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The following is an abstract of a talk given at the Second Annual Symposium on the Forensic Examination of Questioned Documents at Albany, N.Y., on June 18, 1999. An earlier version of this abstract also appears in the October, 1999 issue of Forensic Science Communications, a peer-reviewed quarterly journal published on the Internet by FBI Laboratory personnel.

(See: <http://www.fbi.gov/programs/lab/fsc/current/index.htm>)

## Introduction

Daubert versus Merrell Dow Pharmaceuticals has been referred to as the villain; as the dragon that needs to be slain. But there is no need to be afraid of Daubert. The case is not going to result in the court excluding handwriting identification evidence, if you know what to prepare for when facing a Daubert hearing.

What is a Daubert hearing? It is, in effect, a mini-trial within a trial, conducted before the judge only, not the jury, over the validity and admissibility of expert opinion testimony.

Today, preparing for a Daubert hearing presents less of a problem for questioned document examiners than it will pose in the near future for other branches of the forensic sciences such as firearms and toolmark examination, hairs and fibers comparisons, bitemark identifications, and other forensic disciplines. The advantage of having been first to endure the brunt of Daubert challenges also means you are ahead of the other forensic science disciplines, and you already are doing the kinds of things to overcome Daubert challenges that other disciplines only are beginning to think about.

Actually, of the trilogy of cases, Daubert, Joiner, and Kumho Tire, discussed at this symposium, Kumho Tire is perhaps even more important than Daubert because of two central points in that decision.

- It clearly states that a Daubert determination of reliability must be made in all cases where expert evidence is offered, whether we call it scientific evidence or technical knowledge or skilled profession.

- The Daubert inquiry is to be a flexible one. All of the factors identified in Daubert that guarantee the kind of reliability the Supreme Court said was

needed for admissibility of opinions based upon scientific knowledge, such as replicability, established error rates, peer review, and so on, do not necessarily apply to all forms of expert testimony with the same rigor. They apply with full force only to those disciplines to which such factors can be applied. Conventional wisdom holds that these factors cannot be applied, in the manner spelled out in Daubert, to handwriting identification or to many other forensic sciences where cases deal with problems that are unique and where the accuracy of a specific finding cannot be stated with a measurable statistical degree of confidence.

Having said that, and as a matter of additional security and comfort to us, I believe that, today, the questioned document profession can meet the most stringent of Daubert requirements.

#### The Criticism of Professors Saks, Risinger, and Denbeaux

You are familiar with the comments that were made in the 1989 law review article. Despite all of the current and past research, the law professors—authors of the article are continuing to criticize forensic document examination dealing with handwriting comparisons for not having done the kind of research that they feel to be necessary to supply the larger legal community with empirical data on the validity of handwriting analyses. When they said so, in 1989, there was perhaps considerable truth to that. Not much published empirical research was readily available at that time. However, even in 1989, and assuming we ignore all the mistakes and errors of fact in the article, the criticism still was grossly unfair, because nothing in then-existing legal requirements established that such research be available for opinions on handwriting identifications to be admissible.

Not only had ample court precedent over nearly a century held that such opinion evidence was admissible, but there were statutes in several states and in the federal system authorizing or mandating admission. (e.g., Rule 901 of the Federal Rules of Evidence). It was, therefore, unfair to ridicule a profession for not having done what the law had not required it to do.

What is more, prior to Daubert, admissibility of expert opinions was covered largely by the Frye test of general acceptance, and there is no question that handwriting identification testimony had been accepted universally by the forensic science communities globally. Questioned document examination evidence was clearly among what was called "scientific evidence" at a time when the Supreme Court, in Daubert, had not yet redefined the word "science" in such a way that its definition could only be applied to Newtonian physics. Earlier Supreme Court opinions, as had the opinions of every court of appeals and every state supreme court, had referred to all kinds of expert

opinion testimony as "scientific" evidence even though, after 1993, ninety percent of those disciplines could not meet the Daubert Court's test for what constitutes scientific knowledge.

Although it was unfair of Saks and company to criticize the questioned document profession for not having published the kind of basic research that no law required it to supply, it is even more unfair, today, for them to keep criticizing the discipline now that the research that they said should be done has been published and is continuing to be done with ever-increasing intensity and frequency.

Dr. Saks and co-critics might well have been lauded as heroes for spurring the forensic document examination profession into supplying the necessary data that has since been published had they taken a more professional approach in alerting us to what they perceived to be the missing information and offered to aid and advise the profession. They chose, instead, to proceed as vengeful advocates in a vendetta war that they decided to wage against the prosecution and crime laboratories generally, and document examiners in particular.

As I pointed out in my law review article rebutting their premises and their research, the critics' overview of the profession was not only incomplete, often inaccurate, and their conclusion frequently based upon non sequiturs, but whatever deficiencies in document research they said they had discovered were expressed in a sarcastic manner, in demeaning and depreciating language, and in a nonprofessional manner that debased them more than it did the profession. They heaped further insult upon injury in comparing handwriting identification to tea-leaf reading and witchcraft. The tone of their critique was not the language of the disinterested scientist seeking to alert a professional community to deficiencies in their publication and research record so as to spur on the kind of research it would be desirable to have. Instead, from their premise that the skill of handwriting examiners who compare documents of questioned and known origin to determine common authorship lacked empirical justification, the critics want us and the courts to leap to an unwarranted next step; that such skill could not possibly exist.

Once having taken that position in print and as advocates in litigation, the critics now must feel compelled to continue to criticize handwriting identification as a profession despite the consistent results of past and ongoing research showing the fallacy of their arguments.

That is why the critics have forever lost the respect and the trust of decent, competent forensic scientists around the world. Although Dr. Saks is a social scientist, his co-authors have no credentials in that endeavor. In their attacks upon handwriting identification, all are advocates rather than scientists. Their

perjorations are, and continue to be, advocacy rather than an objective and dispassionate legitimate critique.

## The Daubert Factors and How Document Examination Can Meet Them Today

Daubert, as Professor Gianelli explained, required that certain factors be satisfied if evidence is to be classified as scientific knowledge in the Newtonian sense. There must be some of the following:

- proof of testing of the basic underlying hypothesis upon which the technique rests,
- peer review and publications,
- a known or potential error rate,
- the existence of an accepted methodology, and
- general acceptance of a technique in the forensic community.

