This is an enjoyable and rigorous introduction to the construction and criticism of arguments about questions of fact, and to the marshalling and evaluation of evidence at all stages of litigation. It covers the principles underlying the logic of proof; the uses and dangers of story-telling; standards for decision and the relationship between probabilities and proof; the chart method and other methods of analyzing and ordering evidence in fact-investigation, in preparing for trial, and in connection with other important decisions in legal processes and in criminal investigation and intelligence analysis. Most of the chapters in this new edition have been rewritten; the treatment of fact investigation, probabilities and narrative has been extended; and new examples and exercises have been added. Designed as a flexible tool for undergraduate and postgraduate courses on evidence and proof, students, practitioners and teachers alike will find this book challenging but rewarding.

Terence Anderson is Professor of Law at the University of Miami. He is an experienced litigator and teacher of courses on methods of analysis, evidence and trial practice. His writings include articles developing and illustrating topics covered in this book.

David Schum is Professor of Law and of Systems Engineering at George Mason University and Honorary Professor of Evidence Science, University College London.

William Twining is Quain Professor of Jurisprudence Emeritus, University College London, and a regular Visiting Professor at the University of Miami School of Law. His writings on evidence include Rethinking Evidence (2nd edn., Cambridge University Press).
Law in Context

The series is a vehicle for the publication of innovative scholarly books that treat law and legal phenomena critically in their social, political and economic contexts from a variety of perspectives. The series particularly aims to publish scholarly legal writings that bring fresh perspectives to bear on new and existing areas of law taught in universities. A contextual approach involves treating legal subjects broadly, using materials from other social sciences, and from any other discipline that helps to explain the operation in practice of the subject under discussion. It is hoped that this orientation is at once more stimulating and more realistic than the bare exposition of legal rules. The series includes original books that have a different emphasis from traditional legal textbooks, while maintaining the same high standards of scholarship. They are written primarily for students of law and of other disciplines, but most also appeal to a wider readership. Recent publications include books on globalization, transnational legal processes, and comparative law. In the past, most authors have come from, or been based in, Europe or the Commonwealth. In the future, we also expect to publish authors from, or based in, the United States or Canada, particularly those who adopt a clear transatlantic perspective. The books will include subject areas that have a transnational significance, drawing on European as well as North American scholarship.

Series Editors
William Twining, University College London
Christopher J. McCrudden, University of Oxford

Books in the series
Anderson, Schum & Twining: Analysis of Evidence
Ashworth: Sentencing and Criminal Justice
Barton & Douglas: Law and Parenthood
Bell: French Legal Cultures
Bercusson: European Labour Law
Birkinshaw: European Public Law
Birkinshaw: Freedom of Information: The Law, the Practice and the Ideal
Cane: Atiyah’s Accidents, Compensation and the Law
Clarke & Kohler: Property Law: Commentary and Materials
Collins: The Law of Contract
Davies: Perspectives on Labour Law
de Sousa Santos: Toward a New Legal Common Sense
Diduck: Law’s Families
Elworthy & Holder: Environmental Protection: Text and Materials
Fortin: Children’s Rights and the Developing Law
Glover-Thomas: Reconstructing Mental Health Law and Policy
Gobert & Punch: Rethinking Corporate Crime
Harlow & Rawlings: Law and Administration: Text and Materials
Harris: An Introduction to Law
Harris: Remedies in Contract and Tort
To our children and grandchildren
To Anne, Carolyn, and Penelope
Contents: summary

Preface xvii
Acknowledgments xxv
Tables of cases and statutes xxvii
List of abbreviations xxxii

1 Evidence and inference: some food for thought 1
2 Fact investigation and the nature of evidence 46
3 Principles of proof 78
4 Methods of analysis 112
5 The chart method 123
6 Outlines, chronologies, and narrative 145
7 Analyzing the decided case: anatomy of a cause célèbre 159
8 Evaluating evidence 224
9 Probabilities, weight, and probative force 246
10 Necessary but dangerous: generalizations and stories in argumentation about facts 262
11 The principles of proof and the law of evidence 289
12 The trial lawyer's standpoint 315

Glossary of terms and symbols 379
References 388
Index 396
## Contents

*Preface*  
xxvii  
*Acknowledgments*  
xxv  
*Tables of cases and statutes*  
xxvii  
*List of abbreviations*  
xxxii

1 Evidence and inference: some food for thought  

A. Introduction  
1  
B. Evidence and inference in non-legal contexts  
2  
   1. Whose baby I? The judgment of Solomon  
2  
   2. The intelligence analyst: an intelligence scenario “from the top-down”  
3  
   3. The doctor and the detective: Joseph Bell and Sherlock Holmes  
5  
   a. The doctor  
6  
   b. The detective  
7  
4. Generalizations and stories: Sam’s party  
10  
C. Evidence and inference in legal contexts  
10  
   1. Two murders  
10  
   a. The murder of Y  
10  
   b. Bywaters and Thompson  
10  
   2. Imaginative reasoning: The Nine Mile Walk  
11  
   3. Generalizations, stories, and arguments  
18  
   a. Brides in the bath: closing speech  
18  
   b. Huddleston v. United States  
19  
   c. Miller v. Jackson  
20  
4. Evidence from two causes célèbres  
21  
   a. Commonwealth v. Sacco and Vanzetti  
21  
   b. People v. Simpson  
23  
5. United States v. Richard Able  
23  
28  
31  
8. An investigation: basic concepts in analysis and evaluation  
40
## Contents

