the Daubert factors or another type of "reliability" standard the judge finds appropriate to the circumstances? It appears that in these cases the courts reviewed proposed testimony and determined that sufficient scientific support existed for the expert witness to share opinions about similarities and differences between questioned and known exemplars (handwriting, or bullets, or fingerprints, or whatever), but that insufficient support existed for an opinion as to whether the questioned and known samples definitively originated from the same source. It is necessary to discuss some statistical concepts in order to explain these conclusions.

### **B. POPULATIONS AND SAMPLES**

Two important concepts fundamental to statistics are populations and samples. A population consists of all possible data elements of something that can be measured. For example, the population of fingerprints in the world includes all fingers from all people, everywhere. The population of fingerprints in the world is enormous and impossible to use in any real casework, since no database of all fingers in the world is available, and probably never will be. But if it were possible to build such a database and have the fingerprints of every person available for comparison to a fingerprint of unknown origin, it would then be possible to eliminate all fingers that were not the source of the print, thereby leaving only the actual source as the possible origin of the fingerprint. Statistically, the identification conclusion thereby obtained is not the result of finding any particular degree of agreement between the questioned fingerprint and actual source fingerprint; rather, it is a result of finding disagreement between the questioned print and all other fingerprints except the actual source. The point being that it is theoretically possible to defend a conclusion of "identification" when an examiner has access to all fingerprints everywhere for comparison, so that it could, in mathematical terms, be said that the print was identified "to the exclusion of all others" because all other possible sources have, in fact, been excluded.

Real-world science, including research and practice outside of forensics as well as in forensic casework, rarely has the benefit of

access to entire populations of data and so, instead, must use samples. A sample is a collection of data from a portion of a population which is then used to make estimates about the entire population - the larger the size of the sample, the better the estimate. However, it is conceptually important to know that it will always be an estimate. In the fingerprint case example, almost all real casework involves comparisons with just a sample of the known fingerprints available in the world. A typical case might involve the submission of a finite number of fingerprint cards containing a finite number of prints. Even the search of an unknown print through a large database (such as the FBI's Integrated Automated Fingerprint Identification System) still does not result in the comparison of the unknown fingerprint to all prints available in the world. In either of these circumstances, the unknown print is compared to only a sample of fingerprints on the planet, and so it can never be known with certainty that there is not another fingerprint in the world which appears sufficiently similar to the unknown print that a competent examiner could mistakenly attribute it as the source. From a statistical standpoint, then, it is not mathematically possible to identify a fingerprint "to the exclusion of all others" in the course of real-world casework. Note that this has nothing to do with the size or quality of the unknown fingerprint, sufficiency of information in the print, examiner experience, or other factors; rather, because a sample is being used to make inferences about the entire population, latent print examiners are, in essence, making probabilistic statements since the absolute answer cannot be determined. See Champod and Evett for a more complete discussion (7). The term "identification" or "individualization" is then used when the examiner, relying on his/her training, experience and skills, concludes that the existence of more than one area of friction ridge skin that could have produced a particular latent print is so exceedingly remote that it can be dismissed as a practical consideration, even though the individualization has not been demonstrated mathematically. Similar arguments can be made for handwriting, firearms/toolmarks, and other areas of forensic science, as well as other areas of the "general scientific community," where these concepts of statistical estimation are widely accepted. Culturally, the idea that absolute conclu-

sions such as “identification” or “individualization” (which are an ingrained part of a standard repertoire of conclusions in fields like latent prints) are outside the scientific mainstream is objectionable to many forensic scientists. This is due to a perception by many employed in the forensic pattern evidence fields that removal of an identification conclusion is a general attack on the validity of their discipline. However, it cannot be ignored that the broader scientific community (from social sciences to biology to epidemiology, and other fields) uses statistics to estimate the certainty that the conclusions reached are the correct ones, and considers the frequent (indeed, constant) use of probabilities to describe the state of things in terms of gray areas, rather than absolutes, as normal.

The discussion above describes one possible reason why some courts have determined that “identification” conclusions are prejudicial, and therefore inadmissible, because, simply, they observe that it is not mathematically possible for an examiner to identify a questioned sample to a single known sample, when the questioned sample has not been compared to all possible knowns. This specific language does not describe every case, and the rationale for splitting the testimony does not always cite FRE 403 or specific Daubert factors – in many instances courts cite issues of subjectivity and a host of factors other than the statistical ones mentioned above.