The Daubert Court said that the inquiry was to be a flexible one. Nevertheless, the careful examiner, when asked to be an expert witness, should be prepared to answer questions relating to each one of the above factors and how they apply to the field of handwriting comparisons. Despite the Court's admonition that its requirements were only guide posts, rather than a checklist to be satisfied, lawyers and judges, being the cautious creatures that they are, will seek to explore whether all of the Daubert factors can be satisfied. Therefore, it is important for document examiners to be prepared to give a reasoned answer if asked about the Supreme Court criteria on the witness stand.

## Testability

Does the forensic document examiner's skill of comparing handwritings for the purpose of determining authorship exist? Yes! What is the proof of it? Dr. Kam's continuing studies as well as those by Galbraith and other studies currently going on throughout the profession constitute proof that is constantly reinforcing the premises long before adopted by forensic document examiners. Bob Muehlberger's work on standards is an extension of all of that ongoing research. Every questioned document examiners' meeting that is held today continues to explore the concept of testability. Additional proof supporting the premises of handwriting individuality and the skill of qualified examiners is being acquired monthly by ongoing research conducted worldwide. Computer adaptations to handwriting examinations continue to be explored. There is perhaps more research occurring in handwriting comparisons than in any other branch of the

forensic sciences. The combination of all of these studies provides a good factual basis for the judge's and the jury's verification of the expert's abilities and opinions.

When the subject of testing and validity comes up, it should also be pointed out that no research has ever surfaced that denies the existence of the skill of competent handwriting examiners or that proves that such skill does not exist! In other words, the only critical publications are the Risinger–Denbeaux–Saks articles, which do not deny explicitly the existence of the skill, but state only that they have not been convinced the skills exists. Their disbelief does not constitute proof of the non–existence of the skill of handwriting examiners. There are no studies showing that the skill of competent forensic document examiners in identifying authors of handwritings does not exist.

The critics have it backwards. Handwriting identification has been accepted as valid for so long and has been meeting the legal standards for admissibility that existed since time immemorial, that it should no longer have to justify its existence as a profession. It should be the critics' job to assert and establish invalidity. That is not done simply by writing a law review article that basically says: We believe you are dealing in witchcraft because what we have found does not convince us there is anything to it. This is an important distinction to draw.

Having said that, and recognizing that the criticism has had an effect upon some courts, document examiners are able, today, to supply proof of the underlying premises of handwriting identification. It can be done in a scientifically responsible and respectable way through the research already accomplished and by the research that is ongoing. Every verification endeavor that the profession engages in continues to expand its collective knowledge and confirms its underlying premises. In doing so, the forensic document examiners are accumulating a gigantic body of knowledge. It is one that surpasses, in volume, that available in other forensic disciplines.

## Peer Review and Publications

The profession of questioned document examination possesses a voluminous technical and scientific literature. There exists, today, a vibrant exchange of information on the techniques of examining handwritings. These findings are published in peer–reviewed journals. There has never been an article published in that same peer–reviewed literature by a scientist or by a serious researcher who denies the existence of the principle of individuality of handwriting or the skill of a competent examiner to determine authorship of disputed documents. Again, the article of Risinger et al. may purport to be a critique on the validity of certain questioned

document examinations, but this critique was not made in the peer-reviewed literature. None of the critics' publications contained proof of invalidity.

Offering criticism on a proposition does not establish that proposition's invalidity. For all their contortions and adversarial testimony, the critics have never shown that the skill of document examiners does not exist. All they have done is argue (as opposed to prove), perhaps effectively but in a venomous and destructive (as opposed to constructive) manner, their disbeliefs.

#### Known or Potential Error Rate

It is very difficult to measure the probativeness of a particular examination because it deals with a unique event that cannot be statistically duplicated. Handwriting comparisons are not like DNA analyses where the four variables that constitute base pairs on the genetic chain are clearly defined by the laws of physics and microbiology. In DNA analysis, the results of a particular examination can be quantified. None of the forensic science disciplines that deal with comparisons based on unique occurrences, or clinical judgments, can establish the degree of confidence statistically with respect to an individual result. Fingerprint identification cannot state that a given identification has an x-degree of probability of accuracy. Yet, we accept fingerprint comparisons as positive proof of identity. Firearms and toolmark determinations cannot be quantified statistically when it comes to comparing striations on bullets that may change ever so slightly with each successive use of the weapon that was used. Certainly, opinions of pathologists offering time-of-death testimony or causal-connection opinions in a particular medical examination cannot be stated with a statistically validated degree of probability.

The Daubert decision, however, does not require such proof of mathematical precision in expert opinions. Other than a mere mention of error rates, known or potential, in the Daubert opinion, there is no requirement in the law that opinion testimony of experts is admissible only if they are able to state their opinions with a quantifiable degree of certainty. That is why experts are permitted to express opinions to a reasonable degree of medical certainty, to a reasonable degree of scientific certainty, and to a reasonable degree of professional certainty.

What is more, earlier this year, the Supreme Court in the Kumho Tire case specifically recognized that not all of the Daubert factors must be applied to all expert testimony – only those that can be fairly applied to a particular discipline or field.

Having said all that, and conceding that a particular conclusion cannot be quantified, I believe that the known or potential error rate factor in

handwriting identifications generally can be affirmatively satisfied by the research that is ongoing, and that is already available as a result of the Kam experiments. Other speakers this week talked about further research, now in the planning stage, that seeks to validate statistically every one of the nine levels of document examiner opinions that the ASTM standard provides.

This kind of research should permit questioned document examiners to satisfy the most rigorous scientific demands. If, however, a particular court is not satisfied that the available studies supply the necessary error rates, a very credible and highly persuasive argument can be made that the known or potential error rate factor of Daubert simply is not applicable to forensic document examination evidence or to most other forensic evidence. In fact, among nearly all of the crime laboratory techniques, only in DNA cases (and perhaps in instrumental drug analyses) are such error rates clearly and definitively available.

#### Accepted Protocol or Methodology

I believe that you will not have any difficulty in supply the necessary information to convince a judge the "protocol-and-methodology" Daubert factor is amply met in the case of handwriting identification testimony. The methodologies have been tested over many years; you are familiar with them; you have explained them many times; they are written down in the literature and are widely followed in those cases to which they may be applicable.

Handwriting identification methodologies follow the scientific method in the sense that an examination does not commence with a preconceived notion as to what the outcome is likely to be. Instead, such examinations commence from an essentially neutral viewpoint, in which a document examiner states, if he or she were required to articulate the thinking process followed, "I do not know which one of several authors of known standards authored the questioned writing; I do not know whether the known exemplars also contain the writing of the author of a questioned document."