### 2 Fact investigation and the nature of evidence 46

A. Introduction: connecting the dots 46

Post 9/11 investigation: an exercise 52

B. Fact investigation: generating dots and explanations for them 55

1. Types of logical reasoning and justification 55
2. Abductive reasoning and the generation of a new idea 56
3. Generating explanations for dots or trifles 58

C. On the credentials of evidence 60

1. Evidential foundations of argument 60
2. On relevance 62
3. The credibility of evidence and its sources 63
   a. Tangible evidence 64
   b. The credibility of testimonial evidence 65
   c. Ancillary evidence about testimonial credibility attributes 67
   d. Credibility v. competence 70
4. On the probative force of evidence 71

D. A substance-blind approach to evidence 71

### 3 Principles of proof 78

A. Introduction: evidence in legal contexts 78

B. The Rationalist Tradition 78

1. The tradition described 79

C. Rationale 87

Notes and questions on rules of evidence concerning relevance 88

D. Notes on terminology and inferential relationships 90

A preliminary exercise: State v. Archer (I) 94

E. Probative processes and logical principles 96

1. Probative processes 96
2. The logical principles 98
3. Application of the principles in legal disputes 103

The exercise continues: State v. Archer (II) 109

The Prosecutor’s standpoint 109

### 4 Methods of analysis 112

A. Introduction 112

B. The methods and a protocol for their use 113
## Contents

1. Methods of analysis and analytic devices 113
2. A seven-step protocol for analysis: a generalized account 114

5 The chart method 123
   A. The chart method: an overview 123
   B. The seven-step protocol for the chart method: a detailed account 124
   C. The symbols and their use 134
      1. The basic Wigmorean palette 134
      2. The chart method illustrated 136
      3. Additional symbols, conventions and their utility 140
      4. Three advantages of symbols and charting 141

The exercise continues: State v. Archer (III) 143
   1. Defense counsel’s standpoint 143
   2. Defense investigation 144

6 Outlines, chronologies, and narrative 145
   A. The outline method of analysis 145
   B. Analytic devices: chronologies and narratives 147
   C. The litigation context 149
      1. The stages of a case and the methods of analysis 149
         a. The pleading stage 150
         b. Before the close of discovery and investigation 151
         c. Final trial preparation 152
   D. Theories, themes, stories, and situation-types 153
      State v. Archer (IV): the exercise concludes 158
      1. The prosecution standpoint 158
      2. The defense standpoint 158

7 Analyzing the decided case: anatomy of a cause célèbre 159
   A. Introduction 159
   B. The trial of Bywaters and Thompson 160
      1. Preliminary matter 160
         a. The indictments 160
         b. Dramatis personae 162
         c. Leading dates in the case 163
      2. The judgment on Thompson’s appeal: Rex v. Thompson (1922) 164
      3. Evidence from the trial: the Prosecution 170
         a. Extracts from testimony (including statements made by the accused) 170
         b. Index to selected exhibits 178
c. A selection of Thompson's earlier letters 179

d. Thompson's later letters 189

4. Evidence from the trial: the Defense 203
   a. Extracts from cross-examination of Bywaters 203
   b. Further extracts from the cross-examination of Bywaters 209
   c. Extracts from the examination of Thompson 209
   d. Further extracts from the examination of Thompson 211
   e. Extracts from cross-examination of Thompson 213

C. Comments 219

D. Notes and questions on Rex v. Bywaters and Thompson 220

8 Evaluating evidence 224

A. Introduction 224

B. Evaluating the weight and probative force of evidence 226
   1. No rules of weight 226
   2. Traditional modes of expressing weight and probative force 227

C. Standards for decision 230
   1. Lawyering standards 231
      a. Standards for lawyer-client decisions 232
      b. Standards for lawyers' decisions 234
   2. Standards for decisions in adjudication 237
      a. Standards for decisions disposing of a case as a matter of law 237
      b. Standards for decisions on admissibility 238
      c. The case as a whole: burdens of proof and the civil and criminal standards 242
      d. Appellate review: standards for limiting discretion 244

9 Probabilities, weight, and probative force 246

A. Introduction 246

B. Flirtations involving law and probability 247

C. Probability and the force or weight of evidence 250
   1. Conventional probability and Bayes's Rule 251
   2. Evidential support and evidential weight: non-additive probabilistic beliefs 253
   3. Baconian probability and completeness of evidential coverage 257
   4. Wigmore and the fuzzy weight of evidence 260

10 Necessary but dangerous: generalizations and stories in argumentation about facts 262

A. Generalizations 262
   1. Reprise and introduction 262
2. Degrees of certainty 263

3. Types of generalizations 265
   a. Case-specific generalizations 266
   b. Background generalizations 269
   c. Scientific knowledge and expertise 270
   d. General knowledge 270
   e. Experience-based generalizations 271
   f. Synthetic-intuitive generalizations (belief generalizations) 271

