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Ordway Hilton,[1] *M.A.*

History of Questioned Document Examination in the United States

The history and development of questioned document examination in this country can be divided into three distinct sections. The earliest runs from the founding of the United States and continues up to the end of the 19th century. It is actually a time in which very little is known about work in this field. The first third of the 20th century represents a period dominated by Dr. Albert S. Osborn and the private document examiners and represents the period of acceptance by the courts of what might be termed modern questioned document examination. Finally, the years from the mid-1930s to date represent the more modern era in which the public examiner and governmental laboratories first developed and expanded so that today they are more or less the dominant factor in this field of work. Actually, no fixed dates can be set to delimit these periods, but the dates given should be considered as a general framework for this discussion.

Early History

Early questioned document examination, up to 1890 or 1900, was a period in which there was only limited activity and about which we have almost no written history. Little is known about the work, or workers, until we near the end of the 19th century. We can only surmise from available information that there were individuals testifying from time to time concerning the identification of handwriting and signatures. Court decisions in the early 1800s indicate that this testimony was a part of legal proceedings. However, until about 1870 names of workers and experts are not readily available.

A. S. Osborn [*1*, pp. 303-312] comments on early decisions which admitted handwriting standards that were not a part of the other evidence in the case. The original rule, derived from English common law, held that questioned writing could only be compared with other specimens which were in evidence in the case for some other purpose. No other writing samples could be admitted. As far as Massachusetts, Connecticut, and Vermont were concerned, decisions had changed this rule: first, in Massachusetts in *Homer v. Wallis* in 1814, in Connecticut in 1831 in *Lyon v. Lymen*, and in Vermont in 1849 in *Adams v. Field* [*1-3*]. These important decisions were very slowly recognized in one way or another in courts of other states, but in many instances not until the 1920s [*1*, pp. 454-463]. Thus, we know there must have been testimony on handwriting identification in the early 1800s or else the courts would not have been concerned with what was being used for comparison specimens. In 1880 in New York State the legislature changed the rule by statute, and this condition may in part account for the fact that some of the important pioneers, Ames, Hagan, and Osborn, all practiced in New York.

As early as 1874 in New York there was a decision in *Frank v. Chemical National Bank*

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[1] Examiner of questioned documents, Landrum, S.C.

[3, p. 841] in which the courts ruled that photographs could be admitted over the objection of opposition, but even earlier than that, in 1859, there had been a federal decision in *Luco v. United States* in which the court comments on photographs of signatures and their value in court [3, p. 844]. Thus photographs, routine today in document cases, were often excluded in this period.

During the late 1800s document cases involved testimony on ink tests in addition to handwriting [4], and in 1893, in the matter of *Levy v. Rust*, a New Jersey court admitted testimony on typewriting identification [5]. It is interesting to note that in that case the individual testifying was not a document examiner, but rather a typewriter repairman. However, it was true even into the early 1900s that bank tellers and penmanship teachers rather than professional handwriting identification experts testified on a number of handwriting problems. Thus, we see that from time to time, particularly in the Eastern states, there had been testimony concerning the identification of handwriting and related document problems prior to 1900.

The Pioneering and Development Period

During the 1890s handwriting identification had become common enough in Eastern courts so that two examiners, William E. Hagan and Persifor Frazer, found it worthwhile to publish books: Hagan's, *Disputed Handwriting*, and Frazer's, *A Manual for the Study of Documents*. Within a few years (1900), Daniel T. Ames published *Ames on Forgery*. All three books give some insight into the extent of this work at the turn of the century. In fact, in 1901 Frazer revised his book and retitled it *Bibliotics: A Manual of the Study of Documents*. It was his third edition since he considered a translation into French as the second edition. Unfortunately, his was the poorest of the three and in the third edition he proposed several useless or erroneous tests.[2]

During the same period, Albert S. Osborn published several articles, including a pioneering one in 1901 [7] on typewriting identification. (Hagan had touched very briefly and superficially on the subject in his book.) This entire period was dominated by Albert S. Osborn. In 1910 he published his first edition of *Questioned Documents*. The scope and treatment of the subject in this text completely overshadowed the work of the three previous writers. Here was the basis of document work as it was known in 1910, and actually what was written then and revised slightly in 1929, in the second edition, still has some application today. It is the cornerstone of questioned document examination. Writing instruments, typewriters, writing instructions, inks, and paper have changed greatly, but as long as the examiner recognizes these changes and their effect on document problems he can apply the principles set forth by Osborn as early as 1910. This is especially true of the identification of handwriting and signatures and the detection of forgery.