It is with that initial assumption of neutrality that differences in writings are examined to determine whether the differences are significant enough to indicate nonidentity or insignificant enough so that they do not preclude identity. The methodology that evaluates and compares relevant versus irrelevant differences on the issue of common authorship is a legitimate exercise of an expert's skill in examining handwritings. It is simply the determination of the range of natural variation of a person's writings executed at different times – the intrawriter differences – as distinguished from the interwriter differences.

## General Acceptance

Handwriting identification skills have been generally recognized by the profession, by the entire forensic science community, and by the courts for many decades. Not much further needs to be said on that issue.

All of the document examiners in this room are aware of everything I have said, so far. But judges and juries may not know these facts. You may have to convince them of the information we have shared. That is what we are addressing next.

## How to Prepare for a Daubert Hearing

- The expert must at all times be the consummate professional witness, as well as an articulate advocate for the profession.

A forensic scientist testifying in court to a conclusion in an individual case is not an advocate, but a witness who presents factual information and offers a professional opinion based upon that factual information. When it comes to establishing the worth of the profession as a whole, however, effective advocacy of its reliability, methodology, research, and degree of confidence is essential.

How is that done? We will not dwell, here, on the witness' background, experience, and professional credentials. It is a given for all of you present today. You all have a long and respectable professional life in forensic document examination. That is why you were invited to attend this symposium.

However, lengthy experience may sometimes induce complacency in a person. Some of you have been cross-examined by very skilled lawyers, and you may feel that no lawyer has gotten the better of you, yet. Most lawyers cannot get the better of you when questioning about highly technical areas, and the skilled litigator will often avoid trying to argue the merits of a particular examination. Instead, such an advocate may attack other aspects of your profession, the ones we have been exploring before, or perhaps trying to expose some gaps in your memory by going over some of the basics you may have long forgotten.

Expect to be challenged on every aspect of your work and your profession. That means that, from time to time, you should refresh your memory on the basic tenets of handwriting comparison techniques as described in the worthy treatises, so that you can respond intelligently and understandably to questions that relate to these very basic facets of handwriting examinations.

Also be sure to articulate professional concepts in a way lay persons (like the judge and the lawyers) can understand. You know how to discuss technical matters with your colleagues at professional consultations or meetings, but can you also explain what it is that you are doing to lay people, who may be skeptical? Can you explain these matters in a way that will convince the jury it should credit your opinion?

Among professionals, you know the lingo; you know the basics and do not feel you have to go over them again at meetings such as these. But when you are in court, you are not among your peers: Your job is to let lay persons know what handwriting comparison is all about and how it is done. The part about being a good and credible expert witness is one about which many examiners received little training. Whatever in-house training may have been received may not have conveyed the trial lawyer's perspective of what makes a good expert witness.

Therefore, when preparing for court, go over the basics again from time to time. I repeat: Expect to be challenged on everything. Today, that also includes things that are outside your own professional competence, but that relate to your field. You should also stay current on the pertinent case law that has been handed down, not only in your own jurisdiction, but also elsewhere.

You must, of course, also be current on the relevant research that has already happened and that which is still ongoing. The mark of being engaged in a science is that constant research is being done to expand the collective knowledge about the profession.

To do this, many resources are available to you. There are various home pages on the Internet, among them the American Society of Questioned Document Examiners (ASQDE) home page; there is the American Board of Forensic Document Examiners (ABFDE) Resource Kit (once it is updated). Also be familiar with and read the professional literature. If you are employed in a public agency, I know that you are going to be required to be familiar with your own agency's publications, but that is not enough to be a professional. You must also be familiar with the broad literature in your profession. There is a lot of it, I know, but you should at least be familiar with the Journal of Forensic Sciences, and the one highly specialized journal, the new Journal of the American Society of Questioned Document Examiners.

Having studied and followed the literature in forensic sciences for nearly half a century, I was most impressed with the professionalism of the ASQDE's new publication. Its very existence and the breadth and scope of its content gives the profession a tremendous boost.

If you have a case that has a fairly unusual twist to it, you should be able to quote, or point to, or give references to specific studies or articles in the literature that deal with a narrow issue you may have addressed in the examination about which you are testifying.

- Maintain a close interaction with the attorney on whose side you will be testifying during a Daubert hearing.

If you are on the government side, many of the Assistant United States Attorneys (AUSA) are skilled lawyers, but they are also overworked and may not have dealt with handwriting analysis issues in connection with Daubert.

Chances are that you will know far more about what to expect at a Daubert hearing than an AUSA will. So you will also have to be prepared to educate the AUSA on the critical points that you need to cover, and that includes not only what Daubert requires, but how you can prove all of these factors mentioned in the Daubert opinion – the matter discussed earlier on testability, peer review and publications, known or potential error rates, accepted methodologies, and general acceptance.

Most of you have examples of proper and competent direct examinations that you can give to the prosecutor or to the proponent-lawyer who will present your testimony. A little diplomacy in the way you do this might be helpful. Many lawyers, like some experts, have overinflated egos and do not like to be told how to do their job. So, use some tact in suggesting what approach they should take when they represent your testimony in the courtroom.

Some attorneys are willing to spend a lot of time in getting ready for the handwriting evidence phase of the trial; others are less likely to want to devote much time to it. You have to be able to impress upon them the dangers to their case if a challenge is made at the last minute, and they are not prepared to rebut it. Even if no motion in limine for a Daubert hearing has been made prior to trial, you should also alert your attorney to the possibility that it may literally be sprung on you at trial. Assuming that you, as the expert, are thoroughly prepared for such a challenge, your testimony will still be in trouble if your lawyer does not know what questions to ask.

- If an expert critic is going to appear:

You might suggest, when you know a professional critic will testify for the other side, that the attorney on your side of the litigation move in limine to exclude the critic's testimony on the basis that he or she is not qualified to testify as an expert.

You have ammunition already in the literature, my article critiquing the critics, among others, and now there is also an important precedent in the 11th Circuit Court of Appeals.

Last month, a decision was handed down in the 11th Circuit in the case of *United States v. Paul*. Document examiner, Larry Ziegler testified for the government in this extortion prosecution that the defendant authored the extortion note. Professor Denbeaux wanted to testify for the defense as an expert critic of handwriting analysis, but because of a very good pretrial preparation by the AUSA and a close cooperation with Mr. Ziegler, Denbeaux was kept off the stand as unqualified to testify as an expert.

It is important you are informed about such cases. You can see a reference to this case on this website: under the heading *Handwriting Evidence Meets Reliability Criteria*. This approach can also be used to seek to exclude graphoanalysts seeking to testify on the identification of disputed writings.