4. Judicial notice and cognitive consensus 273
   a. Judicial notice 273
   b. Cognitive consensus 273

5. Dangers of generalizations 276

6. Generalizations: the practitioner’s standpoint 277
   a. Case-specific generalizations 278
   b. Experience-based and synthetic-intuitive generalizations 278
   c. Formulation and appraisal 279

Protocol for assessing the plausibility and validity of a generalization in the context of an argument 279

B. Stories necessary, but dangerous 280
   Protocol for assessing the plausibility, coherence, and evidentiary support for a story 281

C. The relationship between stories and generalizations 282

D. Generalizations, stories, and themes: questions and exercises 285

11 The principles of proof and the law of evidence 289

A. Introduction 289

B. What is the law of evidence? A Thayerite overview 290

C. One law of evidence? 294

D. Linking the principles of proof and the law of evidence: relevance as the main bridge 295

E. Analyzing for admissibility 295

F. Analysis under the United States Federal Rules of Evidence 299
   1. Rules codifying the principles of proof and regulating their applications in judicial trials 299
   2. Analysis and the rules designed to regulate the probative processes 301
   3. Analysis and mandatory exclusionary rules 304
   4. A Wigmorean protocol for analyzing problems in the use and admissibility of evidence under the Federal Rules and its application 305
      a. The hearsay problem 306
      b. The protocol applied 309
## Contents

12 The trial lawyer’s standpoint 315
   A. A Wigmorean lawyer prepares for trial 315
      1. Of charts and other analytic devices 315
      2. The trial book: an organizational device 317
      3. The trial book: an art form 323
   B. Two simple cases 325
      1. Suggested format 325
      2. Materials for Police v. Weller 326
      3. Materials for Police v. Twist 329
   C. The art of plausible proof: theory, story, and theme revisited 333
      1. Introduction 333
      2. More food for thought 335
         a. K. Llewellyn: Who are these men? 335
         b. Bywaters and Thompson: Who is this woman? 336
         c. Is Ford Motor Company guilty of killing girls with a Pinto? 337
   D. Two more complex trial problems 341
      1. Introduction 341
      2. The criminal case: United States v. Wainwright 343
      3. The civil case: The Estate of James Dale Warren 356

Glossary of terms and symbols 379
References 388
Index 396
Preface
The why, what, and how of this book

The why

Inferential reasoning, analyzing and weighing evidence, forming judgments about what has happened in the past or what is likely to happen in the future are a necessary part of coping with the problems of everyday living. They are basic human skills that form part of ordinary practical reasoning. Historians, detectives, doctors, engineers, and intelligence analysts have to develop and apply these skills with rigor and precision in specialized professional contexts. So do lawyers.

These skills have not traditionally formed part of professional training. Perhaps this is because they are perceived to be “mere common sense”; or because it has been felt that they can only be learned by practical experience “on the job”; or because of a belief that these are matters of “intuition” or that great lawyers or historians or detectives or diagnosticians are “born and not made.”

This book starts from a different premise. Building on the work of the American legal scholar John Henry Wigmore (1863–1943), we believe that skills in analyzing and marshaling evidence and in constructing, criticizing and evaluating arguments about disputed questions of fact are intellectual skills that can and should be taught effectively and efficiently in law schools. They are as essential a part of “legal method” as legal analysis and reasoning about questions of law. Common sense, intuition, and practical experience all have a part to play in exercising these skills, but they are not adequate substitutes for a systematic grounding in what Wigmore called “the principles of proof.” This book is designed to enable students to lay a foundation and to develop the basic skills to a high degree before they enter practice as lawyers or in other spheres of activity that involve practical reasoning.

Between us we have accumulated more than fifty years of experience in teaching analysis of evidence in a variety of courses in several different countries. This book builds on that experience. It is designed as a flexible tool to lay a foundation for mastering a necessary set of basic intellectual and professional skills in fact analysis. They include techniques for structuring a problem and organizing a mass of data (macroscopic analysis) and techniques for detailed analysis and evaluation of

1 For a detailed account see Rethinking Ch. 2.
particular data and phases of complex arguments (microscopic analysis). Our main purpose is to present a vehicle for learning certain usable basic skills of analysis, argument, and practical problem-solving. The primary audience is law students, especially in courses on evidence and trial practice, but the early chapters and many of the examples can be used to learn about and develop skills of inferential reasoning in other contexts.

The what

Chapter 1, “Evidence and inference: some food for thought,” is a series of materials, cases, questions, and exercises. These are designed to achieve three objectives. First, to engage the interest of students and other readers, we have included some familiar and not so familiar examples illustrating the range of contexts in which inferential reasoning is necessary or useful. Second, we have provided examples that introduce concepts and issues that are developed in the remainder of the book so that readers can actively think about them from the outset. Third, these materials include concrete examples and exercises that are used as the basis for explaining and illustrating materials presented in later chapters. We have deliberately presented a wide variety of materials so that teachers can select which examples to use to introduce the subject and which can be studied later or omitted altogether. All of these examples have been used in the classroom, none of the authors use them all in one course, and each has his favorites. This is not a reading chapter; rather the idea is to encourage readers to engage actively with some concrete examples before moving on to the more abstract material that follows. Some teachers have used selected examples to illustrate concepts in subsequent chapters that students have been assigned to read later. Others may choose to recommend that their students begin by reading Chapters 2 and 3, referring back to particular examples as they appear in the text.