## CASE CITATIONS

Several handwriting, fingerprint and firearms/toolmarks cases are summarized below in order to demonstrate how a number of courts have reached similar conclusions about different areas of forensic science. While all deal with the theme of prejudice, differing approaches were taken by the courts to obtain their conclusions. Meaningful study of forensic science admissibility in court is problematic due to the large number of unpublished cases. This area is also difficult to study due to inherent differences between the disciplines; for example, it appears that courts are generally more confident in the abilities of jurors to compare handwriting samples with guidance from a document examiner than in their abilities to compare fingerprints or bullets, even with guidance from experts in those areas. The cases summarized below contain language which demonstrates the existence

of a trend to split observational and opinion testimony, but the list is far from complete. Generally, these cases will be considered first by discipline, then chronologically within disciplines moving from handwriting to latent prints, and then to firearms/toolmarks.

## A. HANDWRITING

One of the earliest cases to invoke the Rule 403 prejudice challenge is the 1995 case of *U.S. v. Starzecpyzel* (8), which was a landmark challenge to handwriting examination. *Starzecpyzel* occurred after *Daubert* but prior to *Kumho Tire*. The court found that handwriting examination failed *Daubert* analysis, but was still admissible because handwriting examination was “technical” in nature rather

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than scientific under FRE 702, and therefore not subject to *Daubert* review. (It should be reiterated that, in the wake of *Kumho Tire*, the Supreme Court has clarified that the *Daubert* factors can be used to evaluate all types of expert testimony, not just scientific testimony, and such an outcome today would be unlikely). The court stated:

FDE testimony, while acceptable under Rule 702, does suffer from a substantial problem of prejudice, which is the subject of Fed.R.Evid. 403. The problem arises from the likely perception by jurors that FDEs are scientists, which would suggest far greater precision and reliability than was established at the *Daubert* hearing. This perception might arise from several sources, such as the appearance of the words “scientific” and “laboratory” in much of the relevant literature, and the overly precise manner in which FDEs describe their level of confidence in their opinions as to whether questioned writings are genuine. The Court has determined that the problem of prejudice can be sufficiently diminished with the use of procedural safeguards, including a pre-testimony jury instruction, that FDE testimony need not be excluded pursuant to Rule 403.

Though the *Starzecpyzel* court elected to fully admit the document examiner’s testimony, the above quote indicates that the court found problems with possible prejudice on the basis of the “overly precise manner” in which conclusions are stated and that precision and reliability of the methods of handwriting examination were lower than likely perceived by jurors. The following is an excerpt from the Draft Initial Jury Instruction provided as Appendix I to the opinion:

You may accept a forensic document examiner’s testimony in whole, or you may reject it in whole. If you find that the field of forensic document examination is not sufficiently reliable, or that the particular document examiner is not sufficiently reliable, you

are free to reject the testimony in whole. You may also accept the testimony in part, finding, as one possible example, that while the forensic document examiner has found significant similarities and differences between various handwriting samples, his or her conclusion as to the genuineness of a particular writing is in error, or is inconclusive.

This jury instruction is not a simple refusal to admit identification testimony (opinions about authorship, in this case) as did occur in some later cases, but the language does highlight the jury’s option to accept the document examiner’s qualitative description of the similarities and differences in the handwriting while at the same time rejecting the ultimate conclusion of authorship. This conceptual splitting of observational and authorship testimony in *Starzecpyzel* proved to be a precursor to other cases involving handwriting, fingerprints and firearms/toolmarks.

For example, in *U.S. v. Hines* (9) in 1999 the court stated the following regarding handwriting testimony:

[The document examiner’s] account of what is similar or not similar in the handwriting of Hines and the robber can be understood and evaluated by the jury. The witness

can be cross examined, as she was, about why this difference was not considered consequential, while this difference was, and the jury can draw their own conclusions. This is not rocket science, or higher math.

Her conclusion of authorship, however, has a different resonance: "Out of all my experience, and training, I am saying that he is the one, the very author." That leap may not at all be justified by the underlying data; and in the context of this case, is extraordinarily prejudicial. . . I find [the document examiner's] 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.

In a second case that same year, *U.S. v. Santillan* (10), the Court agreed with and adopted the basic approach in *Hines*, thus setting the stage for a division of testimony into "observations" and "authorship opinion":

Initially, the Court finds it helpful to divide [the document examiner's] proffered handwriting analysis testimony into two components:

(1) comparing the mechanics of defendant's handwriting and the handwriting on the "questioned" documents, i.e. identifying the physical mechanics and characteristics of handwriting and then pointing out similarities between the writings, and

(2) concluding that the handwriting on the questioned documents is in fact the handwriting of the defendant.

