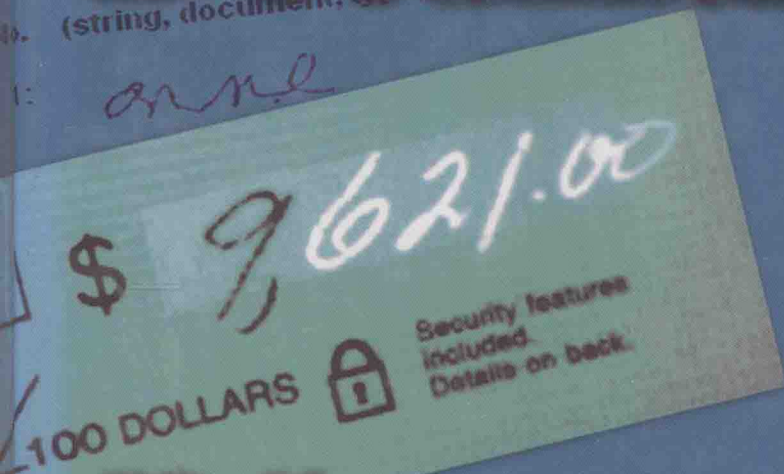


Second Edition

Scientific Examination of Questioned Documents



Edited by
Jan Seaman Kelly
Brian S. Lindblom



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Jan Seaman Kelly is employed as a forensic document examiner with the Las Vegas Metropolitan Police Department Forensic Laboratory. She received her formal training in forensic document examination from George Lewis and Susan Morton at the U.S. Postal Crime Laboratory in San Bruno, California. Kelly became a diplomate in 1993 after successfully completing the certification testing process with the American Board of Forensic Document Examiners (ABFDE).

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In 2004, she received the Ordway Hilton Award presented by the Questioned Document Section of the American Academy of Forensic Sciences. In September 2004, the Rotary Clubs of Southern Nevada named her safety officer of the year. ABFDE presented the Charles C. Scott Award to Kelly in 2002 for her defense of the forensic document profession as a member of the Daubert Group.

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Brian S. Lindblom graduated from the University of Manitoba with a B.A. in sociology. He received his training in forensic document examination at the Royal Canadian Mounted Police Forensic Laboratory (Ottawa) in the early 1980s, where he worked until 1987. Since that time, Lindblom has been in private practice, with offices in Ottawa and Toronto. His firm, Document Examination Consultants, Inc., is an international forensic consulting company that accepts document cases from government and private sectors.

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Ordway Hilton (1913–1998). Sections of this book include contributions by Hilton that appeared in the revised edition (1982).

Kirsten Jackson earned a bachelor of arts degree in psychology from the University of Virginia and a master of science degree from George Washington University. She has been a forensic document examiner for 19 years and is currently employed with the U.S. Postal Inspection Service Forensic Laboratory in Dulles, Virginia. Prior to her current position, she was employed with the Internal Revenue Service, Internal Security, Forensic Laboratory. She received her training with the Virginia Division of Forensic Science during her 7-year employment with that agency. Jackson is a member of the Questioned Document Section of the American Academy of Forensic Sciences, the American Society of Questioned Document Examiners, and the American Society for Testing Materials International. The American Board of Forensic Document Examiners presented the Charles C. Scott Award to Jackson in 2002, in recognition of her work in defending the profession as a member of the Daubert Group. Jackson is a diplomate of the American Board of Forensic Document Examiners and is currently serving as a director on this organization's board of directors.

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Dan C. Purdy obtained a bachelor of science degree in mathematics and physics from the University of British Columbia. He joined the Royal Canadian Mounted Police in 1969 and was trained to examine questioned documents at its Vancouver Laboratory. In 1979, he transferred to Ottawa, where he later supervised the Document Section of the Central Forensic Laboratory. In 1989, he was appointed chief scientist of document examination and served in that capacity until 1999, when he left the RCMP to establish Forensic Document Examination Services, a private consulting company in Ottawa, Canada. Purdy was awarded a diploma in forensic document examination by the Forensic Science Society in 1986. He is also certified by the American Board of Forensic Document Examiners and served as its president from 1993 to 1995. He is a member of the Forensic Science Society, the American Academy of Forensic Science, and the American Society of Questioned Document Examiners, and a fellow of the Canadian Society of Forensic Science.

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Preface

The second edition of *Scientific Examination of Questioned Documents* serves two purposes: first, to inform the layperson about the field of forensic document examination, the accepted methodologies, and the qualifications of a properly trained forensic document examiner (FDE); and second, this book is offered to the forensic document examination community as a reference for trainee document examiners and journeymen alike. This edition adds to an already considerable number of texts and reference materials in the profession.

In addition to the two editors, thirteen authors have made this compilation possible. Each chapter is written by a contributor with considerable expertise in a specific area. The editors felt that by compiling the works of several FDEs whose practices emphasize one or more aspects of our field, this extensively revised and updated edition would be a comprehensive book reflecting post-1982 forensic document examination, including contemporary examination methodologies.