Chapter 2, “Fact investigation and the nature of evidence,” introduces basic concepts and considerations that apply to evidence and inference across many contexts, with particular reference to the generation and testing of hypotheses in the process of any kind of factual investigation. This is illustrated vividly by the problem of “connecting the dots” in intelligence analysis. It deals specifically with the idea of a substance-blind approach, which considers the basic inferential characteristics or credentials of evidence (relevance, credibility, and probative force) without regard to the substance or content of the evidence or to the context of the inquiry. This classification of evidence allows us to say general things about evidence regardless of its substance.

Chapter 3, “Principles of proof,” develops these ideas in a legal context. It describes the “Rationalist Tradition” that has been the foundation of Anglo-American evidence scholarship and explains why it is relevant to contemporary legal practice. It identifies the forms of logic that must be used in analyzing evidence or in justifying conclusions based upon evidence and demonstrates how they can be applied to legal disputes, using the final exercise in Chapter 1, “An investigation.”
Preface xix

Chapter 4, “Methods of analysis,” introduces the main methods of analysis used in preparation for trial and their relations to each other: chronologies, the outline method, narrative, and the chart method. It presents a general seven-step protocol that fits all of them, using the material from the O. J. Simpson case from Chapter 1 to illustrate its application. We have included this generalized account as a separate chapter for two reasons: first, some teachers may wish to provide an overview of approaches without going into detail about the chart method. Second, in our experience we have found this an effective way of easing students into the rigors of the chart method.

Chapter 5, “The chart method,” is the heart of the book for those who wish to master the most rigorous method of analysis. It is a substantially revised version of the method that Wigmore developed for the analysis of mixed masses of evidence early in the last century. It is an intellectual procedure for analyzing and organizing a complex body of evidential data and demonstrating precisely how the inferences from that data can be marshaled in support of and in opposition to the ultimate proposition that must be proved. It also makes it possible to subject selected phases of a complex argument to rigorous microscopic analysis. Such analysis can be used to identify and construct arguments about whether evidence should be admitted or its use restricted, as well as to evaluate the strengths and weaknesses of the particular phase of the argument based upon that data. Each step of the method is illustrated using United States v. Able and the O. J. Simpson example from Chapter 1.

Chapter 6, “Outline, chronologies, and narratives,” considers other methods of analysis in the context of litigation. The outline method is a familiar device. Variations of it are common. It is, on its face, less difficult to grasp and easier to use than the chart method. Chronologies and narratives are other devices commonly used in practice to organize the available evidence and to develop and test arguments based on that evidence. Part C of that chapter, “The litigation context,” describes which of the methods is best suited to the various stages of a case.

Chapter 7 uses an edited version of the record of R. v. Bywaters and Thompson to illustrate how the chart method can be applied to a complex decided case. The questions at the end have been organized to reflect the seven-step protocol. In our experience, if students immerse themselves in the detail and then are guided through the case using these questions step by step they readily grasp the basics of Wigmorean analysis. However, other cases involving mixed masses of evidence about which there is scope for reasoned disagreement, such as Sacco and Vanzetti, or O. J. Simpson, or the Lindbergh Baby (Bruno Hauptman), or any other complex case, can also be used for this purpose, provided that a detailed record is available and there is a historical doubt about the event.

Wigmore’s presentation of the principles of reasoning and methods of analysis falls squarely within the mainstream of Anglo-American scholarship, but he did not satisfactorily address a class of problems that are important for lawyers and that have emerged in recent debates as central issues for scholars. How is the strength of an inference to be determined? How is the net persuasive value of a mass of evidence
to be assessed? How are judgments about the probative force of different items of evidence to be combined? How can the lawyer (or the trier of fact) determine whether a mass of evidence, which logically supports the truth of the proposition ultimately to be proved, satisfies the applicable standard of proof? What do we mean when we say a proposition has been proven to be “more probable than not,” proven by “clear and convincing evidence,” or proven “beyond a reasonable doubt”? We confront these problems in Chapters 8 and 9.

Chapter 8, “Evaluating evidence,” first presents the traditional vocabularies that lawyers and others use in arguing about these issues in court. The next part, “Standards for decision,” introduces the distinction between standards intended to guide the decision-makers’ exercise of discretion, such as the standards defining the burden of proof, and standards designed to define the limits of discretion, such as the standards that appellate courts apply in deciding whether the decision below exceeded those limits. That part moves beyond the familiar standards of proof to consider standards for other decisions that are involved in the total process of litigation from the first interview of a client to pre-trial decisions, through the trial process and beyond, including standards for lawyers’ decisions, decisions to prosecute, and other standards for decision in litigation and adjudication.