If you cannot keep the critic off the stand – and some courts may be reluctant to bar a critic from testifying from fear that if they do so, they might be reversed on due process grounds for denying a defendant the right to present a defense – then be prepared in a different way.

Obtain, read, and research transcripts of prior testimony given by these experts.

Make sure that you know exactly what the critic's positions are, and convey accurate information on this point to the attorney who will cross-examine the critic.

Know the manner in which their writings and prior testimony have been critiqued, too.

Be familiar with the cases in which they testified, what the issues directly in point were, and what the outcomes have been.

Be also familiar with the public statements they have made in other cases, so that the critic can be effectively impeached if he now makes a contradictory statement. For instance, it is well-known in the profession that, in one case, Professor Denbeaux had testified that he had absolutely no experience with or knowledge of typewriting comparisons. Yet, in a case currently pending, I am told that he professes to testify as a critic of typewriting identification.

- Know who the judge is.

Some judges may be familiar with your testimony in earlier cases. By contrast, some may never have had the occasion to hear the foundations of handwriting examination methodologies explained. Such a judge may be willing to listen with more attention to fallacious, but nevertheless logically-sounding arguments of a law professor-critic. Such judges will require a high

caliber of testimony in order to lay the proper foundation to admit handwriting identification opinions. Know whether the judge previously ruled in handwriting evidence cases. Does he or she lean toward one side of the other?

- Conclusion

Expert opinion testimony is, and will remain, one of the most powerful forms of evidence in the courtroom. In order for it to be effective, it must be carefully documented, and expressed with precision, but without overstatement, in as neutral and objective a way as the adversary system permits.

Don't fear Daubert

Ever since the United States Supreme Court handed down its decision in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), the questioned document examination field has been challenged as not meeting the Daubert factors required for the admissibility of scientific evidence. Elsewhere on this web site we have discussed several of the cases involving handwriting identification testimony. The challenges intensified after *Kumho Tire v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999) expanded the Daubert applicability to all forms of expert opinion testimony, requiring that the reliability of the evidence be determined in a pre-trial hearing conducted by a judge – the gatekeeper – in those cases where a serious challenge to the reliability of the evidence was presented.

Yet, these challenges have been largely ineffective in terms of barring the experts' testimony. In the majority of cases where handwriting evidence was challenged, the evidence was admitted as comporting with the Daubert/*Kumho Tire* criteria. In a few cases, discussed and dismissed in the Prime opinion that follows, the ultimate opinions of the experts were deemed not admissible although they were permitted to testify to the similarities and differences between writing samples that had been studied.. In only four federal trial court decisions did the judge rule that the evidence of a forensic document examiner was fully excluded..

Recently, two cases were decided by judges who, after carefully considering all of the prior judicial holdings, pro and con, came to the conclusion that the offered expert testimony on handwriting identification, including the ultimate opinion of a "match," was fully admissible as meeting both the Daubert and the *Kumho Tire* requirements. The cases are *United States v. Prime*, 220 F.Supp.2d 1203 (W.D. Wash., Sept. 20, 2002), and *United States v.*

Thornton, .... F.Supp.2d ....., Case No. 02-M-9150-01, decided by the United States District Court for the District of Kansas on Jan. 24, 2003.

Since they provide a good overview of all of the issues that are traditionally raised, and were cases where the courts considered the criticism leveled against handwriting evidence by Dr. Michael Saks, we will reprint here significant portions of the opinions that place the controversy in its proper perspective. This story gives the readers the bulk of the opinion in the Prime case. The next story on the site [see link at the end of this story] deals with the Thornton decision. In reprinting both decisions, we have omitted some internal quotations and footnotes where they do not affect the substance of the arguments.

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UNITED STATES v. PRIME  
220 F. Supp.2d 1203 (W.D.Wash. 2002)

Order regarding Defendant's Motion In Limine

LASNIK, District Judge.

"On October 3, 2001, Michael S. Prime ("Prime") moved in limine to exclude expert testimony on handwriting identification at his trial or, in the alternative, for a hearing to determine the admissibility of such evidence pursuant to Daubert v. Merrell Dow Pharmaceuticals (1993) and Kumho Tire v. Carmichael (1999). Prime's motion brought into issue the testimony of Kathleen Storer ("Storer"), a forensic document examiner ("FDE" or "examiner") working for the United States Secret Service in Washington, D.C. Storer was to testify for the government that, in her opinion, Prime's handwriting appeared on counterfeit money orders and other documents. . . . The Court held a Daubert hearing on March 18, 2002, and issued an order denying Prime's motion on April 2, 2002....

## I. THE APPLICABLE STANDARD

Until the Supreme Court issued its opinion in Daubert, the trial courts determined the admissibility of scientific evidence by applying the "general acceptance" test, . . . first articulated by the Court of Appeals of the District of Columbia in Frye v. United States (App. D.C. 1923) [which held that] expert opinion based on a scientific technique was inadmissible unless the technique was generally acceptable as reliable in the relevant scientific community. In Daubert, the Supreme Court held that this "rigid" requirement had been superseded by Rule 702 of the Federal Rules of Evidence. \* \* \*

In Daubert, the Supreme Court created a gatekeeping role for trial judges as to the admissibility of scientific expert testimony. The Supreme Court envisioned that trial courts would conduct a factor based analysis when determining whether the testimony was reliable: (1) "whether the theory of technique can be and has been tested" (2) "whether the theory or technique has been subjected to peer review and publication" (3) "the known or potential rate of error" (4) "the existence and maintenance of standards controlling the technique's operation" and, finally, (5) "'general acceptance' can yet have a bearing on the inquiry." However, the opinion noted that the factors did not comprise a definitive checklist or test: "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."

Subsequently, in Kumho Tire, the Supreme Court expanded this gatekeeper function to all expert testimony—i.e., not just that based on science. . . . Perhaps anticipating the problems that would follow if any particular Daubert factor was rigidly applied, the Supreme Court emphasized the flexibility that was inherent in the analysis: "We can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in Daubert, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue. \* \* \* A flexible approach does not, however, imply a lax one. Even if testimony is based upon professional studies or personal experience, trial courts are to ensure that the expert employs in the courtroom the same intellectual rigor that categorizes the practice of an expert in the relevant field."

In Kumho Tire, the Supreme Court also clarified that the application of Daubert by trial courts was to be case- and fact-specific. \* \* \* Finally, in Kumho Tire, the Supreme Court reaffirmed that trial courts enjoy a certain amount of latitude in their admissibility decisions. A trial court's decision on whether or not to include expert testimony was to be reviewed under the abuse of discretion standard. . . .