Before going on to a more detailed look at Osborn's influence on questioned document work, it might be interesting to stop for a moment to look at a unique publication that appeared in 1909: Jerome B. Lavay's *Disputed Handwriting*. It was published by the Harvard Book Co. of Chicago, Ill. No one in the questioned document field knows who Lavay was. Why was the book written in 1909? It is a complete fabrication. One has only to compare it with the writings of Hagan, Frazer, and Ames to recognize that but for a few nontechnical chapters it actually was put together with shears and a paste pot. Paragraphs from all three authors are lifted and patched together. At least there has not been a second attempt to prepare a fraudulent text on questioned documents. This statement appears on the title page: "The first work of the kind ever published in the United States." The unsuspecting reader may believe that this was the first text on questioned

[2]Frazer's serration test proved to be entirely in error. It was used by some experts for a number of years until Stein [6] made a careful study of the weaknesses of the test.

documents, which is incorrect, but possibly the author was admitting in his own subtle ways that he had created a unique book in this field.

It is widely recognized that Osborn was an outstanding figure. Before the publication of *Questioned Documents*, and until close to his death in 1946, he wrote extensively, publishing articles in legal and other publications. Osborn had been a penman and had taught penmanship for a number of years in a commercial school in Rochester, N.Y., but he states in *Who's Who* [*8*] that he had been an examiner of questioned documents since 1887. He was well enough known (even though he practiced in a smaller city) to be a major participant in a number of important cases around 1900.[3]

Osborn was concerned with all aspects of questioned document work: methods of examination, new techniques, court presentation, and legal decisions affecting the work. He wrote a great deal about the need for wider acceptance of the work by the courts. His writing undoubtedly influenced decisions that led to liberalization of legal rules. In his early days many courts restricted the use of photographs and in part because of his writing these rules gradually changed. The courts would not always let the expert express any reasons for his opinion except on cross-examination. His writings advocated the need for a full explanation of opinions on direct testimony, and today the court rulings are very different. In 1922 he published his second book, *The Problem of Proof*, in which he discusses courtroom procedure, much of it from the viewpoint of a document examiner.

In 1937, after the revision of *Questioned Documents*, Osborn produced *The Mind of the Juror*. Clearly his thoughts were directed in a large measure to the proof of facts concerning questioned documents in the courtroom.

Early in his career he attracted the notice of Professor John H. Wigmore of Northwestern University School of Law, who wrote the introduction to several of his books. Wigmore recognized the value of scientific evidence concerning documents and as a law professor and a writer of legal texts contributed a great deal to the acceptance of expert testimony and to the liberalization of rules in American courts. His famous book on evidence [*9*] advocated the most progressive ideas of his day.

One of the developments during the second decade of this century was the informal organization of the first group of questioned document examiners. This group started in 1913 when Elbridge W. Stein, who was then teaching handwriting in a commercial school in Pittsburgh, persuaded Mr. Osborn to let him visit Osborn on the Jersey Shore for a few days to discuss aspects of this work. The following summer Osborn invited Stein, J. Fordyce Wood of Chicago, and Curtis Shearman of Wichita, Kans., to New York for a week of discussion of questioned document problems. These meetings were renewed each summer by invitation. The circle grew, but remained a select group of those who were willing not only to meet with others but also to fully participate in a mutual education program. Questioned document work owes much to these men and their work. Each man was responsible for preparing for and participating in the meeting. It is known that John F. Tyrrell of Milwaukee joined the group in 1915 or 1916 and Mr. Osborn's son, A. D. Osborn; Clark Sellers of Los Angeles; Herbert J. Walter, originally of Winnipeg, Canada and later Chicago; John J. Lomax of Montreal; E. H. Fearon of Pittsburgh; John L. Harris of Los Angeles; Scott E. Leslie of Cleveland; H. E. Cassidy of Richmond, Va.; and Rafael Fernandez Ruenes of Cuba, and later of Miami, joined this group in the 1920s and 1930s. They were the principal members in 1942, with the exception of Lomax, Shearman, Wood, and Leslie, all of whom had died, who formally organized the American Society of Questioned Document Examiners [*10*].

[3]*New York v. R. B. Molineaux* (1900), a trial for murder by poisoning that involved the testimony of ten handwriting experts in the presentation of the state's case, and the Rice-Patrick case (Matter of Rice, 81 Appellate Div., New York, 1903), which defeated a forged will and preserved a legacy that led to the founding of Rice Institute in Texas, were two such cases.

These years were dominated by the private examiner. In fact, until the 1920s all questioned document work in the United States was done exclusively by private consultants. There was a number of individuals of varying ability and standing active in the field, but this has been true of all professional groups and is true of professions today. It was not until the early 1930s that any attempts were made to organize a federal laboratory, and there is some question, despite claims of certain police organizations, as to whether their so-called identification laboratories were much more than fingerprint bureaus until the late 1930s. Two men were known to be doing work in the questioned document field for the federal government, Wilmer Souder of the Bureau of Standards and Bert C. Farrar of the Treasury Department, when the FBI laboratory was established in the early 1930s.