Chapter 9, “Probabilities, weight, and probative force,” provides a basic introduction to probability theory. It outlines the debates about the application of different theories of probability in legal contexts and elucidates some basic concepts. These debates mainly focus upon whether probability theory should be used in evaluating evidence for cases-as-a-whole – i.e. arguments to a judge or jury. As a practical matter, practitioners, judges, and most legal academics have rejected the use of Bayes’s Theorem and other axioms of probability for these purposes, but have recognized that they should play a role in specific contexts – for example, in paternity suits, or disparate impact cases, as the basis for many scientific or expert opinions, or in wrongful death or total disability cases. There are further reasons why lawyers should be familiar with these concepts. Probability assessments have an important role as an aid to making many pre-trial decisions. The decision to prosecute or to contest a case requires analysis of the probability that liability or guilt will be established and, in a civil case, an estimate of the probable quantum of damages. Negotiations to settle a case or to reach a plea agreement are often argued in terms of probability assessments made by each of the parties. Lawyers also need to be equipped to recognize fallacies and misuses of statistics that may be made by their opponents.

Chapter 9 provides the theoretical background to the separate appendix on Probabilities and Proof by Philip Dawid, which is included on the website for this book. The appendix is a basic practical introduction to statistical method applied to

2 A simple formula for negotiating a settlement is discussed in Ch. 8 with an exercise based on Sargent v. General Accident Co., a case presented for other purposes in Ch. 1.

3 Appendix I at www.cambridge.org/9780521673167. There is a second Website for the book at http://analysisofevidence.law.miami.edu/.
legal examples. It explores the theoretical and practical problems posed by the use of mathematical probabilities in evaluating evidence. It introduces some basic axioms of probabilistic analysis and, through a series of problems and exercises, illustrates their application in contexts such as DNA, paternity suits, discrimination cases, and actuarial analysis.

Chapter 10, “Necessary but dangerous,” explores at greater length the roles of generalizations and stories in argumentation about questions of fact and the relations between them. This is mainly a theoretical chapter, but it includes two simple protocols that a lawyer might use in testing key generalizations or potential stories in preparing for trial.

Chapter 11, “The principles of proof and the law of evidence,” explores the intimate relationship between the principles of proof and the law of evidence, recapping on points where the connections have been touched on previously, especially in relation to basic concepts and exploring these in more detail in relation to hearsay.

Chapter 12, “The trial lawyer’s standpoint,” integrates the materials and methods introduced in Chapters 2 to 11 into the practical context of preparation for trial. This chapter includes two simple traffic cases that have been adapted from exercises used at the Inns of Court School of Law in London and two more complex problems drawn from the oldest National Trial Competition in the United States. We have found that these cases work well either as a basis for class discussion or as problems for simulated mini-trials on either side of the Atlantic.

Changes in this edition

First, David Schum has joined us as a co-author. Trained in probability and psychology, he has in recent years been concerned with evidence as a multi-disciplinary subject. In Evidential Foundations of Probabilistic Reasoning (1994) he argued that other disciplines had a lot to learn about evidence from law, but that lawyers could also benefit by considering those features of evidence that cross all or most disciplines. This “substance-blind” approach to relevance, credibility, and probative force is introduced in Chapter 2, with particular reference to investigation and inquiry in both legal and non-legal contexts.

Second, scientific evidence, such as DNA, and the bearing of probability theory and practical statistics on evidence in legal contexts have increased in importance in recent years. Chapter 9 contains a brief introduction to probability theory; the Appendix provides a practical introduction to the application of statistical methods to legal issues as an optional extra. Placing this on the website has made it possible to shorten the hard copy of the book, while substantially expanding the treatment of statistics.

Third, Wigmorean analysis has become much better known outside legal circles as well as within law. Specialists in decision theory, artificial intelligence, and in other areas have taken great interest in assisting intelligence analysts in “connecting
the dots” or trying to make sense out of masses of evidence. Wigmore’s methods are now being routinely applied in such efforts. They have also been applied to investigation of multiple crimes and insurance fraud (Schum (1987), Leary (2003), Twining (2003)). We have expanded the scope of this edition to take account of such developments, especially in relation to intelligence analysis post 9/11.

Fourth, there have been many developments in the law of evidence, civil and criminal procedure, and in scientific evidence. Evidence scholarship has continued to be a lively and pluralistic field. It is now a well-established area in comparative law. Evidence is becoming increasingly recognized as an exciting multidisciplinary subject of great importance in many spheres of practical activity (Schum (1994); Twining and Hampsher-Monk (2003); Twining (2003)). The first edition did not deal in detail with how the principles of proof and the law of evidence interact. We have added Chapter 11 in order to make this relationship clear and to facilitate the integration of the logic of proof and the rules of evidence in teaching.5

All of these developments have been taken into account in revising this edition. However, the principles of inferential reasoning, the basic concepts, and the skills involved in analyzing and marshaling mixed masses of evidence are quite stable. We have retained examples that we have found work well in teaching, even though some of them are quite old. We have dropped others and streamlined the presentation. We have tried to make the book more flexible and accessible to a variety of users, by giving clearer signposts.