Throughout the process of overseeing the contributors' work, and in writing our own chapters, the editors were cognizant of Ordway Hilton's leadership¹ and the passion that he exhibited for this profession. He has authored numerous articles, published two books,^{1,2} and was instrumental in establishing the Questioned Documents Section in the American Academy of Forensic Sciences.

In the preface of the revised edition, Ordway Hilton wrote:

Now another 20 years has elapsed since an up-to-date treatise has appeared. During that period, many new instruments and materials for preparing documents have been introduced, including porous tip and roller pens, single element and electronic typewriters, and dry-process copiers. Recognizing and identifying their work has presented challenges to the progressive document examiner. In response to these new problems, there have been significant modifications in technique. At the same time, workers in the field have developed other new methods, such as thin-layer chromatography, infra-red luminescence, and examination with diachronic filters, to answer older questions more completely and accurately. In a number of respects, document examination today is more advanced than it was, or had to be, in the 1950s.¹

The advancements in establishing this profession as a science continue through today. The explosion of modern technology has influenced every facet of our lives, from introducing new avenues of written communication to improvements in ink and ergonomic design of writing instruments. The introduction of desktop computers and printers has

¹ Ordway Hilton (1913–1998) authored the first edition (1956) of this book.

impacted on the nature of examinations and methodologies that are used. Computers and accompanying software have made it possible to insert text or signatures onto a document, making it challenging to detect the alteration on a copy. A formally trained FDE is equipped to identify the insertion by applying accepted methodologies. This treatise explores the complexities of the various aspects of the forensic document profession and the variety of documents and cases submitted for analysis.

As a result of how much the world has changed since the 1982 version of this book, the reader will note that outdated subjects, such as mimeographs and office duplicating machines, have been excluded. Other sections, such as the chapter on typewriters, are more abbreviated given their limited impact in today's business world. Nevertheless, they do constitute an up-to-date summary. This book focuses on contemporary office equipment, such as modern-day digital photocopiers, fax machines, and computer printers.

Ordway Hilton chose to curtail the discussion regarding methodology because his book was not supposed to be a training manual, but rather its purpose was to educate attorneys, investigators, and others interested in the forensic discipline. Although this book covers some of the subject areas in considerably more detail, neither is it intended to be a sole-source training manual. It is, however, intended to be a valuable reference tool for summarizing up-to-date and generally accepted methodologies for the examination of handwriting, rubber stamps, photocopies, facsimiles, and computer-generated documents.

The editors, contributors, and the American Board of Forensic Document Examiners (ABFDE) offer this treatise as a reference tool to further the knowledge of practitioners and to educate the non-forensic scientist as to the foundations of forensic document examination.

References

1. Hilton, O., *Scientific Examination of Questioned Documents, Revised Edition*, Elsevier Science Publishing Co., New York, 1982.
2. Hilton, O., *Detecting and Deciphering Erased Pencil Writing*, Charles C Thomas Publisher, Springfield, IL, 1991.

Acknowledgments

The editors thank each author for his or her contribution to the second edition of the *Scientific Examination of Questioned Documents*. Each contributor accepted a tremendous responsibility in his or her agreement to write one or more chapters. It is difficult to find forensic document examiners (FDEs) who have the courage, vision, and willingness to donate personal time to take on such a task. We are grateful to the following individuals for demonstrating their commitment: Bonnie Beal, William (Bill) Flynn, Sue Fortunato, Robert Gervais, Frank Hicks, Kirsten Jackson, Mary Kelly, Carl McClary, Susan Morton, Dan Purdy, Howard Rile, Farrell Shiver, and Thomas Vastrick.

Our appreciation goes out to the board of directors of the American Board of Forensic Document Examiners (ABFDE) for their financial and moral support in the preparation of this book. ABFDE is an independent certification body for forensic document examiners. This organization has always supported the document examination community by offering quality workshops and supporting the Daubert Group, who assists those facing a Daubert Hearing or critic's challenge. Those who comprise the board of directors are individuals who have their eyes cast toward the future of the forensic document examination profession. We applaud the board's insight in seeing this worthy project through to its fruition.

The editors offer a special acknowledgment to Grant Sperry for his encouragement and support. During the early phases of our involvement as editors, many decisions had to be made and Grant was there for guidance and direction on many issues that confronted us.

We also recognize the countless contributions Rob Gervais of Document Examination Consultants, Inc., in Ottawa made in preparing the manuscript for publication, from file management to the construction and formatting of numerous illustrations in this text.

A number of other individuals provided literature references, illustrations, and other information used in chapters of this book. Our thanks to Phil Bouffard, Donald Coffey, Lloyd Cunningham, Nanette Davis, John Harris, Hans Gideon, Anne Greeson, William Jungbluth, Paul Llewellyn, Robert Radley, Karen Smith, Andy Szymanski, Peter Tytell, and Robert Whritenour.