## II. STORER'S ANALYSIS

According to Storer, the premises underlying handwriting examination and identification are that (1) "No two writers share the same combination of handwriting characteristics" and (2) "Each writer has a range of variation centered within his/her basic writing habits." A proper examination requires sufficient samples of comparable "questioned" and "known" handwriting that are naturally executed. If adequate samples are available, an examiner conducts a side-by-side comparison, including a visual and a microscopic study. The comparison made is of several handwriting features such as style, smoothness, size relationships, slant, spacing, curvature, angularity,

punctuation, etc. Similarities and differences in various features have varying levels of significance, and the latter influence the conclusion that is drawn. After the examination, an opinion is expressed on a nine point scale: "identification," "strong probability of identification," "probable indications," "no conclusion," "indications did not," "probably did not," "strong probability did not," and "elimination." In the Secret Service, a second examiner conducts an independent examination without knowledge of the conclusion of the first.

In the case before the Court, the questioned documents comprised 76 exhibits such as envelopes, postal forms, money orders, post-it notes, express mail labels and postal box applications. The "known" handwriting came from three suspects in the case: 114 pages from David Hiestand ("Hiestand"), 14 pages from Jeff Hardy ("Hardy") and 112 pages from Prime. In Storer's opinion, Hiestand wrote portions of eight documents, Hardy wrote portions of one of the questioned documents and Prime wrote portions of 45 documents. These opinions ranked the highest in the nine-point scale (i.e. identification). As to portions of 14 questioned documents, Storer rendered an "indications" opinion, i.e., that there were "few features which are of significance for handwriting comparison purposes . . ." As to 38 signatures, Storer rendered a "could not be determined" opinion and the remainder of the material has "no evidence of significance" according to her.

In December 2001, Storer issued a second report based on additional questioned material (two brown envelopes with hand printing). She was of the opinion that Prime was the writer of the material on the new exhibits.

### III COURT TREATMENT OF HANDWRITING IDENTIFICATION

[The first paragraph of the opinion, dealing with early (1902–1993) case law, is omitted as only of historical interest and irrelevant to the current issues. The opinion then continues as indicated hereafter. Editor]

The world appears to have changed with Daubert, after which district courts began to cast a suspicious eye at the discipline of forensic document analysis. After Daubert, but prior to Kumho Tire, district courts had the option of analyzing handwriting comparison testimony under two alternative strands: They could either look at the area of forensic document examination as being grounded in scientific knowledge and apply Daubert, or treat it as nonscientific expert testimony, i.e., falling under the "technical, or other specialized knowledge" prong of Fed.R.Evid 702. Analysis under both approaches was conducted in *United States v. Starzecpyzel*, 880 F.Supp. 1027 (S.D.N.Y. 1995). After a Daubert hearing in which Judge McKenna himself occasionally questioned the examiner, the court treated the testimony as science-based and then applied the Daubert factors. Noting that two ongoing studies were being conducted by the U.S. Postal Laboratory

and the Immigration and Naturalization Service ("INS") Laboratory, the court ruled, first, that the discipline of handwriting analysis was "amenable" to testing. Second, the court found that the field had not, in fact, actually been subjected to rigorous testing and, therefore, the error rate as to any conclusions testified to by examiners was unknown. [In footnote 2, the Court indicated that the Postal Service and INS studies were incomplete at the time the Starzecpyzel opinion was rendered. Editor] As to the third Daubert factor, the court noted that FDEs published in several journals. However, the court found the articles "to be significantly different from scholarly articles in such fields as medicine and physics, in their lack of critical scholarship." Finally, the court found that the field did indeed receive general acceptance within the community of examiners and the legal community, but not from "financially disinterested parties, such as academics." In sum, the court concluded that "forensic document examination, despite the existence of a certification program, professional journals and other trappings of science, cannot, after Daubert, be regarded as "scientific . . . knowledge."

However, this did not result in an automatic ruling of inadmissibility. The [Starzecpyzel] court went on to state that Daubert did not apply to forensic document examiner testimony. The court rules that such testimony was not based on science but on "technical, or other specialized knowledge." After outlining what FDEs actually do, the Court held that forensic document examiner testimony was admissible, largely on the grounds that (1) the jury could visually confirm the first part of an FDE's analysis in which the examiner identifies significant similarities and differences between genuine and challenged handwriting examples, and (2) the other, unverifiable portion of the analysis, in which the examiner draws inferences, was dependent on the first part, and the testimony was, in any event, subject to cross-examination.

After Kumho Tire, all expert testimony, whether based on science or not, is subjected to the Daubert screen. Circuit courts [of appeal], admonished by the Supreme Court to review a district court's decision deferentially, generally have upheld district courts' decisions. \* \* \*

Among district courts [trial courts], handwriting comparison testimony as fared unevenly since Kumho Tire. Much of the evidence presented to the courts is the same (and indeed, mirrors that presented to this Court). Yet, after applying Daubert, courts have reached varying conclusions as to the reliability of such testimony.

In *United States v. Gricco*, 2002 WL 746037 (E.D.Pa. 2002) (issued after the Daubert hearing in the case before the Court) the court found that testimony of an expert's opinion that there was a handwriting match between the defendant's exemplars and two government exhibits, including a handwritten list of materials allegedly used in manufacturing methamphetamine and a

handwritten list of alleged laboratory supplies, was "sufficiently reliable for purposes of Rule 702." The court . . . found that the case for admissibility was clear. In reaching its conclusion that handwriting analysis was based on "valid reasoning and reliable methodology," the court noted the pedigree of such evidence in courtrooms across the country that had been established under the approving eye of the circuit courts. . . .

In contrast, in *U.S. v. Saelee*, 162 F.Supp.2d 1097 (D.Alaska 2001), the trial court ruled such evidence inadmissible. The questioned writing in the case involved address labels on packages, which the court presumed "would be considered a very small quantity of printing" and the defendant was an Asian whose first language was not known. In that case, the government sought to have its expert "testify only about the similarities and differences between the known writing and the questioned writing and not have [the expert] testify about his ultimate conclusions as to whether defendant authored the questioned documents. Acknowledging that it was taking "one step further than other courts," the [Saelee] court concluded that after applying Daubert that the expert testimony "is as likely to mislead a jury as to assist it in determining the facts of this case. It is therefore excluded entirely."

