Exploring Crime Analysis
Readings on Essential Skills
Second Edition

Edited by:
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IACA
Overland Park, KS
http://www.iaca.net
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About the Editors

Samantha L. Gwinn has served as a Crime Analyst in the Violent Criminal Apprehension Program (ViCAP) Unit of the Federal Bureau of Investigation since February 2006. She is also an online instructor for Tiffin University, teaching a graduate level course entitled Theories of Crime Analysis. Gwinn was a Crime Analyst for the San Diego Police Department between 2002 and 2005, and a Crime Analysis Intern at that department from 1998 to 1999. She also worked as a Crime Analyst for the San Diego Unified School District Police Department from 1999 to 2001, which was one of the only crime analysis positions in the country exclusively dedicated to a school district. She got her start in the field of crime analysis with a summer internship at the Las Vegas Metropolitan Police Department in 1997. Gwinn was the Treasurer for the International Association of Crime Analysts from 2003 to 2006, and she continues to serve on the IACA Certification Commission. She held two different Board positions in the San Diego Crime and Intelligence Analysis Association in 2001 and 2002. Gwinn earned a BA in Psychology from the University of Nevada Las Vegas in 1997, and an MS in Criminology and Criminal Justice from San Diego State University in 2004.

Christopher W. Bruce has been a crime analyst since 1994, first at the Cambridge (MA) Police Department, and now at the Danvers (MA) Police Department. He became President of the International Association of Crime Analysts in 2007 after serving as Vice President for six years. He also served as President of the Massachusetts Association of Crime Analysts from 2000-2004. Chris earned his B.S. in Criminal Justice from Northeastern University in 1996 and his M.S. in Criminal Justice from Tiffin University in 2006. He has served as a Lecturer at Suffolk University's Graduate Program in Criminal Justice since 2001, and at Tiffin University since 2006. He has presented on crime analysis and mapping at numerous conferences, conventions, and academies. He became an IACA Certified Law Enforcement Analyst (CLEA) in 2006.

Julie P. Cooper is currently the Supervising Crime Analyst for the Irvine Police Department in Irvine, California. She was a Crime Analyst and Operations Administrator for the Los Angeles County Sheriff Department between 1996 and 1999. She has been active in crime analysis for the past 10 years and has served as the Secretary for the Southern California Crime and Intelligence Analysts Association as well as numerous committees for the International Association of Crime Analysts. She has been a past presenter at various crime analysis and policing conferences. She teaches Crime Mapping and Analysis for the National Law Enforcement & Corrections Technology Center's Crime Mapping and Analysis Program in Denver, Colorado. Ms. Cooper has her B.S. in Criminal Justice and her Master's in Public Policy and Administration from California State University, Long Beach.

Steven Hick is the GIS Director and faculty member in the Department of Geography at the University of Denver. For the past thirteen years Steven has been directing the Geographic Information System (GIS) education and research activities in the Department. Steven is currently the Director of the GIS Certificate Program and was instrumental in the creation of one of the nation's first MS degrees in Geographic Information Science. He also provides crime mapping and analysis technical assistance to law enforcement agencies across the country and volunteers with the
Denver Police Department’s Crime Analysis Unit. Prior to joining the University of Denver, Steven was a Technical Consultant at UGC Consulting from 1989 until 1994. Prior to moving to Denver, Steven was a Cartographer with the Defense Mapping Agency, based at Fort Sam Houston, Texas, between 1985 and 1988. While living in Texas, Steven taught in the University of Texas system on the San Antonio and Austin campuses.

**About the Contributors**

**Jonathan Alston** received a BSc in Sociology with an emphasis in Deviance from Brigham Young University. He earned an MA in Criminology from Simon Fraser University after studying the selection patterns of serial rapists. He has been involved in a number of research projects that have included academic research as well as projects with the Royal Canadian Mounted Police, Ministry of Attorney General (BC), Legal Services Society (BC), and the Canadian government. He went to the University of Alberta and began working on his PhD in Criminology but has since become employed with the Edmonton Police Service as a crime analyst in its Intelligence Analysis Unit. He has been employed with the EPS since early 2000. Since joining the EPS, Mr. Alston has worked as a spatial crime analyst, as a crime analyst on several major case files, and as a research analyst for a service-wide strategic analysis project, and is currently assigned to the Sexual Assault Section.