Throughout this period the authors have continued to think, write, and teach in this area. Our ideas have continued to develop and we have learned from the experience of using the first edition in teaching and from the critical feedback of hundreds of students and some colleagues. Almost all our students have found the process of learning the method challenging and hard work (the motto of our courses has been “tough, but fun”); nevertheless, the vast majority have succeeded in mastering the basic techniques and many have produced work of outstanding quality. Interestingly, the subject has worked best with first year law students in Miami, where it is a popular elective in the second semester. Many of our students have reported that they have found the approach very helpful in practice, some claiming that it was the most useful course that they had in law school. Of course, they

4 For England these developments are surveyed in Zander (2003), Dennis (2004), and Roberts and Zuckerman (2004).
5 Throughout this edition we indicate important points of contact between the principles of proof and the law of evidence. For this purpose, we have used the Federal Rules of Evidence (as amended up to Dec. 1, 2002). This is a coherent, accessible, and important code that falls four-square within the Rationalist Tradition. In respect of English law we make regular reference to Ian Dennis, The Law of Evidence (2nd edn, 2002), especially Chs. 1–4, which is generally in tune with our approach. So is Roberts and Zuckerman, Criminal Evidence (2004). Michael Zander’s Cases and Materials on the English Legal System (9th edn, 2003) contains useful discussions of debates and reforms concerning evidence and procedure in recent years. The main points of direct connection between the principles of proof and the law of evidence concern matters such as the basic concepts, relevance, standards of proof, and judicial notice, topics in respect of which there are not great differences between common law jurisdictions.
do not spend time drawing elaborate charts in straightforward cases, but the basic
techniques of evidence marshaling and argument construction can become habits
of mind that are invaluable and efficient in handling both simple and complex cases.
This is hardly surprising because Wigmore's method is essentially a systematization
of the “best practice” of good lawyers.

Most of our students and some colleagues are converts. Moreover, the type of
analysis involved in the chart method has in recent years attracted interest in a
number of fields, including police investigation, intelligence analysis, and various
other spheres of practical decision-making (Schum (1987); Leary (2003), Twining
(2003)). There are, however, still some skeptics, not least among teachers of the
law of evidence (Roberts (2002), Murphy (2001); response by Twining (2005)). We
have tried to address their central criticism that the first edition was too substantial
and complex to use in an ordinary law of evidence course, and we hope that this
dition is more accessible and user friendly.

How to use this book

Our main purpose is to present a vehicle for learning certain usable basic skills of
analysis, argument, and practical problem-solving; hence this book can be used
as core or supplemental material in a variety of ways and in a variety of courses.
Chapter 1 contains a number of concrete examples and exercises that can be used
selectively for different purposes.

First, the book can be used as the basis for a self-standing course on analysis of
evidence. All three authors have used it in this way for over a decade in a postgraduate
course in London, in first degree courses for lawyers and non-lawyers at George
Mason University, and, most successfully, as a popular first year elective at the
University of Miami Law School.

Second, this edition has been designed so that it can also be used as part of
orthodox evidence courses. Anderson has regularly used it during the first three
weeks of a standard four-credit course on the Law of Evidence in Miami; Twining
teaches it as the first third of the year-long course on Evidence and Proof in the
London LLM, the second half of which is devoted to selected topics in the Law of
Evidence, the remainder being devoted to a brief introduction to statistical analysis.
Other law teachers who have tried to introduce this approach at the start of their
courses on evidence have tended to find the first edition too substantial and too
dense to use in three to four weeks. With this in mind we have reorganized the book,
shortened several chapters, and indicated more clearly how the principles of proof
underpin and are integrated into evidence doctrine. We have also provided some
guidance to teachers who wish to take some short cuts in order to fit this subject
into a few weeks.

We would emphasize, however, that there are no short cuts to learning
the basic skills involved. If the learning objectives include mastering the basic
techniques of evidence marshaling and the construction and criticism of rigorous
arguments about disputed questions of fact, these can only be acquired by repeated practice involving exercises that are inevitably time consuming for students. However, it is our experience that a student who has acquired these skills can much more rapidly and efficiently understand the law of evidence and its practical applications. In short, studying analysis of evidence takes time, but it also saves time. In our view, the basic approach can be taught in a minimum of eight to ten contact hours together with at least two written exercises.

Third, while the obvious and tested uses are in basic or advanced courses in evidence and trial or pre-trial advocacy, we believe that some chapters can also be usefully employed in any skills course that seeks to develop the intellectual component of practical lawyering skills (and indeed in pre-law and other undergraduate courses concerned with rigorous reasoning about disputed questions of fact). Handling evidence is a basic human skill and a neglected aspect of “thinking like a lawyer.” Wigmorean analysis is beginning to feature in the training of intelligence analysts, police investigators, and others. It deserves to be a regular part of the curriculum of first degrees in law.
Acknowledgments

This book has been in gestation for over thirty years. During this period we have become indebted to so many people that it is impossible to name them all. In addition to those to whom inadequate acknowledgment was made in the first edition, we have since incurred many further debts. In preparing this edition, special thanks are due to colleagues, librarians, and deans in the law schools of George Mason University, the University of Miami and University College London; to Philip Dawid, who has prepared Appendix I on Probabilities and Proof for the website; to our students who have continued to be our most persistent critics and supporters; to Christopher Allen, Kola Abimbola, Ricardo Bacusas, Erica Becher-Monas, Philip Dawid, Ian Dennis, Jason Goldsmith, Michael Graham, Susan Haack, Richard Leary, Donald Nicolson, Mike Redmayne, Paul Roberts, Peter Tillers, and Bill Widen for many useful comments and suggestions; to Deborah Burns, Colette Hanna, Eileen Russell, Erna Stoddart, and, especially, Gloria Lastres, for unstinting assistance with word-processing, scanning, preparation of charts, and much else; to Noah Cox and Sisi Tran for research assistance; and, as ever, to our families, especially Anne, Carolyn, and Penelope for their tolerance, support, help, and love.

