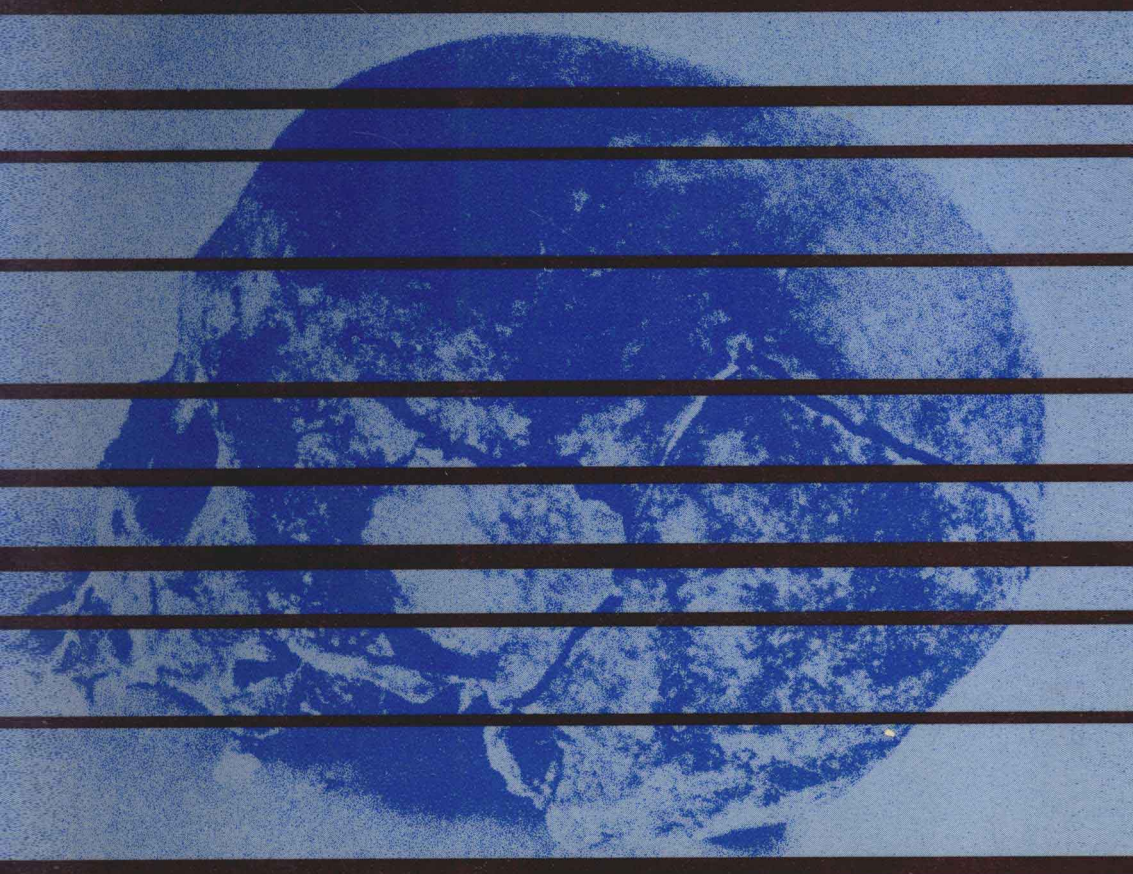
TECHNIQUES OF CRIME SCENE INVESTIGATION

FOURTH EDITION

BARRY A.J. FISHER
ARNE SVENSSON · OTTO WENDEL



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FOREWORD

Both the law enforcement investigator or detective and the criminalist have a common goal: they seek to solve mysteries. In many cases, they alone must speak for those who no longer can do so for themselves.

This fascinating and often complex task of discovering the truth is made infinitely more accurate and ultimately more just when law enforcement follows proven procedures and guidelines developed by forensic science. The criminalist supplements and confirms the intuitive theories of the experienced investigator; he recommends new and better methods of collecting and preserving evidence; and he brings to the task of criminal investigation the full weight of the latest advances in modern science.

In the summer of 1985, communities throughout southern California breathed a collective sigh of relief as the bloody trail of murder and violent assault wrought by a suspect dubbed the "Night Stalker" came to an end, in large part because of a new forensic science technique involving the use of a laser. A lone fingerprint, invisible through conventional means, was recovered with the aid of laser technology and identified. The identification led to the capture of this ruthless killer. The solution of this crime is but one example of how the application of advanced forensic scientific techniques has made the efforts of law enforcement professionals more successful.