**Sean Bair** is the President of Bair Software Research & Consulting; a Colorado based software company dedicated to providing consulting, training and cutting-edge solutions to the law enforcement, intelligence, and defense communities. He is the former Assistant Director at the National Law Enforcement and Corrections Technology Center, as well as a former Crime Analyst and Police Officer for the Tempe, AZ, Police Department. He holds an MBA degree from the University of Denver. Mr. Bair has made numerous appearances on television and radio, providing commentary or instruction on the analysis of crime, and on other law enforcement related matters. He has trained thousands of analysts, officers and investigators around the world in the analysis of crime.

**Rachel Boba** is an assistant professor at Florida Atlantic University in the Criminology and Criminal Justice program. She teaches methods of research, criminal justice systems, crime prevention, problem solving, and analysis in policing, and she also conducts research in the areas of problem-oriented policing, accountability, problem analysis, and crime analysis. From 2000 to 2003, Dr. Boba was Director of the Police Foundation’s Crime Mapping Laboratory. Prior to that, she worked as a crime analyst at the Tempe, Arizona, Police Department for five years. She holds a PhD and an MA in sociology from Arizona State University. Most recently, Dr. Boba published the book *Crime Analysis and Crime Mapping* with Sage Publications, Inc. As one of the first crime analysis textbooks for undergraduate and graduate students, it provides a comprehensive introduction for current and future practitioners.

**Barbara Brookover** has worked with the Chula Vista Police Department in California for over 15 years. Before her recent transfer to the position of Police Support Services Manager, Ms. Brookover held positions as a crime analyst, senior crime analyst and crime analysis manager. Ms. Brookover worked as a crime analyst for the Oceanside, California Police Department for two and a half years before beginning her career in Chula Vista. While managing tactical, strategic, and administrative crime analysis functions in Chula Vista, Ms. Brookover has managed the Crime Prevention Unit, Senior Volunteer Patrol, Data Entry Section and False Alarm Program. After coordinating the development of effective crime analysis
units in both Oceanside and Chula Vista, Ms. Brookover was invited to serve on the State of California Career Criminal Apprehension Program Advisory Committee. She also assisted with development of the Expanded Applications-Crime Analysis training course sponsored by the California Department of Justice Advanced Training Center. Ms. Brookover holds a Bachelor of Arts Degree in Geography from the University of New Mexico and a Master of Science Degree in Human Resources Management from Chapman University. She has extensive professional writing experience and tutors high school students enrolled in Advanced Placement courses, assisting with writing assignments and competitive essays.

Donald W. Chamberlayne was a crime analyst with the Worcester Police Department from 1995 to 2008. He served as Vice President of Administration for the Massachusetts Association of Crime Analysts from 2003-2006, having previously served as the editor of the Crime Analyst's Round Table. He is a member of the International Association of Crime Analysts and in 2001 was the recipient of its 2007 "Innovations in Crime Analysis" award. His educational background includes degrees from the University of Virginia and the University of Massachusetts. Before coming to the field of crime analysis, he taught in the areas of urban planning and social science, and later served in research and analysis positions pertaining to demographics, housing markets, and labor markets, as well as database systems design and development.

Mary Velasco Clark was previously employed as a Research Associate in the Police Foundation's Crime Mapping Laboratory. Much of the Crime Mapping Laboratory's work is focused on encouraging analysts to conduct in-depth examinations of crime and disorder problems that are both informed by, and contribute to, the growing body of crime analysis and policing literature. This work required Ms. Clark to be aware of which publications are most relevant for crime analysis professionals as well as how to access and interpret the information within these resources. Through training and technical assistance contacts, Ms. Clark sought to acquaint practitioners with practical resources, including government reports, academic publications, and professional books and periodicals. Ms. Clark has also worked as a Crime Analyst for the Tempe, AZ, Police Department, where she conducted a comprehensive study of Tempe's auto theft problem, co-authored protocols on tactical crime analysis, and administered a citizen survey. Ms. Clark received her BS in Justice Studies at Arizona State University and her MS in Justice, Law, and Society at The American University.

