

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF KANSAS

**FILED**

JAN 24 2003

RALPH L. DeLOACH, CLERK  
By *[Signature]* Deputy

UNITED STATES OF AMERICA, )  
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 ) Plaintiff, )  
 )  
 vs. )  
 )  
 JANET L. THORNTON, )  
 )  
 ) Defendant. )  
 \_\_\_\_\_ )

Case No. 02-M-9150-01

ORDER

The defendant, a physician, is before this court on a charge of theft of Demerol from Irwin Army Hospital at Ft. Riley, Kansas, on October 16, 2001. Records from the Hospital indicated that 5 Demerol injectors had been signed out by a doctor who was not on shift when the entries were made, and had been issued to non-existent patients or patients whose records indicated that they were not taking Demerol. The government has obtained a report from Derek Hammond, a forensic document examiner employed by the United States Army Criminal Investigation Laboratory. Mr. Hammond reviewed the narcotics log from Irwin Army Hospital and rendered opinions concerning whether or not certain writings on those records were or may have been those of the defendant. The defendant has filed a motion to exclude the testimony of Mr.

Hammond.

This issue is governed by Fed.R.Evid. 702, which states as follows:

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.

This rule was amended in 2000 in response to Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786 (1993) and Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 119 S. Ct. 1167 (1999). See Fed.R.Evid. 702, Advisory Committee Notes to 2000 amendments. In Daubert, the court, focusing on the admissibility of scientific expert testimony, held that the trial judge has the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Kumho Tire, 526 U.S. at 141, 119 S. Ct. at 1171. In Kumho Tire, the court held that a trial judge's gatekeeping obligation applies not only to testimony based on scientific knowledge, but also to testimony based on technical and other specialized knowledge. Id.

In Daubert, the court set out five factors for the trial

court to consider when determining whether the testimony was reliable. They are:

- (1) whether the theory or 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 techniques's operation, and
- (5) whether the theory or technique enjoys general acceptance within a relevant scientific community.

Daubert, 509 U.S. at 593-594, 113 S. Ct. at 2796-2797. However, these factors do not constitute a definitive checklist or test. The gatekeeping function must be tied to the facts of a particular case. Kumho Tire, 526 U.S. at 150, 119 S. Ct. at 1175. The court finds that the above factors are pertinent to assessing the reliability of handwriting analysis. See United States v. Saelee, 162 F. Supp. 1097, 1101 (D. Alaska 2001). The government bears the burden of proving that its expert's proffered testimony is sufficiently reliable to be admissible under Rule 702. Saelee, 162 F. Supp. at 1101.

As noted above, the government's witness was Derek Hammond, a forensic document examiner with the United States Army Criminal Investigation Laboratory (USACIL). He has been employed by USACIL for three years. Previously, Mr. Hammond had served as a

forensic document examiner with the Internal Revenue Service-National Forensic Laboratory, the Florida Department of Law Enforcement, and the Carney & Hammond Forensic Document Laboratory. Mr. Hammond has worked as a forensic document examiner for 10 years. He received 2 years formal training in forensic document examination. He has also attended numerous workshops, seminars and other courses in document examination. Mr. Hammond has a Certificate of Qualification in Forensic Document Examination based upon his education, training, experience, and the successful completion of a three-part formal examination process. He is a member of the American Board of Forensic Document Examiners. Mr. Hammond has authored or co-authored 9 publications in forensic document examination, and has testified 18 times as an expert witness in forensic document examination.

Mr. Hammond reviewed the narcotics logs from Irwin Army Hospital and compared them with writing exemplars obtained from the defendant and another physician. Mr. Hammond based his opinions using a 9 point scale, ranging from: *Identification, Highly probable did write, Probably did write, Indications did write, No conclusion, Indications did not write, Probably did not write, Highly probable did not write, and Elimination.* As to the exhibits, Mr. Hammond indicated in his report and testimony that there were indications that the defendant may have written

certain entries, that the defendant did write certain other entries, and could reach no conclusion as to whether the defendant wrote the remaining entries in question. Mr. Hammond's report further states that many of the handwriting exemplars of the defendant appeared to be distorted or stilted. These specimens were rapidly written, illegible, and may not reflect the normal handwriting habits of the defendant, according to Mr. Hammond. Mr. Hammond indicated that obtaining further handwriting exemplars of the defendant would provide an adequate basis for stronger opinions regarding the defendant.