After further inquiry into handwriting identification, the Santillan Court concluded:

The Court is satisfied that testimony of a handwriting "expert" as to the specific mechanics and characteristics of handwriting will add to the general knowledge of lay persons and assist them to make comparisons of different examples of handwriting. However, the Court questions whether adding the essentially subjective opinion of another person as to how the jury should answer the question of fact before them is not the type of assistance contemplated by the rule. Moreover, such testimony, when it is buttressed by the fact that it comes from an "expert," would appear to be more prejudicial and misleading than probative in the Court's consideration of the application of Rule 403 of the Federal

Rules of Evidence.

In *U.S. v. Rutherford* (11) in 2000 the court denied a request for a limiting jury instruction of the type used in *Starzecpyzel*, but split the testimony when it stated: [the document examiner's] 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. [The document examiner] 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. Because the Court finds that placing limits on [the document examiner's] expert testimony will be more effective than a limiting instruction, the Court shall deny defendant's request for a special limiting jury instruction on forensic document examiners.

This language departs somewhat from *Starzecpyzel* and *Hines* in that the *Rutherford* Court also specifically precluded the document examiner from testifying to any level of certainty of authorship on the scale of probabilities commonly used by document examiners:

...there was no evidence adduced to support the nine-level scale of probabilities adopted by the American Board of Forensic Document Examiners for conclusions as to handwriting identification...Accordingly, the Court shall preclude [the document examiner] from testifying to the degree of probability, confidence, or certainty underlying his proffered opinions.

## B. FINGERPRINTS

The first challenges to fingerprint evidence under *Daubert* came several years after the initial challenges to handwriting. The first and only U.S. federal case in which fingerprint testimony was restricted to observations did not occur until 2002 (*U.S. v. Llera Plaza*), and cited the handwriting case *U.S. v. Hines* in the decision. *Llera Plaza* is a landmark case not only because it was a first for fingerprints, but also because the judge reversed his original opinion (12) less than two months after it was issued (retracting an earlier decision to disallow parts of the fingerprint testimony) in a second order (13). Although the original position was retracted, it is informative to

consider this language in the original opinion:

Accordingly, this court will permit the government to present testimony by fingerprint examiners who, suitably qualified as "expert" examiners by virtue of training and experience, may (1) describe how the rolled and latent fingerprints at issue in this case were obtained, (2) identify and place before the jury the fingerprints and such magnifications thereof as may be required to show minute details, and (3) point out observed similarities (and differences) between any latent print and any rolled print the government contends are attributable to the same person. What such expert witness will not be permitted to do is to present "evaluation" testimony as to their "opinion" (Rule 702) that a particular latent print is in fact the print of a particular person.

While somewhat different language is used, what this passage describes is, again, separation of observational and opinion testimony similar to *Hines*. Additional examples of this type of ruling on fingerprint evidence in U.S. federal courts have not been found by the authors, but at least one other comparable example is available at the state level in the 2008 State of Maryland vs. *Johnson* (14). The *Johnson* Court states:

From what the Court has read and seen, there does not seem to be a factual foundation or basis for [the latent print examiner] in this case to say more than that Defendant's print closely or exactly matches the partial latent print he lifted. 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.

Although not a latent print case, a footwear impression case reached the federal appellate courts and is worthy of mention here. In the 2005 case of *U.S. v. Albritton* (15), the 11th Circuit upheld the district court's finding that stated:

...on the issue of whether the...shoes made the latent print which was taken from the teller's counter top in the bank robbery, he was quite can did in telling us that he could not say definitively or positively that that was the case. He did give us his opinion, however, and the basis for that opinion was his perceived similarity which he said he observed

between the shoe sole and the print. You are going to have the same opportunity to make that observation and assessment to examine the actual shoes and the prints he examined. You'll have the same opportunity to decide whether there is or is not a match between the shoes and the prints. Therefore, I am instructing you to disregard the opinion of [the footwear impression examiner] on that subject and be guided by your own determination and conclusion as to whether the prints were left by the shoes in Government's Exhibit 24.

### C. FIREARMS/TOOLMARKS

*U.S. v. Green, et al.* (16), originated in 2005 from the same judge who tried the Hines handwriting case (Judge Gertner of the District of Massachusetts) and the Court adopted measures like those in Hines:

Putting together this precedent with the evidence I have heard, suggests admission but with limitations, limitations identical to those I adopted in Hines. [The firearms examiner] is a seasoned observer of firearms and toolmarks, he may be able to identify marks that a lay observer would not. But while I will allow [the firearms examiner] to testify as to his observations, I will not allow him to conclude that the match he found by dint of the specific methodology he used permits "the exclusion of all other guns" as the source of the shell casings.