In *United States v. Rutherford*, 104 F.Supp.2d 1190 (D.Neb. 2000), the court found it helpful to break down the expert testimony into two components: (1) The comparison of the "stylistics of the defendant's handwriting" with the "handwriting(s) on the questioned documents" and (2) conclusions that the defendant was "the author of a signature or other writing on a questioned document." The former was not challenged by the defendant. The court found that the latter did not meet Daubert/Kumho Tire requirements and was therefore excluded.

Similarly, in *United States v. Santillan*, 1999 WL 1201765 (N.D.Cal. 1999), the district court limited the testimony to "the mechanics and characteristics of handwriting and testimony as to comparison of similarities between defendant's known handwriting and the handwriting on the 'questioned' documents, and barred any testimony concerning the expert's belief that the handwriting on the questioned documents is in fact handwriting of the defendant." [A similar conclusion was reached in *United States v. Hines*, 55 F.Supp. 62 (D.Mass. 1999).]

Trial court rulings reach one of three conclusions: (1) exclusion of all forms of expert testimony on handwriting comparison; (2) inclusion of the testimony on similarities and differences but exclusion of the expert's conclusions; and (3) inclusion of comparison and expert testimony.

#### IV. APPLICATION OF DAUBERT/KUMHO TIRE IN THE CASE BEFORE THE COURT

The challenge to handwriting evidence by Prime is two-fold. In 1998, in response to the *Starzecpyzel* decision, the U.S. Department of Justice issued a solicitation to conduct more studies to "determine the scientific validity of handwriting identification." Prime moved to exclude Storer's testimony on the ground that this solicitation was an admission by the Department that "in its present state, handwriting analysis cannot pass muster under *Daubert/Kumho Tire*. This argument is clearly without merit. A solicitation to gather further data on handwriting examination is not an admission that the testimony fails to meet current requirements. Therefore, Storer's testimony is not to be excluded on this ground.

The heart of Prime's challenge, however, goes to the government's claim that handwriting and handprinting identification testimony meets the requirements of *Daubert/Kumho Tire*.

Before the Court applies the *Daubert* factors to assess the admissibility of Storer's testimony, a few general observations are in order. First: *Daubert* and *Kumho Tire* were opinions issued in response to the increasing efforts to introduce novel theories in civil trials. By issuing these landmark opinions, the Supreme Court attempted to strike a balance between wholesale exclusion of most forms of non-scientific expert testimony, even that based on sound principles, versus liberal inclusion of such testimony, including that based on untested theories of highly dubious merit. Therefore, in *Daubert*, the Supreme Court overturned the trial court's exclusion of expert evidence based on the general acceptance test, but in *Kumho Tire*, upheld the exclusion of testimony based on a tire failure expert's obviously flawed methodology. These rulings have been used by some trial courts to exclude not just novel theories, but also time-tested techniques used almost universally by law enforcement, such as fingerprint and handwriting analysis. The Court believes that the outright exclusion of such evidence is a mistake. While the Court agrees that the *Daubert* analysis needs to be applied to all expert testimony, the test "depends upon the particular circumstances of the particular case at issue." [*Kumho Tire*.] Where a novel theory is presented to a court, it makes sense to demand proof of statistically significant results and strict compliance with scientific methods. However, where a technique has been repeatedly applied and tested by law enforcement and by courts for over a century, the Court does not believe that the absence of scientific data, without more, should be the death knell for such testimony. In *United States v. Llera Plaza*, 188 F.Supp.2d 549 (E.D.Pa. 2002) Judge Louis H. Pollak reached a similar conclusion where the testimony at stake was fingerprint identification based on a regimen known as "ACE-V." Judge Pollak acknowledged that such testimony did not satisfy all the *Daubert* factors. Nevertheless, he concluded that such testimony was admissible based largely on its historical acceptance by law enforcement and by English and American Courts:

I am not persuaded that courts should defer admission of testimony with respect to fingerprinting . . . until academic investigators financed by the National Institute of Justice have made substantial headway on a "verification and validation" research agenda. For the National Institute of Justice, or other institutions both public and private, to sponsor such research would be all to the good. But to postpone present in-court utilization of this "bedrock forensic identifier" pending such research would be to make the best the enemy of the good. . . . The ACE-V regime that is sufficiently reliable for an English court is, I conclude, a regime whose reliability should, subject to a similar measure of trial court oversight, be regarded by the federal courts of the United States as satisfying the requirements of Rule 702 as the Supreme Court has explicated that rule in *Daubert* and *Kumho Tire*.

The Court agrees with Judge Pollak's conclusion and reasoning.

Second: The Court also believes that the *Daubert* inquiry is not intended to ask the "larger question" regarding the reliability of a particular technique in general. Rather, the inquiry is case specific. In other words, all applications of handwriting identification are not at issue in the motion before the Court. Rather, the Court will evaluate the reliability of handwriting testimony within the confines of the facts of this case. \* \* \* The Supreme Court made clear, therefore, that even in the context of evaluating expert testimony, the focus of a trial court should be on the facts of the dispute before it rather than on theoretical issues that may be relevant to discussions in other contexts.

With these principles in mind, the Court will proceed to apply the *Daubert* factors to the expert testimony at hand.

The most important line of inquiry under *Daubert* for present purposes—and one that appears to have foiled the testimony of many a handwriting expert in other district courts—is whether the theory and technique of handwriting has been, or is capable of being, tested and whether handwriting identification has an acceptable error rate. The Court understands this inquiry to include the following prongs: (a) whether the premises of handwriting identification are sound given the facts of this case; i.e., given the number of known samples of handwriting in this case, whether characteristics individual to Prime can be identified and used by a trained forensic examiner such as Storer; and (b) whether the work of professional forensic examiners, such as Storer, can be, and has been, tested for accuracy and proficiency and what the error rates are in such tests.

The government and Storer have cited to several different sources as support for the proposition that handwriting is unique. Among the evidence were results from research conducted by the Center for Excellence for Document Analysis and Recognition ("CEDAR") at the State University of New York at Buffalo. The CEDAR research results were accepted for publication in the

Journal of Forensic Sciences prior to the Daubert hearing. . . . Professor [Sargur N.] Srihari [the principal author–investigator in the study. Editor] testified about his research at the Daubert hearing. His project was undertaken with the purpose of testing the hypotheses underlying forensic document examination. A portion of Professor Srihari's study looked at the process of examining two writing samples and determining whether they were written by the same or a different writer. Professor Srihari and his colleagues extracted features of handwriting—both "macro" features such as slant, and "micro" features such as the presence of openings in characters—and utilized these to compare documents using computer software. According to Professor Srihari, he obtained a 96 percent accuracy rate within his sample, which was "statistically inferable over the entire population." His conclusion was that "handwriting is individualistic."