Since the Daubert and Kumho Tire decisions, courts have been split on the admissibility of expert testimony of a forensic document examiner. Some courts have found the testimony to be reliable and fully admissible. United States v. Prime, 220 F. Supp. 2d 1203 (W.D. Wash. 2002); United States v. Gricco, 2002 WL 746037 (E.D. Pa. Apr. 26, 2002); United States v. Richmond, 2001 WL 1117235 (E.D. La. Sept. 21, 2001). Some courts have determined that the forensic document examiner's testimony was not sufficiently reliable and therefore fully excluded their testimony. United States v. Lewis, 220 F. Supp.2d 548 (S.D. W.Va. 2002); United States v. Brewer, 2002 U.S. Dist. LEXIS 6689 (N.D. Ill. Apr. 12, 2002); United States v. Saelee, 162 F. Supp.2d 1097 (D. Alaska 2001); United States v. Fujii, 152 F. Supp.2d 939 (N.D. Ill. 2000). However, other courts have taken a

middle position, permitting the forensic document examiner to testify as to particular similarities and dissimilarities between the documents, but excluding the ultimate opinion as to authorship. United States v. Hidalgo, \_\_\_ F. Supp.2d \_\_\_, 2002 WL 31496192 (D. Ariz. Nov. 6, 2002); United States v. Rutherford, 104 F. Supp.2d 1190 (D. Neb. 2000); United States v. Van Wyk, 83 F. Supp.2d 515 (D. N.J. 2000); United States v. Santillan, 1999 U.S. Dist. LEXIS 21611 (N.D. Calif. Dec. 3, 1999); United States v. Hines, 55 F. Supp.2d 62 (D. Mass. 1999). In the case of United States v. Hernandez, 42 Fed. Appx. 173, 2002 WL 1335595 (10<sup>th</sup> Cir. June 19, 2002), the 10<sup>th</sup> Circuit, in an unpublished opinion, held that the district court did not abuse its discretion when it permitted a document examiner to testify as an expert concerning the physical mechanics and characteristics of handwriting, and then pointing out the similarities between the questioned documents and defendant's known exemplars.<sup>1</sup>

Mr. Hammond provided evidence, including copies of numerous studies, which clearly indicate that the premises of handwriting identification have been tested, and its error rate. The defendant has also provided the court with an affidavit from Dr. Michael J. Saks, who has studied the premises and reliability of

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<sup>1</sup>The appeal in this case was brought by the defendant. The trial court had also held that the expert could not offer any testimony as to his belief that the handwriting on the documents was that of the defendant. That ruling was not appealed to the 10<sup>th</sup> Circuit.

handwriting identification (defendant's exhibit #1). Many of these studies have been used in nearly all of the cases cited above, and therefore will not be set forth in detail in this opinion. Only a few selected studies will be briefly set forth.

Among the studies cited by Mr. Hammond is a study by Professor Sargur Srihari on the individuality of handwriting. Using handwriting of 1500 individuals, his conclusions were that, using computer software, they were able to establish with a 98% confidence that the writer can be identified. Taking the results over the entire population, they were able to validate handwriting individuality with a 96% confidence. By considering finer features, Professor Srihari opined that they should be able to validate handwriting individuality with a near 100% confidence (attachment 19, government exhibit #1). A study by Dr. Moshe Kam indicates that professional document examiners had only a 6.5% error rate compared to an error rate of 38.3% for nonprofessionals. Dr. Kam concluded by stating that professional document examiners possess writer identification skills absent in the general population (attachment 36, government exhibit #1). Another study by Professor Kam indicated that professionals concluded that forgeries were genuine 0.49% of the time whereas lay persons did so 6.47% of the time. Professionals mistakenly concluded that genuine signatories were forgeries 7.05% of the time; lay persons did so 26.1% of the time. Prime, 220 F.

Supp.2d at 1213; see attachment 38, government exhibit #1. Another study by Jodi Sita, Brian Found and others found that forensic document examiners made errors in 3.4% of their opinions while 19.3% of the control group gave erroneous opinions (attachment 40, government exhibit #1).

The above studies provide solid evidence that handwriting individuality can be validated with a very high degree of confidence, and that professional forensic document examiners have developed an expertise and training that allow them to correctly identify a person's handwriting with a much lower error rate than laypersons. On the other hand, the affidavit of Dr. Saks raises legitimate questions concerning the validity of these studies and the accuracy of handwriting identification in general.

Although handwriting identification is not error free, the test is whether the particular opinion is based on valid reasoning and reliable methodology. Prime, 220 F. Supp.2d at 1213-1214. Courts that have rejected expert opinion testimony of forensic document examiners have done so because the studies do not "conclusively establish that forensic document examiners can reliably do what they say they can do." Saelee, 162 F. Supp.2d at 1102. However, in Daubert, the U.S. Supreme Court made it clear that "it would be unreasonable to conclude that the subject of scientific testimony must be known to a certainty; arguably,



there are no certainties in science...Science...represents a process for proposing and refining theoretical explanations about the world that are subject to further testing and refinement." It is sufficient if the proposed testimony can be supported by appropriate validation, i.e., good grounds, based on what is known. Daubert, 509 U.S. at 590, 113 S. Ct. at 2795.

