Contents

Preface ix
About the Editors xiii
About the Contributors xv

CHAPTER 1
The Social Construction of the Admissibility of the Most Frequently Proffered Varieties of Expert Testimony 1
MARA L. MERLINO, VICTORIA SPRINGER, AND ALEXANDRA E. SIGILLO

The Social Construction of “Legal Science” 2
Method 6
Results 7
The Admissibility of Psychological/Psychiatric Experts 9
The Admissibility of Toxicology Experts 11
The Admissibility of Damages Experts 12
The Admissibility of Engineering Experts 14
Discussion and Implications 15
Summary of Findings 15
Discussion 16
Implications 18
Tables 20
CHAPTER 2
Expert Testimony in Civil Cases 33
ERICA BEECHER-MONAS

Frye, the Daubert Revolution, and Revised
Federal Rule of Evidence 702 33
Causation Issues in Toxic Torts 40
Cursory Checklists and Bottom Lines 41
Atomistic Admissibility 43
Peer Review and Publication as Surrogates for Expert Consensus 48
Proving Exposure Levels 51
Differential Diagnosis 55
Experts in Non-Laboratory Sciences 56
Psychiatric/Psychological Testimony 56
Engineering Testimony 59
Experience-Based Testimony 63
Beekeepers, Wine Tasters, and Perfume Sniffers 63
Future Directions 66
Efforts toward Objectivity 66
Conclusion 73
Reliability Checklist for Analyzing Proffered Expert Testimony 74

CHAPTER 3
Digital Visual Evidence 77
VERONICA BLAS DAHIR

General Admissibility Concerns and Issues 80
Demonstrative Evidence 81
Federal Rules of Evidence 82
FRE 702: Expert Testimony 83
FRE 901: Authentication 84
FRE 403: “Unfairness,” Probative versus Prejudicial, Confusion,
Misleading, Waste of Time 85
Cognitive and Social Psychological Jury Issues to Consider 86
Learning Styles 87
Narratives and Storytelling 88
CHAPTER 4
The Juror and Courtroom of the Future 113
NEAL FEIGENSON AND CHRISTINA SPIESEL

Evidence of the Future: New Media and New Presentation Systems 114
    Augmented Reality 114
    Augmented Virtuality 115
    Immersive Virtual Reality 116
    New Ways of Presenting Pictures 118
    Summary 119
Courtroom of the Future: From Video to Virtual Reality 120
    Video in the Justice System 121
    Justice Moves Online 127
    Online Courts 127
Jurors of the Future 129
    New Habits of Thought and Judgment 129
    Cyberjuries 133
Summary 135
CHAPTER 5
The Future of Neuroscientific Evidence 137
STEPHEN J. MORSE

Current Use of Neuroscientific Evidence 138
Current and Future Questions about the Science of Neuroscientific Evidence 140
Translating Neuroscience into Law 144
Criminal Law and Future Neuroscience 150
  Dangerous Distractions 150
  Criminal Responsibility and Mitigation 151
  Competence 153
  Prediction 153
  Lie Detection 155
Civil Law 156
  Pain 156
  Competence 157
  Consciousness Evaluation 158
  Lie Detection 159
  Prediction 159
Futuristic Concerns: The Death of Personhood 160
Conclusion 163

CHAPTER 6
The Future of DNA Evidence 165
CHRISTINE FUNK

Introduction to DNA Evidence 165
Increased Use of Forensic DNA Evidence 167
The Problem of Lack of Education 168
Pretrial Evidence 169
Expert Testimony—The NAS Report 169
DNA Profiles of Arrestees 171
Cold Hits 171
Familial Searches 173
Conclusion 175
CONTENTS

CHAPTER 7
The Child Witness
JULES EPSTEIN

Defining the Term Child Witness 179
The Child Witness: A Brief Historic Overview 179
Psychology and the Child Witness 184
  Interviewing 185
  Competence to Testify 186
  Courtroom Presentation 187
Interviewing and the Child Witness 190
The Child Witness and Hearsay 193
Accommodating the Child Witness 197
Conclusion 199
  Child Witness Checklist 200

CHAPTER 8
Evidence, Privacy, and Technology
ANDREW E. TASLITZ

Privacy and the Courts 202
  E-Filing 202
  Courtroom Technology 205
  Digital Dossiers and Jury Selection 210
  Privacy and Evidence-Gathering 213
Conclusion 232

CHAPTER 9
Three Prongs of the Confession Problem: Issues and Proposed Solutions
DEBORAH DAVIS AND RICHARD A. LEO

Modern Psychological Interrogation 234
The Confession Problem, Prong I: Involuntariness 241
  Voluntariness Judgments in Practice 246
  What if Admission of the Confession Is Contested on Appeal? 247
The Confession Problem, Prong II: Validity 248
The Confession Problem, Prong III: Prejudicial Impact 250
Confession and the Role of Misleading Specialized Knowledge 251
Tunnel-Vision and Confirmation Biases 254
Motivational Biases 255
Emotional Influences on Thinking and Behavior 256
Institutional Influences on Evidence Production and Decision Making 257
Inadequate or Incorrect Relevant Knowledge 258
Progressively Constricting Relevant Evidence 260
Conclusions and Recommendations for the Future 261

CHAPTER 10
Research Resources in Technology, Science, and the Law (Keeping Current) 265
KEN STRUTIN

Current Awareness 267
Reference Works 271
Reports 272
Ethics 273
Standards 277
Surveys and Statistics 280
Libraries 281
Organizations 284
Research Guides 291
Legal Bibliography and Informatics 294
The Future 297
Checklists 299
New Information Sources 299
Information Quality 299

Additional Resources 301
Index 309