We are grateful to the sources identified below for permission to reprint or reproduce parts of the following works.

In Chapter 1, Harry Kemelman, The Nine Mile Walk, with copyright Harry Kemelman, is reproduced with permission of the author’s agents. Extracts from Morrison v. Jenkins, 80 C.L.R. 626 (Aust. 1969) are reproduced with permission of The Law Book Company Ltd.

In Chapter 2, the cartoon at Figure 2.1 is reproduced with permission of both the artist John Trevor and the Albuquerque Journal in New Mexico.

In Chapter 7, the trial record extract from Filson Young, ed., The Trial of Bywaters and Thompson (2nd edn., 1951), is reproduced with permission of William Hodge and Company in Edinburgh.

In Chapter 12, the extract from Dart, Is the Ford Motor Company Guilty of Killing Girls with a Pinto? copyright 1980 by the Atlanta Constitution, is reproduced with permission. Exhibits and text In the Matter of James Dale Warren (1981) and the
Acknowledgments

United States v. Wainwright (1981) are reproduced with the permission of the Texas Young Lawyers Association and the National Trial Competition Committee.

Every effort has been made to secure necessary permissions to reproduce copyright material in this work, though in some cases it has proved impossible to trace copyright holders. If any omissions are brought to our notice, we will be happy to include appropriate acknowledgments on reprinting.
### Table of cases

**Australia**

Morris v Jenkins 80 CLR 626 (Aust 1949)  31–39, 130

**England**

Bater v Bater [1951] P 35  243  
Candler v Crane Christmas & Co [1951] 2 KB 164  156, 285  
H (Minors) (Sexual Abuse: Standard of Proof), Re [1996] AC 563  243  
Miller v Jackson [1977] 3 All ER 340  20–1, 287  
R v Clark [2003] EWCA Crim 1020  298  
R v Hepworth and Fearnley [1955] 2 QB 600  242  
R v Sang [1980] AC 402  87  
R v Smith (George Joseph) [1914–15] 84 KB 2153 (Brides in the Bath)  18, 286, 296–8, 298, 304  
R v Turnbull [1977] QB 224  227

**United States**

Addington v Texas, 441 US 418 (1979)  243  
Anderson v City of Bessemer, 470 US 564 (1970)  245  
Bradwell v Illinois, 83 US 130 (1872)  266  
Chambers v Mississippi, 410 US 284 (1973)  140  
Commonwealth v Sacco, 255 Mass 369, 151 NE 839 (1926)  2, 335  
Commonwealth v Sacco, 259 Mass 128, 156 NE 57 (1927)  2, 335  
Commonwealth v Sacco, 261 Mass 12, 158 NE 167 (1927)  2, 335  
Icicle Seafoods Inc v Worthington, 475 US 709 (1986)  245  
Table of cases

Old Chief v United States, 519 US 172 (1997)  87, 147, 241
People v Collins, 68 Cal 2d 319, (1968)  249–50
Robinson v Diamond Housing Corp, 267 A 2d 833 (DC Ct App 1970)  238
Robinson v Diamond Housing Corp, 463 F 2d 853 (DC Cir 1972)  238
Sargent v Massachusetts Accident Co, 307 Mass 246, 29 NE 2d 825 (1940)  28
Shepard v United States, 290 US 96 (1933)  309
US v Myers, 550 F 2d 1036 (5th 1977)  101

Causes célèbres

New Jersey v Hauptmann, (1935) (Lindbergh baby kidnapping)  xix, 160
State v Frank, 1913 (Leo Frank/Mary Phagen murder)  160
Tichborne v Lushington, 1871 (claim to estate)  160

Hypothetical cases

Police v Twist  329–34
Police v Weller  160, 325–9, 333–4
Sargent v. Southern Accident Co.,  1, 2, 28–31, 104, 126, 154, 233–4, 286
State v Archer  94, 109–11, 142–4, 158, 320
United States v Able,  xix, 1, 2, 23–8, 74, 125–9, 132, 137, 138, 140, 147, 149, 239–42, 278, 303, 309–14
United States v Wainwright  160, 341, 343–56

References to these causes célèbres are based upon materials in the trial record. Sources where additional information may be found are identified in the References. Additional sources can be found on the internet and at the websites for this book.
# Table of legislation and rules

## England

**Civil Procedure Rules 1999**
- r 1(1) 84
- r 1(2) 84

**Code for Crown Prosecutors**
- s 5.1 236
- s 6.2 236

**Construction and Use Regulations 1972**
- reg 98(i)(b) 329, 332

**Criminal Appeal Act 1995**
- s 2 244

**Criminal Justice Act 2003** 281
- Part 10 244
- s 101 298
- s 103 298

**Human Rights Act 1998** 294

**Road Traffic Act 1972**
- s 3 326, 327, 329, 330, 333
- s 22 326, 327, 329, 332, 333
- s 34 329, 332
- s 40 329, 332
- s 65 329, 332