The organization of the first forensic science laboratory, the Scientific Crime Detection Laboratory in Chicago, Ill., began in 1929. It started under private endowment, but within one or two years, because of the influence of Professor John H. Wigmore, it was affiliated with Northwestern University School of Law. In 1938 the laboratory became a unit of the Chicago Police Department. This laboratory was modeled after multidisciplinary European laboratories and included a questioned document section.

During the 1930s there was the gradual development of other law enforcement laboratories doing questioned document examination, but the great increase in such laboratories and the number of government document examiners came 15 or 20 years later.

It is interesting to note that one of the most significant criminal cases in the 1930s was the trial in New Jersey of Bruno Hauptman for the kidnapping and killing of the Lindbergh baby. Questioned documents figured prominently in the trial because of a series of ransom notes. (Highlights of the handwriting evidence in this famous case are given in Ref *11*, and Ref *12* provides more extensive treatment of the entire case.) Eight experts testified for the state, seven of them private examiners from throughout the United States. Albert S. Osborn was consulted early in the case. Others consulted independently were Elbridge W. Stein, Clark Sellers, John H. Tyrrell, H. J. Walter, Albert D. Osborn, and Harry Cassidy. Dr. Wilmer Souder was the sole public examiner. Hauptman's comment at the end of the trial, one of his few, was "Dat handwriting is the worstest thing against me."

Major progress in questioned document work during this period was the development of a cadre of highly ethical, well-trained private examiners and of improved rules of evidence that allowed thorough, effective testimony in criminal and civil cases. Typewriting identification was expanded. Stein [*13*] published the first paper on the use of ultraviolet light in questioned document examination. M. E. O'Neill [*14*] of the Northwestern University Laboratory developed new methods for restoring erased ink writing. Infrared photography was applied to document work, and the determination of the sequence of ink and pencil strokes was tested and improved. Published work of the Bureau of Standards [*15*] and John F. Tyrrell [*16*] formed the groundwork for deciphering charred documents. Basically, the principles of handwriting identification and the detection of forgery were standardized. Questioned document examination in the hands of skilled workers was shown to be a scientific procedure.

All early workers in the field were men. During this period, however, a few women examiners, including Catherine Applegate Keller at the Northwestern University Laboratory, followed by Elizabeth McCarthy in Boston and Mary Beacom in Atlanta,[4] entered what had until then been an all-male profession.

[4]Katherine Applegate Keeler was serving as staff document examiner at the Scientific Crime Detection Laboratory in 1931, Miss McCarthy first testified in 1934, and Mrs. Beacom's career dates from 1937.

The Modern Period

While we might start the modern period in the mid-1930s, the interruption in the first half of the 1940s by World War II really makes a logical break in this historical continuity. The war years were concerned with much more weighty matters than progress in questioned document examination, but with the termination of warfare we entered into a period of rapid change and significant growth in the questioned document field.

Change has been almost constant since 1946; new writing instruments, the introduction of three significantly new classes of typewriters, and two complete changes in office copying machines are some of the new problems confronting the document examiner. New document-producing techniques, which include computer printing records, add to these problems. For the past 25 to 30 years, the document examiner has faced increasingly difficult problems and the immediate future undoubtedly will produce more.

In addition, there has been a tremendous increase of documents in criminal activities and with it the growth of law enforcement laboratories at the federal, state, and municipal levels. Today the dominant activity, at least as far as volume is concerned, is found in the government-funded laboratories. The private consultant examiner is still active and still needed, but his numbers have grown very little, except for numerous poorly qualified, probably part-time "hangers-on." In comparison there has been a significant increase since 1945 in the number of public examiners employed by various governmental agencies. Now, while these events are fresh in everyone's mind, is the time to record some of the more significant items.

Some of the changes that affect questioned document examinations are to be found in handwritten, hand-lettering, writing instruments, typewriters, and photocopy problems. Since the 1930s the basic handwriting instruction in American School systems has undergone modification. The commercial style of handwriting and the instructions of the 1920s and earlier years have for the most part been discarded. At present, handwriting is being taught first as a form of disconnected letters (manuscript writing) and then proceeds to the modification of these forms into a cursive writing. Basic instruction of this kind has influenced both handwriting and hand-lettering problems. Many hand-lettering problems today reflect this early training that reduces, to some extent, the amount of personal individuality, especially among younger writers.

In 1945 the ball-point pen was introduced and by the early 1950s it was well established. It became the dominant writing instrument. Its characteristics have a direct effect on handwriting identification. Starting with the Stein-Hilton article in the *American Bar Association Journal* [*17*], workers have published a number of papers dealing with how the ball-point pen modifies the approaches to handwriting identification and the detection of forgery.