The fourth edition of *Techniques of Crime Scene Investigation* is an expansion of an already world-renowned text that serves as an invaluable reference for investigators and criminalists alike. The experience and innovation of those involved in gathering and interpreting evi-

dence has been compiled and defined here by Barry A.J. Fisher, Chief Criminalist of the Los Angeles County Sheriff's Department.

As our space-age society continues to plunge into the age of accelerated technological advancement, we in law enforcement must continue to keep pace by welcoming, encouraging, and recognizing the countless contributions of forensic scientists. Barry Fisher's relentless search for the truth has brought both this book and the department in which he works to a position of universal respect among law enforcement agencies throughout the world.

Sherman Block
Sheriff of Los Angeles County

PREFACE

Today, as ever, physical evidence plays a major role in the investigation and solution of criminal acts. Courts question confessions made by defendants, as well as testimony of eye witnesses. Prosecutors recognize that the ability of physical evidence to corroborate testimony is often a requisite for successful prosecution of cases. Forensic science has greatly increased the value of physical evidence as a tool of today's law enforcement.

Modern criminal investigation is a complex profession. Not only must investigators be skillful interrogators, knowledgeable in the laws of arrest and search and seizure, but they must also be familiar with the proper procedures of collection, preservation, identification, and utilization of physical evidence encountered at the crime scene.

Techniques of Crime Scene Investigation is a treatise on physical evidence. It is written for the student engaged in the study of crime scene investigation and physical evidence, for the experienced investigator as a reference work, and for the non–forensic scientist who must be familiar with physical evidence. It is not intended to be a study of methods and techniques of forensic science, but rather a compendium of information on crime scene investigation and the ways physical evidence can be used in the investigation of criminal acts.

Since the third edition of this text was published in 1981, crime scene investigation techniques have not changed dramatically. Nonetheless, there have been a few changes and a greater awareness of the value of physical evidence. Prosecution and defense attorneys rely heavily upon independent, scientific corroboration of evidence pre-

sented at trial. Major criminal investigations involving serial murders and child molestations have focused on forensic science as a means to assist law enforcement in these difficult cases.

Forensic science has answered this call. Advances have been made in the area of identification. The use of lasers, cyanoacrylate, and image processing has significantly enhanced fingerprint technology. Forensic serology continues to progress and develop the means to identify individuals. Crime laboratories are moving forward and developing the capability to provide greater assistance to law enforcement in the investigation of crimes.

Those working in criminal justice professions are a pragmatic lot. Although a certain amount of the material in the text is discussed in an academic context, I have tried to include many specific examples to illustrate specific points. In preparing this fourth edition, I have included additional interesting cases from various jurisdictions to demonstrate how physical evidence can assist in police investigations.

Scientific criminal investigation is a team effort. Professionals from many different disciplines within the criminal justice system—police, forensic scientists, and attorneys—must work together. Physical evidence is a focal point. For an investigation to proceed optimally, all must be knowledgeable in the value and capabilities of physical evidence and all must work together in a spirit of mutual cooperation.

ACKNOWLEDGMENTS

In preparation of this fourth edition I contacted a number of colleagues and requested that they share interesting cases for inclusion in this edition. While I was not able to use all of the submissions, I would like to thank those who responded to my request: James Anderson and Sze-Ern Kuo, Scientific Investigative Division, Los Angeles Police Department, Los Angeles, California; James M. Bullock and Bruce R. Mackenzie, Forensic Science Division, Michigan State Police, Madison Heights, Michigan; Joseph H. Davis, M.D., Office of Chief Medical Examiner, Metropolitan Dade County, Miami, Florida; Dr. James Donovan, Forensic Science Laboratory, Department of Justice, Dublin, Ireland; Richard S. Frank, Forensic Sciences Section, Office of Science and Technology, Drug Enforcement Administration, Washington, D.C.; Neil Holland, State Forensic Science Laboratory, Melbourne, Australia; Randy Hanzlick, M.D., Office of Fulton County Medical Examiner, Atlanta, Georgia; Robert W. Horn, New York State Police Laboratories, Albany, New York; Dr. Jia Jingtao, China Medical College, Shenyang, People's Republic of China; Kenneth F. Kowalski, Scientific Analysis Division, Arizona Department of Public Safety, Phoenix, Arizona; M. James Kreiser, Bureau of Forensic Sciences, Illinois Department of State Police, Springfield, Illinois; Henry Lee, Ph.D., Connecticut State Police Forensic Science Laboratory, Meriden, Connecticut; Douglas M. Lucas, the Centre of Forensic Sciences, Toronto, Ontario, Canada; Thomas J. Nasser, Forensic Science Division, Michigan State Police, Bridgeport, Michigan; Stephan M. Ojena, Kinderprint Company, Martinez, California; Nicholas Petraco, Police Laboratory,

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I also wish to thank Dr. Ronald Kornblum, Acting Chief Medical Examiner–Coroner, Los Angeles County, for reviewing the chapter on homicide investigation, and James White, Orange County Sheriff–Coroner's Laboratory, Santa Ana, California, for reviewing the chapter on illicit drugs and toxicology.