The government also refers to databases maintained by the Secret Service and the German law enforcement agency, Bundeskriminalamt ("BKA"). These so-called "Forensic Information System for Handwriting" ("FISH") databases of letters convert handwriting features into mathematical algorithms. The government claims that of the 90,000 writers in the German database, "the system has determined that no two writers write alike, nor do they share the same combination of handwriting characteristics." The same conclusion can be reached from an analysis of the Secret Service's slightly smaller database of 9,000 writers, according to the government.

In addition, Storer refers in her affidavit to studies which show that the handwriting of twins can be distinguished. She cites numerous articles published in forensic science journals that conclude that handwriting is a distinguishable, individual trait. She also testified that her own personal experience showed that "every writer does have their [sic] own combination of individual characteristics."

As the Court has already noted, it need not address the reliability of handwriting evidence generally. However, within the confines of this case, the Court has no trouble concluding that the premises of handwriting identification are sound. Storer states she received as many as 112 pages containing specimen writing from Prime, samples that the defense itself characterizes as "extensive." Storer's training credentials are, furthermore, impeccable: She received a Master of Forensic Science degree from George Washington University in 1988. From 1989 to the present she has been employed as an FDE with the Secret Service in Washington, D.C. At the Secret Service, she underwent a three-year apprenticeship or training program in document examination leading up to a certification on July 1, 1992. The training program in the Secret Service involves writing 18 research papers in the area of document examination and presenting them to peers for discussion. It also entails working alongside senior examiners who impart knowledge of their craft to the apprentices. Storer continues to take internal

proficiency tests twice a year. Storer testified that she had never failed any of the in-house tests she was required to take by the Secret Service. In 1997, she was certified by the certifying body for forensic document examiners, the American Board of Forensic Document Examiners. The certification process included a three-part test: a practical, written, and an oral test. With this extensive level of training by the examiner and the array of available writing samples, the Court has no trouble concluding that unique characteristics of Prime's handwriting may be established.

[Editor's Note: At this point in the opinion, the Court included an extensive footnote 5, which is included herein in full since it deals with the defense testimony of a well-known critic of handwriting reliability: Professor Michael J. Saks.]

The Court's Footnote 5. The Court's conclusion is supported in general by the results of Professor Srihari's research. However, the Court acknowledges the limitations on the inferences that can be drawn from the study. Even if handwriting is individualistic when the examination is conducted by a computer, this does not necessarily establish it will be so when subjected to human examination. Moreover, the evidence provided of the BKA and Secret Service databases, while marginally probative, appears to beg the question it is presented to answer, as pointed out by Professor Michael J. Saks ("Saks"), professor of law and of psychology at Arizona State University, who testified at the Daubert hearing for the defendant. The uniqueness and individuality cannot be established simply by stating that different writers generate different algorithms. It is clear that individuality is an attribute that depends on the criteria used to judge the writing's characteristics: the more thorough the examination, the more likely that writings will appear unique (even if written by the same person). Dealing with the uniqueness question in a particular situation requires determining the criteria used to determine uniqueness, whether such criteria are reliable and whether these criteria were in fact applied in the case. Professor Saks' criticisms as to the studies on twins are also well taken. That the writing of twins can be distinguished cannot be said to stand for the principle that writing is unique to every individual. However, at least some of Professor Saks' criticism is more properly directed to the field of forensic document examination in general rather than being specifically applicable in the case before the Court. For instances, Saks cites to a 1958 study of signatures as being "extremely cautionary, if not devastating" to the hypothesis of individuality. (John J. Harris, How Much Do People Write Alike: A Study of Signatures, 48 J.Crim.L. & Criminology 647 (1958) ("Harris Study").) However, the Harris signature study has little bearing on the current case. In that study, the last names of people were cut out from handwriting on voter registration records. Examiners were then asked to compare the writing of the same last name, e.g., two different samples of the word "Smith" were compared. While Harris concluded that many of the signatures lacked individuality, the Court does not feel that the

results of a one-word comparison can be extended to cover a case with the depth and breath of questioned and known documents as the one before the Court. The availability of a large number and variety of samples of handwriting makes this situation different not merely in degree, but in kind, from the research published in the 1958 article. Saks' criticism is a warning, well taken, that trial courts should be wary of identification based on small samples of handwriting.

As far as the proficiency and accuracy of FDEs are concerned, directly relevant to these issues are studies conducted in the 1990s by Professor Moshe Kam of the Electrical and Computer Engineering Department at Drexel University. [Editor's Note: Here again, the Court included its footnote 6, which it is important to relate, since it compares the Kam research to the handwriting critics' frequent assertion that old proficiency test data of the 1980s – thus, pre-Daubert – shows a lack of reliability in handwriting comparisons:]

The Court's Footnote 6: The Court finds that the studies conducted by Professor Kam are more relevant to its analysis than the statistical manipulation of data from proficiency tests conducted by the Forensic Sciences Foundation in the 1980s. The tests were not conducted using control groups; neither were the testing conditions taken into account. Moreover, the tests contained photographs, not original documents, and were administered to anyone who paid a fee. Given the availability of newer and more reliable data by Professor Kam, the Court finds that reliance on the proficiency tests is unnecessary.

In his studies, Professor Kam compared the performance of professional forensic document examiners with non-professionals in matching handwriting. Professor Kam testified in court that the first of his studies that lay persons made far more types of errors than professional examiners. The second study showed that as a group, examiners' performance was different from that of lay persons: Lay persons rivaled professional examiners in being able to select different documents written by one person. However, lay persons also claimed erroneously that documents written by different people had the handwriting of the same person 38 percent of the time, whereas experts made the same mistake 6.5 percent of the time. As Professor Kam stated: "It struck me very quickly that lay persons tend to see similarities and jump to a conclusion . . . whereas document examiners always started the analysis-when I asked why did you make the decision-by trying to show me [sic] what's different." The third [Kam] study showed that a different incentive scheme did not make a difference in the results; it apparently also showed an unexplained improvement in the ability of lay persons to avoid false positives. The fourth study showed that professionals and lay persons did

not differ significantly in detecting forgeries, but professionals were better at finding genuine signatures. Professionals erroneously concluded that forgeries were genuine 0.5 percent of the time whereas lay persons did so 6.5 percent of the time; professionals mistakenly concluded that genuine signatures were forgeries 7.1 percent of the times, lay persons did so 26.1 percent of the time.