## United States

**California Penal Code**
- §187(a) 117

**Connecticut General Statutes**
- §53a–8 18
- §53a–54a 17
<table>
<thead>
<tr>
<th>Legislation and Rules</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Rules of Civil Procedure</td>
<td>84, 85</td>
</tr>
<tr>
<td>R 1</td>
<td>84</td>
</tr>
<tr>
<td>R 11</td>
<td>234–5</td>
</tr>
<tr>
<td>R 52(a)</td>
<td>245</td>
</tr>
<tr>
<td>Federal Rules of Criminal Procedure</td>
<td>84</td>
</tr>
<tr>
<td>R 2</td>
<td>84</td>
</tr>
<tr>
<td>Federal Rules of Evidence</td>
<td>xxii, 84, 85, 299–314</td>
</tr>
<tr>
<td>R 102</td>
<td>84, 300</td>
</tr>
<tr>
<td>R 201</td>
<td>300</td>
</tr>
<tr>
<td>R 201(b)</td>
<td>273</td>
</tr>
<tr>
<td>R 401</td>
<td>62, 86, 88, 252, 261, 299</td>
</tr>
<tr>
<td>R 402</td>
<td>86, 89, 299</td>
</tr>
<tr>
<td>R 403</td>
<td>87, 89, 90, 240, 241, 303, 304</td>
</tr>
<tr>
<td>R 404</td>
<td>87, 89, 90, 281</td>
</tr>
<tr>
<td>R 404(b)</td>
<td>303, 304, 321</td>
</tr>
<tr>
<td>R 405</td>
<td>87, 281, 300</td>
</tr>
<tr>
<td>R 406</td>
<td>281</td>
</tr>
<tr>
<td>R 407</td>
<td>301, 302</td>
</tr>
<tr>
<td>R 408</td>
<td>301</td>
</tr>
<tr>
<td>R 409</td>
<td>301</td>
</tr>
<tr>
<td>R 410</td>
<td>301</td>
</tr>
<tr>
<td>R 411</td>
<td>301</td>
</tr>
<tr>
<td>R 501</td>
<td>87</td>
</tr>
<tr>
<td>R 602</td>
<td>300</td>
</tr>
<tr>
<td>R 603</td>
<td>300</td>
</tr>
<tr>
<td>R 608</td>
<td>300</td>
</tr>
<tr>
<td>R 609</td>
<td>87</td>
</tr>
<tr>
<td>R 613(b)</td>
<td>312</td>
</tr>
<tr>
<td>R 701</td>
<td>87, 300</td>
</tr>
<tr>
<td>R 702</td>
<td>87, 300, 359</td>
</tr>
<tr>
<td>R 703</td>
<td>87, 300</td>
</tr>
<tr>
<td>R 704</td>
<td>87, 300</td>
</tr>
<tr>
<td>R 705</td>
<td>300</td>
</tr>
<tr>
<td>R 801(1)(B)</td>
<td>147</td>
</tr>
<tr>
<td>R 801(a)</td>
<td>312</td>
</tr>
<tr>
<td>R 801(d)(2)</td>
<td>313</td>
</tr>
<tr>
<td>R 801(d)(2)(D)</td>
<td>312</td>
</tr>
<tr>
<td>R 803</td>
<td>309</td>
</tr>
<tr>
<td>R 804</td>
<td>309</td>
</tr>
<tr>
<td>R 804(b)(1)</td>
<td>309</td>
</tr>
<tr>
<td>R 804(b)(2)</td>
<td>309</td>
</tr>
<tr>
<td>R 806</td>
<td>308, 309</td>
</tr>
<tr>
<td>R 901</td>
<td>64</td>
</tr>
<tr>
<td>Source</td>
<td>Section(s)</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>R 902</td>
<td></td>
</tr>
<tr>
<td>art IV</td>
<td></td>
</tr>
<tr>
<td>Internal Revenue Code</td>
<td>§7201</td>
</tr>
<tr>
<td>United States Attorneys’ Manual</td>
<td>§9-27.220A</td>
</tr>
<tr>
<td>United States Code</td>
<td></td>
</tr>
<tr>
<td>Title 18 §1111</td>
<td></td>
</tr>
<tr>
<td>Title 18 §1112</td>
<td></td>
</tr>
<tr>
<td>Title 18 §1112(a)</td>
<td></td>
</tr>
<tr>
<td>Title 18 §1113(a)(4)</td>
<td></td>
</tr>
<tr>
<td>United States Constitution</td>
<td>Amendment IV</td>
</tr>
<tr>
<td>Amendment V</td>
<td></td>
</tr>
</tbody>
</table>
Some of the points and themes in the text are treated at greater length in other writings by the authors. The following abbreviations for the most commonly cited works are used in the text and notes:  

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Work Title and Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis</td>
<td><em>Analysis of Evidence</em> (1st edn) by Terence Anderson and William Twining (1991)</td>
</tr>
<tr>
<td>Rethinking</td>
<td><em>Rethinking Evidence</em> by William Twining (1990/1994)</td>
</tr>
<tr>
<td>Websites</td>
<td><a href="http://www.cambridge.org/9780521673167">www.cambridge.org/9780521673167</a>; <a href="http://analysisofevidence.law.miami.edu">http://analysisofevidence.law.miami.edu</a></td>
</tr>
</tbody>
</table>

1 For full references see References at pages 388–95 below.