Writing or even updating a book is a chore. Work and family responsibilities sometimes conflict with the job of a part-time author. There are a few special people who, knowingly and sometimes unknowingly, made my efforts in updating this book an easier task: my immediate boss, Donald A. Denison, Captain, Scientific Services Bureau; my coworkers, Eddie Lu and John T. Cook, Supervising Criminalists II, and Katherine R. Vukovich and Harley M. Sagara, Supervising Criminalists I; and of course Sheriff Sherman Block, who administers one of the finest law enforcement agencies in the world, of which I'm delighted to be a part.

Lastly, I thank my family. My wife, Susan, helped by being both mom and dad to our sons during the past few months and kept them busy so I could write and finish up on schedule. Michael and David tried hard not to distract me from my work, but as 9- and 11-year-olds they sometimes had a hard time. Thank you for all your patience and help.

Los Angeles, California
March 16, 1986

Barry A.J. Fisher

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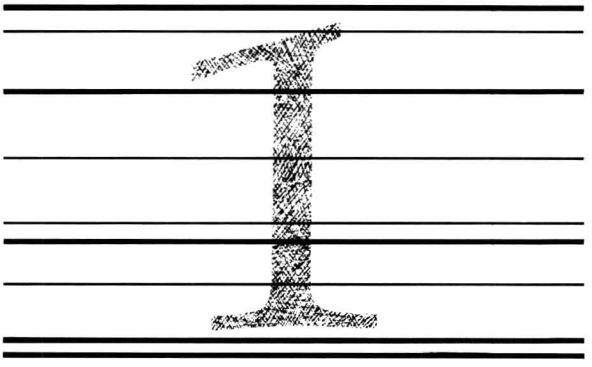

INTRODUCTION

Case

FIGURE 1.1. The crime scene with clothes piled high on the bed. (Metropolitan Police Forensic Science Laboratory, London.)

One Mr. Mohan Gulrajani came to London from India in 1956. A middle-aged homosexual, he gradually acquired property, and by 1979, he owned or had interest in 14 houses in West London, which he let out in rooms. He lived in one of the houses. His tenants were usually young men from abroad, who stayed either on short-term lets to avoid immigration problems or who did work for Gulrajani, cleaning, driving, etc., in return for free board and lodging. Gulrajani was a brutal "Rackman*"-type of character who worked these young men incredibly hard, kept them in squalid conditions, and made them perform homosexual acts for him. On their arrival at his house, he would confiscate their passports, and since they were usually in the country illegally or were overstayers, he used the threat of exposure to the authorities as a hold over them.

* Rackman was a notorious landlord in London in the 1970s, who used thugs for evicting tenants who did not pay his exorbitant rents.

This case is related through the kindness of Dr. Ann Priston, Metropolitan Police Forensic Science Laboratory, London, U.K.

On Sunday, the morning of August 26, 1979, at 9 A.M., three young men who lived in the house, having not seen or heard from Gulrajani all day during Saturday, decided to break his door open. One of the three was a 24-year-old man from Singapore, called Suresh Nair, who worked for Gulrajani as his driver. What they saw was an obviously ransacked room with clothing piled high on top of the bed. The three apparently closed the door and sent for the police.

When the scene was examined the following was found:

1. The clothes were piled to a height of approximately 3 feet (Figure 1.1).
2. The room had been completely ransacked and the contents of the cupboards and drawers emptied around the room.
3. Underneath the pile of clothes, they discovered the murdered body of Mohan Gulrajani lying in a pool of blood with a deep stab wound to his neck (Figure 1.2).
4. On the wall above the bed were written the letters "ROB" in blood.

The case came into the laboratory initially for the usual swab examination and drug screen. At the beginning of the investigation, attention was understandably focused on the handwriting—the possibility that

FIGURE **1.2.** The same crime scene as in Figure 1.1, with the pile of clothes removed. Note the blood stained sheets, writing in blood on the wall, and the scuff marks in blood on the floor, which matched with the shoe. (Metropolitan Police Forensic Science Laboratory, London.)

(*continued*)