

## **FORENSIC EVIDENCE: SCIENCE AND THE CRIMINAL LAW**

**Author: Terrence F. Kiely**

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The book *Forensic Evidence: Science and the Criminal Law*, as noted in the Preface, has been intended to serve as an introduction and guide to the appreciation and understanding of the significant historical, contemporary, and future relationship between the world of forensic sciences and the criminal justice system. It was never conceived or intended to be a close study of forensic science. Rather, it was attempted to provide the general framework and comprehensive coverage of the ongoing use of forensic evidence in the U.S. criminal justice system. In particular, it is devoted to a study of the judicial response to diverse uses of forensic science in all phases of criminal procedure. Thus, the book is primarily aimed at those who may be directly or potentially involved in that relationship: the police, forensic scientists, prosecutors, defense lawyers, criminal law professors and students.

The particular scientific value of this book is that it presents all the important aspects of the diverse application of forensic science in criminal proceedings: the DNA analysis, fingerprints, footprints and tire marks, hairs and fiber analysis, ballistic traces, etc. The clear and up-to-date discussion on these issues is illustrated by relevant case law, which helps understand the importance and the significant contribution of forensic science to the 21<sup>st</sup> century criminal justice system.

Structurally, the book is divided into 12 chapters.

Chapter 1, titled *Science, Forensic Science, and Evidence*, briefly analyzes the historical and contemporary context underlying the legal arguments on the adequacy of the forensic science findings.

Chapter 2, titled *Science and the Criminal Law*, provides an overview of the entire subject matter of using forensic sciences in all phases of criminal procedure in U.S. courts, including investigation, prosecution and defence.

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Chapter 3, titled *Hair Analysis*, discusses the courts' response to forensic expert opinions regarding the attempts to link the forensic analysis of hairs found at a crime scene to an individual suspect. This controversial issue sets the analytical framework for the subsequent discussions on a wide range of forensic science applications.

Chapter 4, titled *Fiber Analysis*, discusses the identification and use of a wide variety of fiber materials collected from crime scenes, and the processes used to link such materials to an individual suspect.

Chapter 5, titled *Ballistics and Tool Marks*, addresses the subject matter of firearms and projectile identification, the matching of bullets to a weapon, gunshot residue, tool mark identification, and attempts to match crime scene striations to a tool associated with the commission of a crime.

Chapter 6, titled *Soil, Glass, and Paint*, discusses the nature of soil and glass-shard particle identification, and the attempt to link such materials with an individual suspect.

Chapter 7, titled *Footprints and Tire Impressions*, addresses the identification, photographing, and/or casting of footwear and tire impressions found at a crime scene, and their association with a suspect and crime. The chapter ends with a listing of bite mark cases.

Chapter 8, titled *Fingerprints*, discusses the subject matter of fingerprint identification procedures and the application of digitalized systems, such as the Automated Fingerprint Identification System (AFIS) and the rapidly expanding Combined DNA Index System (CODIS). The former is also used in identification proceedings conducted by the Ministry of the Interior in the Republic of Serbia.

Chapter 9, titled *Blood Spatter Analysis*, analyzes the subject matter of blood products testing, as well as the subject of blood sample (bloodstain pattern) analysis and its importance in the process of crime scene reconstruction.

Chapter 10, titled *DNA Analysis*, deals with court requirements for accepting different forms of DNA testing and analyses, which are important in criminal procedure.

Chapter 11, titled *Forensic Anthropology and Entomology*, briefly addresses the application of these fields of forensic science, their methodologies and findings in the investigation and identification of human remains and determining the time of death (by the study of insects). This is especially important because it is a new scientific discipline.

Chapter 12, titled *Epilogue*, provides a summary of the subject matter and major points covered in this book, and briefly refers to a vast body of highly specialized forensic science disciplines (forensic pathology, toxicology, psychiatry, psychology, etc.) which have not been covered but are equally essential in criminal procedure.

The *Appendix* contains an extensive list of bibliographic items and online resources which are intended to serve as guidelines for further forensic science and forensic evidence research (Kiely, 2001: 5-6). It also includes a list of cases used to illustrate the judicial perspective on the use of forensic science in U.S. courts.

The book *Forensic Evidence: Science and the Criminal Law* was written in a clear and straightforward linguistic style, which certainly does not diminish its scientific value. Given the fact that the author analyzes the current issues of contemporary forensic sciences, the book can be used by experts of all profiles who use the forensic science results in their professional activities.