Brian's partner, Nancy Dobson, devoted many hours of careful proofreading and editing. We very much appreciate her dedication to this project, down to the most minute detail. Brian expresses his thanks for her support and patience throughout the writing and editing of the text.

Jan's husband, David, prepared the illustrations in Chapters 4, 10, and 11, and the ABFDE seal that appears on the cover of this version. His graphic arts ability provided quality illustrations for the book.

On a personal note, appreciation goes to the family of Jan Seaman Kelly: David, Katie, and Becca. A project of this magnitude can, at times, be stressful and all consuming. Thank you for your patience, love, and support.

Contents

Section I Introduction	1
1 Organization and Content of Book	3
<i>Brian S. Lindblom and Jan Seaman Kelly</i>	
2 What Is Forensic Document Examination?	9
<i>Brian S. Lindblom</i>	
3 A Forensic Document Examiner's Training	15
<i>Brian S. Lindblom</i>	
Section II The Document Case	19
4 Care and Handling of Documents	21
<i>Jan Seaman Kelly</i>	
5 Work Notes	29
<i>Jan Seaman Kelly</i>	
Section III Science, Handwriting Examination, and the Courts	35
6 The <i>Daubert</i> Era	37
<i>Kirsten Jackson</i>	
7 Conclusions and Guidelines for Handwriting Comparison	43
<i>Carl R. McClary</i>	
Section IV Handwriting Examination and Comparison	45
8 Identification of Handwriting	47
<i>Dan C. Purdy</i>	

9	Identification of Signatures	75
	<i>Howard C. Rile, Jr.</i>	
10	Identification of Hand Printing and Numerals	109
	<i>Jan Seaman Kelly</i>	
11	Disguise in Hand Printing and Numerals	119
	<i>Jan Seaman Kelly</i>	
12	Preparation and Collection of Signatures and Handwriting Standards	127
	<i>Brian S. Lindblom</i>	
Section V Mechanical and Electronic Impression Examinations and Comparisons		145
13	Pens and Pencils	147
	<i>Brian S. Lindblom</i>	
14	Typography	159
	<i>William J. Flynn</i>	
15	Typewriters	177
	<i>Mary W. Kelly</i>	
16	The Examination of Computer-Generated Documents	191
	<i>William J. Flynn</i>	
17	Photocopiers	217
	<i>Bonnie L. Beal and Susan E. Morton</i>	
18	Facsimile Machines	227
	<i>Brian S. Lindblom</i>	
19	Manipulated Photocopies, Faxes, and Computer-Printed Documents	235
	<i>Brian S. Lindblom and Robert Gervais</i>	

20	Rubber Stamps	247
	<i>Jan Seaman Kelly</i>	
21	Checkwriters	269
	<i>Tom Vastrick</i>	
22	Staples	281
	<i>Tom Vastrick</i>	
	Section VI Conventional Printing and Paper Examinations	285
23	Conventional Printing Processes	287
	<i>Susan L. Fortunato</i>	
24	Paper Examinations	293
	<i>Susan L. Fortunato</i>	
25	Carbonless Paper	303
	<i>Tom Vastrick</i>	
	Section VII Indented Writing Impressions	307
26	Accidental Markings and Indented Writing on a Document	309
	<i>Farrell C. Shiver</i>	
	Section VIII Altered Documents	317
27	Alterations in Documents	319
	<i>Susan E. Morton and Bonnie L. Beal</i>	
	Section IX The Age of a Document	337
28	Multi-Faceted Approach	339
	<i>Brian S. Lindblom</i>	
29	The Role of Indentation Analysis, Offsetting, and Transfer	341
	<i>Brian S. Lindblom</i>	

30	Dating by Materials: Identification, Comparison, and Examination of Changes	347
	<i>Brian S. Lindblom</i>	
	Section X Digital Photography and Enhancement	357
31	Cameras, Scanners, and Image Enhancement	359
	<i>Frank Hicks, Brian S. Lindblom, and Robert Gervais</i>	
	Section XI ASTM Guidelines for Forensic Document Examination	365
32	Conclusions and Guidelines	367
	<i>Carl R. McClary</i>	
	Section XII Preparing for Court Testimony	371
33	Considerations in Preparing for Court	373
	<i>Frank Hicks</i>	
34	Demonstrative Charts	375
	<i>Frank Hicks, Brian S. Lindblom, and Robert Gervais</i>	
35	Pretrial Conference	383
	<i>Frank Hicks</i>	
36	Preparation for a <i>Daubert</i> Hearing	385
	<i>Jan Seaman Kelly and Kirsten Jackson</i>	
37	The Untrained Document Expert Witness	393
	<i>Jan Seaman Kelly</i>	
38	The Document Examiner's Testimony in Court	399
	<i>Jan Seaman Kelly</i>	
	Glossary	407
	Index	425

Section I

Introduction