



RACHEL BOBA SANTOS

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# CRIME ANALYSIS

— WITH —

# CRIME MAPPING

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FOURTH EDITION



# **CRIME ANALYSIS**

With

# **CRIME MAPPING**

**RACHEL BOBA SANTOS**  
Radford University



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**CRIME  
ANALYSIS**  
With  
**CRIME  
MAPPING**

**SAGE** was founded in 1965 by Sara Miller McCune to support the dissemination of usable knowledge by publishing innovative and high-quality research and teaching content. Today, we publish over 900 journals, including those of more than 400 learned societies, more than 800 new books per year, and a growing range of library products including archives, data, case studies, reports, and video. SAGE remains majority-owned by our founder, and after Sara's lifetime will become owned by a charitable trust that secures our continued independence.

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# Preface

Crime analysis is a field of study and practice in criminal justice that uses systematic research methods and data, supports the mission of police agencies, and provides information to a range of audiences. Crime mapping is a subset of crime analysis that focuses on understanding the geographic nature of crime and other activity. Crime analysis is a relatively new topic in criminal justice education, and this book is one of the first to bring crime analysis and crime mapping to an undergraduate audience. A class in crime analysis provides students with opportunities to apply theory, research methods, and statistics learned in other courses, as well as presents information on a viable career path for criminal justice majors.

My purpose in this book is to provide an introduction to crime analysis with crime mapping through discussion of the concepts, theories, practices, data, analysis techniques, and the role of crime analysis in policing associated with this field of study. My purpose is not to cover current general or specific crime analysis software products or technology. This is because the rate of change of software products and technology is high, even though the foundations and fundamentals of crime analysis practice have remained the same over time.

In this fourth edition, I have updated and added to the content, so the book reflects current crime analysis practice in the United States and internationally. New to this edition are perspectives from crime analysts from countries outside the United States, from North America, Europe, and South America. These international crime analysts provide insight into crime analysis practices as they are conducted across the world. This book will not serve all purposes for the growing field of undergraduate education in crime analysis, but it is necessary for classes in which an overview of the field and fundamental techniques are taught. The book's website [<http://www.sagepub.com/bobasantos4e>] provides students with a plethora of practical examples contributed by working crime analysts, as well as opportunities to conduct crime analyses themselves through a variety of exercises.

The book is divided into five parts. Part I covers the foundations of crime analysis, including key definitions, a description of the crime analysis profession and its future, theoretical foundations of crime analysis, and the role of crime analysis in evidence-based policing strategies. Part II addresses the data and processes used in crime analysis, geographic data and crime mapping techniques, and the purpose of crime analysis products. Part III covers the methods and techniques of tactical crime analysis. Part IV looks at the methods and techniques of strategic crime analysis. Part V includes a chapter on crime analysis for crime reduction accountability—an important topic within administrative crime analysis.

The chapters in Part I lay the foundation for the rest of the book. Chapter 1 presents definitions of crime analysis and discusses the history and future of crime analysis and crime mapping; it also includes information on crime analysis career opportunities. In 2014, the International Association of Crime Analysts (IACA) developed a standardized definition of crime analysis as well as its types, so those are new to this edition. Chapter 2 provides an overview of the criminological theories that help to guide the practice of crime analysis. The illustration in Chapter 3 of the policing context in which crime analysis is conducted and the discussion of the role of crime analysis in effective policing strategies has been updated with current research in this edition.

The four chapters that make up Part II are devoted to the topics of the data and processes used in crime analysis, geographic data and crime mapping techniques, and a typology for crime analysis results. Chapter 4 discusses the crime analysis process and the different types of crime analysis (which were standardized by IACA in 2014). Chapter 5 provides a review of key terms, a discussion of the kinds of data commonly used and databases commonly accessed in crime analysis (e.g., crime, arrests, calls for service, traffic crashes, and primary data), information on what analysts must consider when using different kinds of data for analysis, and a brief overview of some of the hardware and software commonly used in crime analysis. Chapter 6 covers, in more detail, geographic data, types of geographic features, geocoding, descriptive crime mapping methods, and density mapping. Chapter 7 outlines a typology that categorizes crime analysis results by type of problem examined, purpose of the analysis, and type of audience for which the analysis results are produced.

The chapters in Part III describe the data, methodologies, techniques, and products of tactical crime analysis. Chapter 8 contains details of data and analysis of repeat incidents as well as data collected specifically for tactical crime analysis and pattern identification. Chapter 9 covers the methodologies analysts employ in identifying and finalizing patterns. Chapter 10 discusses how police respond to patterns and provides current examples of commonly identified patterns of persons and property crime. Chapter 11 highlights specific analytic, temporal, and spatial techniques that analysts use to identify and understand crime patterns. The chapter closes with guidelines for creating pattern bulletins and a bulletin template example.

The chapters in Part IV concentrate on the techniques that analysts use in analyzing long-term crime and disorder problems and provide case examples of how the techniques have been used in practice. Chapter 12 is an overview of the problem-solving process and covers the key statistics used in strategic crime analysis. Chapters 13 and 14 illustrate the strategic analysis of problems by demonstrating various techniques that answer key analysis questions. Chapter 15 discusses the types of strategic crime

analysis products and provides guidelines for the substantive and formative development of such products.

Finally, Part V has been significantly changed in this edition. It contains one new chapter that covers one aspect of administrative crime analysis: crime analysis for crime reduction accountability. Chapter 16 focuses on the foundation of and products that support a police department's accountability structure, which ensures that crime reduction activities are taking place and are effective.

By no means does this book cover all facets of crime analysis; however, it does lay a solid foundation for students' understanding of the conceptual nature and practice of crime analysis that assists police in preventing and reducing crime and disorder. It provides an in-depth description of this emerging field and guidelines for the practice of crime analysis that are based on research, practice, and recent innovations, as well as previously available and new information. It also provides opportunities for students to explore possible future careers that support and enhance the effectiveness of modern policing.

## Student Study Site

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This free student study site provides additional support to students using *Crime Analysis With Crime Mapping, 4th Edition*. Practical crime analysis products, exercises, suggested web resources, and SAGE journal articles with discussion questions are included on this site to provide students with additional information and support and to get students into original research. Visit the study site at <http://www.sagepub.com/bobasantos4e>.

## Instructor Teaching Site

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This set of instructor's resources provides a number of helpful teaching aids for professors to use *Crime Analysis With Crime Mapping, 4th Edition*. Included on this site are PowerPoint slides, chapter outlines, test questions and answers, a sample syllabus, and suggested web resources for each part of the text.

## Acknowledgments

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# About the Author

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