The Kam studies indicate that handwriting identification is not error-free; however, the differences in error rates and results between professionals versus lay persons show that the field is one that is amenable to developing an expertise and that, with proper training, professionals can improve their accuracy. For the purposes of this case, the Court considers the expertise and testimony of Storer to be adequately tested. Further scientific testing on handwriting comparison would undoubtedly aid in gauging the field's legitimacy; however, as a legal matter, the field has been sufficiently tested by its long-established use, and the research that already has been concluded. Daubert does not require more: The test of admissibility is not whether a particular scientific opinion has the best foundation or whether it is demonstrably correct. Rather, the test is whether the particular opinion is based on valid reasoning and reliable methodology.

The Saelee court's problem with the Kam studies was that "they did not conclusively establish that forensic document examiners can reliably do what they say they do." However, the context of the Saelee court's ruling was entirely different: As already noted, the court was dealing with a writer whose native language was not known and with a small quantity of questioned writing. The Saelee court specifically noted that:

The court would point out that it is not holding that handwriting analysis can never be a field of expertise under the Federal Rules of Evidence. The court is merely holding that the Government has failed to meet its burden of establishing that the proffered expert testimony in this case is admissible under Rule 702.

In any event, the Court disagrees with the Saelee's court assumption that Daubert requires that the reliability of a process or technique be established "conclusively.": As noted by the Supreme Court in Daubert itself: "It would be unreasonable to conclude that the subject of scientific testimony must be 'known' to a certainty; arguable, there are no certainties in science. To the extent that there are gaps in the research—and there are—they need to be filled. The Court encourages the profession to respond forthrightly to Professor Saks' criticism and urges Professor Kam to reveal his data for the purpose of re-analysis. However, the fact that additional research can be done does not mean that FDE testimony should now be inadmissible on the ground that it has not been adequately tested. Such as ruling "would be to

make the best the enemy of the good.: [Quoting Judge Pollak in Llera Plaza, supra.]

The other Daubert factors also are satisfied in the case before the Court. It is clear to the Court that the forensic sciences, including document examination, are subject to extensive peer review. Storer testified at the Daubert hearing that journals publishing articles in this area include: The Journal of Forensic Sciences, the Journal of the American Society of Questioned Document Examiners, the International Journal of Forensic Document Examiners, the Canadian Society of Forensic Science Journal, the Journal of Forensic Identification and Forensic Science International. Articles sent for publication in the Journal of Forensic Sciences are reviewed not just by handwriting experts but by others in the forensic sciences community. Even if this form of peer review is not conducted by academics, it does not mean that it is devoid of utility. As Professor Kam's testimony shows, forensic document examiners have a legitimate expertise based on years of experience and training. Their review of articles submitted for publication provides oversight on research in the field. The Court agrees with Judge Pollak in Llera Plaza that just because peer review is not conducted by scientists, this need not "militate against the utility of the identification procedures. . . ."

Furthermore, at least in the case of Secret Service examiners, the process of document identification goes through an "internal" peer review as well, since every document reviewed by such examiners is subject to a second, independent examination. Finally, it cannot be ignored that handwriting evidence has been tested and reviewed in the courtroom for decades. This usage itself provides some assurance of reliability. Cf. *United States v. Havvard*, 117 F.Supp.2d 848, 854 (S.D.Ind. 2000) (nothing that "latent fingerprint identification has been subject to adversarial testing for roughly 100 years," a "track record [which] provides far greater assurance of reliability than, for example, publication of one peer-reviewed article describing a novel theory about the cause of a particular disease at issue in a civil lawsuit.")

Storer's testimony also showed that the field of document examination is moving toward establishing standards controlling the technique's operation. For one, the Secret Service laboratory where she works has maintained its accreditation with the American Society of Crime Laboratory Directors since 1998. This accreditation process requires an annual external proficiency test. Further, the nine-point scale for expressing opinions by the FDE's was established under the auspices of the American Standards and Testing Organization ("ASTM"). Perhaps in response to the enhanced scrutiny it was receiving, a working group was formed in 1997 by the industry in order to standardize many of the processes utilized. Standards already established by ASTM include the terminology used in the profession, and the practice for

receiving, documenting, storing and retrieving evidence in a laboratory. According to Storer, eight proposed guidelines are undergoing peer review. One of the standards that is being formalized is the comparison process itself. Under these circumstances, the Court finds that forensic document examination is making strides toward standardization. The fact that the document examination process has not completely standardized is not necessarily a bar to admissibility in court. Not all expert testimony must be backed up by a standard procedure. Moreover, if a fact-finder is fully apprized of the process that is actually followed, and the expert is subject to cross-examination and to being countered by other experts, the lack of standardization can hardly be said to require exclusion.

Finally, it is clear to the Court that handwriting analysis has received broad acceptance. Law enforcement agencies such as Interpol, Scotland Yard, the Central Intelligence Agency, the Federal Bureau of Investigation and the United States Postal Inspection service use handwriting analysis. In addition, Storer listed 15 universities in the United States that offer Masters degrees in forensic science with courses that include document examination. As has already been noted, handwriting analysis has long been used in American courts. Even after Daubert and Kumho Tire, most district courts have admitted such evidence, albeit with limitations. Therefore, the general acceptance prong of Daubert is satisfied.

In sum, the Court is persuaded of the reliability of Storer's testimony; it was properly admitted and presented to the jury at trial. The Court acknowledges that had it required extensive scientific testing as exists in other fields, forensic document examination would come up short at the present time. However, the Daubert hearing made it very clear that the profession is in the process of making giant strides toward objective testing and standardization. The question before the Court, then, is whether in the interim period in which complete data are not available, the Court should exclude all FDE testimony as inadmissible. The Court is persuaded that, under Daubert, such testimony, including conclusions based on examinations, is reliable and admissible. Prime can present his own expert to dispute Storer's findings and/or to attack the entire field of forensic document examination as illegitimate. However, the apparent trend to exclude FDE testimony is a result, the Court believes, of an excessively-rigid application of Daubert. Since Daubert applies in both criminal and civil cases, such an approach may, one day, result in unfortunate consequences for a criminal defendant who is denied the ability to present the best evidence that he did not author an extortion demand or pen a forged signature. The Court declines to follow this trend on the record before it.

## V. CONCLUSION

For the foregoing reasons, the Court denies the motion in limine and holds that Storer's testimony was properly admitted at trial.

END

See also, "The Thornton Handwriting Examination Decision." (link provided below)