In 2007 in *U.S. v. Diaz, et al.* (17) the Court arrived at a similar conclusion. Citing Green and another firearms case in which testimony was limited, *U.S. v. Monteiro* (18), the Court stated:

...the evidence before this Court does not support the theory that firearms examiners can conclude that a bullet or casing was fired by a particular firearm to the exclusion of all other guns in the world... This Court agrees with Judge Saris's assessment of firearms identification: "Because an examiner's bottom line opinion as to an identification is largely a subjective one, there is no reliable statistical or scientific methodology which will currently permit the expert to testify that it is a 'match' to an absolute certainty, or to an arbitrary degree of statistical certainty."... Accordingly, in the government's case in chief, the experts will be permitted to testify that cartridge cases or bullets were fired from a particular firearm "to a reasonable degree of ballistic certainty."

Similarly, in *U.S. v. Glynn* (19) from 2008,

the opinion states:

The Court therefore determined...that the ballistics examiners in those cases would be permitted to testify only that a firearms match was "more likely than not," thereby satisfying Rule 401 without overstating the capacity of the methodology to ascertain matches. This limitation will continue to apply to any ballistics testimony offered by the Government in the retrial of this case.

The opinions in Diaz and Glynn represent a different variety of split between observational and identification testimony where the Court acknowledges that subjective, descriptive testimony is appropriate, and even implies that while the expert should be able to testify to an opinion, that opinion cannot state an absolute association between bullet(s)/casing(s) and a firearm. This stands somewhat in contrast to some handwriting cases, in which it is implied that jurors are capable of examining handwriting evidence with guidance from an expert in the form of observational testimony; it appears in Diaz that the court does not believe this is the case with firearms, and so permits somewhat more latitude in the expert's opinion testimony.

### CONCLUSION

A reading of the published "split-testimony" cases suggests that the courts place high confidence in many areas of pattern evidence in forensic science and recognize that expertise does exist in these areas. In general, courts remain willing to accept that expert testimony can be valuable to the jury even without the rendering of a specific conclusion of identification, even though in many forensic disciplines there remain few methods to quantify an examiner's conclusions mathematically or provide a qualified opinion that is supported by a statistical foundation. This last point is an important one – the courts at this time are, in most cases, satisfied with the subjective judgments of examiners as long as those examiners are not making claims of accuracy that cannot be substantiated. It appears that these courts perceive the main problem to be statements of certainty in testimony that associates a questioned object or impression to a known, without qualification, when so many areas of the general scientific community and some areas of forensic science are so thoroughly intertwined with probabilities and statistics. It is often not the basic methods

and techniques of the fields mentioned above that are the subject of criticism; it is the way in which conclusions are stated. But the recent release of the NAS report and all of its recommendations make it clear that many areas of forensic science remain the subject of scrutiny, and practitioners should be prepared to respond to challenges.★

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# CBD STATISTICS

**TOTAL MEMBERSHIP - 710**

**ACTIVE - 432**

**ASSOCIATE - 104**

**LIFE ASSOCIATE - 1**

**SUSTAINING LIFE ACTIVE - 27**

**SUSTAINING LIFE ASSOCIATE - 6**

## **HONORARY LIFE MEMBER IN 2009 (TOTAL 4)**

Robert W. Baker

## **LIFE ACTIVE MEMBERS IN 2009 (TOTAL 134)**

William L. Bickle

Clinton H. Chamberlain, Jr.

Rodney L. Gohn

Allen B. Hafner, Jr.

William S. Meyers

J. Andrew Rosenhamer

Joseph R. Scerra

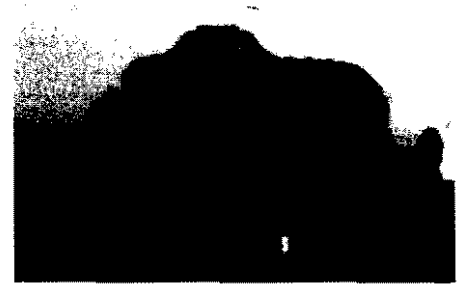
Dollie S. Woods

## **CORRECTIONS TO THE FALL 2009 CHESAPEAKE EXAMINER**

The editor regrets the following errors and appreciates that they were brought to her attention.

*Reciprocity Failure: Film Versus Digital*  
by Christopher D. Duncan, Houston Police  
Department, Crime Scene Unit

On page 14 of this article figure 4A was inadvertently omitted from the publication. The referenced image is below.



*A Review of Split Testimony Cases Resulting From Admissibility Challenges* by Joel Zlotnick, M.S.F.S. & Laura Tierney, M.F.S., U.S. Immigration and Customs Enforcement, Forensic Document Laboratory McLean, Virginia

This article was inadvertently formatted incorrectly. A properly formatted pdf of the article was sent via email to the membership in December. Please email the editor, Laura A. Hutchins (lahutchins@comcast.net) if you would like the article resent.

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