Around 1960 the fiber-tipped pen began to assume popularity, and here again identification problems require different procedures [*18*].

Typewriting improvements included first the electric typewriter and then the proportional spacing typewriter [*19*]; a complete change followed with the introduction of the single element, type ball machine [*20–22*] and, more recently, with the type wheel printer being used in so many word-processing systems. Each change required reevaluation of identification techniques and the approach to typewriting problems. In a measure the manufacturing changes brought about by the international typewriting companies with factories throughout the world have led to complete modification of some determinations by the American typewriting examiner [*23*]. While principles remain the same, evaluation of identification features have been substantially modified.

Numerous new problems have arisen, including the identification of photocopying units, work of various specialized office machines, and the differentiation of paper, inks, and writing instruments. Computer printouts, word processing units, and electronic writing transmissions are among the challenges that confront the examiner today and in

the immediate future. It has become almost impossible for any individual worker or any laboratory to collect all the necessary reference material so as to handle all problems that arise. The work in fact is approaching the need for specialists in several subdisciplines.

The document examiner has not stood still during the last 30 years. Today he is using special equipment and techniques developed for scientific and commercial uses. Both long-wave and shortwave ultraviolet is commonly employed [*24*]. Electronic infrared viewers and microscopes are of value [*25*]. Infrared luminescence is an important tool, especially in ink differentiation [*26,27*]. Color photography has supplemented black and white procedures. Significant work has been done with thin-layer chromatography [*28*]. Dichroic filters have been investigated and found to be a useful tool [*26,29*]. Various laboratories and individuals have developed specialized equipment to utilize certain of these instruments and to be applied to special document problems. Older tools such as typewriter test plates or grids have been modified and improved to better resolve problems.

This modern period has seen the growth of professional organizations for document examiners. In 1942 the Osborn-sponsored group of questioned document examiners, under the urging of Elbridge W. Stein and Clark Sellers, became a formal organization, The American Society of Questioned Document Examiners. It was not until the latter part of the 1950s that this organization accepted public examiners among its members, although by this time it had elected a number of younger private consultants to membership. Its annual programs have included a number of pioneering papers.

The American Academy of Forensic Sciences was founded in 1950. Questioned documents were recognized as a discipline to be included, but by 1952 only one or two document examiners were members. Clark Sellers was designated section chairman by the Executive Committee in 1951. In 1952 Ordway Hilton was designated chairman, and he began correspondence to develop an active section. In 1953 he was able to organize the first sectional meeting with a program of technical papers, and David Purtell was elected as the first section secretary. Programs have been maintained yearly since then, and while the section grew slowly during the first few years, today it represents the largest group of public and private examiners in the country.

In the 1950s a document examination group was organized among members of the International Association for Identification. Within these three organizations and their publications, exchanges of methods and ideas were effected.

While several minor questioned document books were published in the United States between 1929, when Osborn's *Questioned Documents*, second edition, appeared, and the 1950s, the first attempt to update questioned documents was Ordway Hilton's *Scientific Examination of Questioned Documents* (1956); it was followed shortly afterwards by James V. P. Conway's *Evidential Documents* (1959). Charles C. Scott's *Photographic Evidence,* which was first published in 1942 and later revised and greatly expanded in 1969, contains extensive discussion of the application of photography to questioned documents. While there has been another hiatus in book publication there have been important articles in the *Journal of Forensic Sciences* and the *Journal of Criminal Law, Criminology and Police Science,* which was succeeded by the *Journal of Police Science and Administration* in 1972. Without these and various foreign journals and the work of private examiners and the members of principal laboratories, many contemporary problems would not have been as completely resolved and common procedures would not be available.

Attempts have been made to develop academic programs for questioned document training, but no program to date has replaced the apprenticeship method, which has produced many of today's leading examiners. An occasional private examiner has successfully trained new workers, but the principal training today is in federal and state laboratories.

The most recent step to improve the quality of questioned document work has been

the development of a national certification program. The American Board of Forensic Document Examiners, Inc., was organized in 1977, and under the chairmanship of John J. Harris the Committee on Certification has developed an ongoing program for certifying qualified document examiners. Let us hope that in years to come we can look back on this program as one of the more significant forward steps taken by the profession.

In less than 100 years questioned document examination has grown from a few struggling handwriting examiners to a widely practiced profession, from a group of part-time private consultants to full-time private and public examiners, from a suspect and legally limited form of expert testimony to an accepted part of criminal and civil litigation, from the identification of handwriting and the detection of forgery to the wide scope of today's document examination covering all phases of modern documents, from a few male examiners to a field staffed by men and women without regard to race. We have seen progress in our work, but we cannot stand still. There is much progress and history still to be made.

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Address requests for reprints or additional information to
Ordway Hilton
P.O. Box 592
Landrum, S.C. 29356