The Advisory Committee Notes to Rule 702 notes that the caselaw after Daubert shows that the rejection of expert testimony is the exception rather than the rule. Daubert did not work a seachange over federal evidence law, and the trial court's role as a gatekeeper is not intended to serve as a replacement for the adversary system. Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burdens of proof are the traditional and appropriate means of attacking shaky but admissible evidence. Daubert, 509 U.S. at 596; 113 S. Ct. at 2798.

The documentation provided by Mr. Hammond and his testimony also demonstrates that document examination is subject to extensive peer review. Numerous journals publish articles in this field. See also Prime, 220 F. Supp.2d at 1214-1215 (setting forth numerous journals). Furthermore, 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. Prime, 220 F. Supp.2d at 1215; see United States

v. Hernandez, 42 Fed. Appx. at 176 n.5 ("Prior to Daubert and Kumho, it was 'well established' that properly qualified handwriting expert could give opinion testimony about the authorship of a questioned document.").

Mr. Hammond's testimony and exhibits also establish that there are standards governing the technique of handwriting analysis. The Scientific Working Group for Forensic Document Examination (SWGDOC) has promulgated standards for forensic document examination (attachment 6, government exhibit #1); see also Gricco, 2002 WL 746037 at \*6. The American Society for Testing and Materials (ASTM) has also promulgated standards for forensic document examiners (attachments 41-47, government exhibit #1). The nine-point scale used by Mr. Hammond in this case for expressing his opinions was established under the auspices of the ASTM (attachment 41, government exhibit #1). As noted earlier, Mr. Hammond, who is certified as a forensic document examiner, had to complete a three-part examination process to be certified. The three-part examination process consisted of a comprehensive written examination, practical examinations, and an oral board examination. All phases of the examination process are based on the broad range of problems encountered in forensic document examination including handwriting examinations and comparisons.

Finally, the court is satisfied from the evidence presented

that handwriting analysis enjoys general acceptance in the field of forensic science. The various professional associations of which Mr. Hammond is a member are the American Academy of Forensic Sciences/Questioned Document Section, the American Society of Questioned Document Examiners, the Southeastern Association of Forensic Document Examiners, and the American Society of Testing and Materials. Law enforcement agencies worldwide use handwriting analysis. Prime, 220 F. Supp.2d at 1215; (summary of expert testimony of Mr. Hammond, government exhibit #1). Many universities offer masters degrees in forensic science with courses that include document examination. Id; (summary of expert testimony of Mr. Hammond, government exhibit #1).

Mr. Hammond has indicated that his opinions are based upon sufficient facts or data, although he acknowledges some limitations in his opinions because of the nature of the exemplars he received and the desirability of further exemplars in order to provide an adequate basis for stronger opinions. However, Mr. Hammond testified that he had sufficient information with which to render the opinions he offered in his report. The government has provided adequate evidence that his testimony is the product of reliable principles and methods, and the evidence at the hearing demonstrates that Mr. Hammond applied the principles and methods reliably to the facts of this case. In

fact, Mr. Hammond should be commended for the extensive information provided to the court. The 52 page summary of his testimony sets forth in great detail the bases for Mr. Hammond's conclusions. This summary also discusses in detail the evidence pertaining to each of the 5 Daubert factors to be considered when admitting expert testimony.

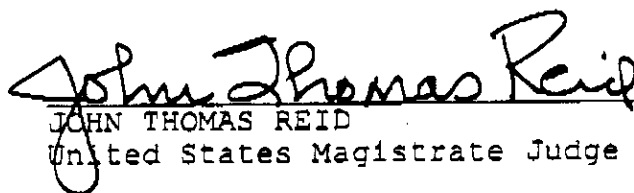
In summary, the court finds that the extensive evidence provided by the government persuades the court that Mr. Hammond's testimony is based on a reliable foundation and is relevant to the task at hand. Mr. Hammond's testimony satisfies each of the five Daubert factors, and fully complies with the requirements of Rule 702. This ruling is not meant in any way to discount the serious criticism and limitations of handwriting analysis based on the affidavit of Michael Saks. However, as noted earlier, vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. The government has presented sufficient evidence of the reliability of handwriting analysis and the training of Mr. Hammond in that analysis; it will be for the trier of fact to weigh any conflicting evidence regarding handwriting analysis and the opinions of Mr. Hammond which he will offer in this case.

IT IS THEREFORE ORDERED that the motion to exclude the

testimony of Mr. Hammond is denied. Mr. Hammond will be permitted to offer expert opinion testimony as a forensic document examiner as set forth in his summary of expert testimony.

Copies of this order shall be mailed to counsel of record for the parties.

Dated at Wichita, Kansas, on January 24, 2003.

  
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JOHN THOMAS REID  
United States Magistrate Judge