Noah Fritz is an Assistant Professor in the Criminal Justice & Criminology Department at Metropolitan State College of Denver and a Senior Research Analyst for the National Law Enforcement & Corrections Technology Center. His primary area of research is Crime Mapping, Crime Analysis and Geographic Information Systems. He was previously the founder and Director of the U.S. Department of Justice-sponsored Crime Mapping and Analysis Program (CMAP); the Deputy Director of the National Law Enforcement and Corrections Technology Center (NLECTC), Rocky Mountain Region; the first Criminal Justice Strategic Planner from Jefferson County, Colorado; the first crime analyst and then the commander of the Information Management Bureau for the Tempe (AZ) Police Department. Dr. Fritz holds a Doctorate in Justice and Social Inquiry from Arizona State University, a master's degree from the same, and undergraduate degrees in Sociology and Criminal Justice from Illinois State University. He served as the President of the International Association of Crime Analysts from 2000-2006 and currently serves as the Past President. He has authored articles in Sociological Quarterly, The Encyclopedia of Criminology and Deviant Behavior, and has appeared nationally on ABC's Weekend News Edition featuring crime mapping. Noah enjoys camping, hiking and golf; and spending time outdoors with his family and friends.
Dan Helms is the Chief Technology Officer for Bair Software, Research & Consulting (BSRC), and a consultant to the U.S. Department of Defense, U.S. Department of Justice, and numerous law enforcement agencies. He is the former Program Manager of the Crime Mapping & Analysis Program (CMAP), and a former crime analyst with the Las Vegas Metropolitan Police Department. As primary instructor for CMAP, Mr. Helms trained hundreds of police investigators, analysts, and agents in crime analysis and mapping methods. Mr. Helms is a former intelligence specialist with the U.S. Air Force, is fluent in the Arabic language, and has worked closely with the national intelligence community since 1987.

Dennis Kessinger served for twenty-one years in full-time public safety positions, including eight years as a firefighter for the Long Beach (CA) Fire Department, four years as an analyst for the University of California at San Diego, and nine years as an analyst for the Redding (CA) Police Department. At the Redding Police Department, Mr. Kessinger designed and built the crime analysis unit from concept to statewide model. He has written and administered more than $3 million in successful grants for public safety agencies, and he continues to consult and speak on both grant administration and presentation techniques. He created a popular “Life After Law Enforcement” seminar to show how public safety skills can be transferred to a post-law enforcement life. Mr. Kessinger is an adjunct faculty member at National University in the Criminal Justice and Masters in Public Administration Program. He has written more than twenty-three articles in national and international publications. He is the author of *Lawyeride: a Crime Analysis Novel*, published through Crimson Druid Publishing, which Mr. Kessinger founded. Mr. Kessinger assists at a shelter for domestic violence and sexual assault victims, providing counseling and legal assistance. When not traveling, teaching, speaking, or writing, he lives with his wife and son in Redding, California.

Deborah Osborne was a crime analyst for the Buffalo Police Department from 1997-2007, and now teaches online courses in crime and intelligence analysis for the American Military University and Empire State College, State University of New York. Her research fellow work is summarized in the book *Out of Bounds: Innovation and Change for Law Enforcement Intelligence Analysis*, which is available online for free at the National Defense Intelligence College's website, www.ndic.edu/press/press.htm. She co-authored the book *Introduction to Crime Analysis: Basic Resources for Criminal Justice Practice*. Debbie takes an active role in the development of crime and intelligence analysis in policing. Her blog, Analysts' Corner, at www.analystscorner.blogspot.com, is devoted to this subject. By engaging in liaison between levels of analysis in policing, military, and national security, both nationally and internationally, her goal is to broaden the understanding of the value of analysis in all aspects of public safety.

Christopher G. Mowbray is a Criminal Intelligence Analyst with the Royal Canadian Mounted Police (RCMP). He is a member of the Integrated Response to Organized Crime Team, a provincial initiative to investigate and disrupt all forms of organized crime groups. Before joining the RCMP in early 2004, Mr. Mowbray was employed as an Intelligence Analyst with the Edmonton Police Service where his duties involved criminal analysis on a joint forces operation dealing with high risk missing persons and unsolved homicides in Alberta Canada. He is particularly experienced in spatial analysis of sexual assaults and gang activity and homicides in the city of Edmonton. Mr. Mowbray has a Masters degree in Criminal Justice Studies from the University of Leicester in the United Kingdom where his area of study was spatial pattern analysis and target selection of serial sexual offenders in Edmonton Canada. Mr. Mowbray earned a Bachelor of Science with a major in Biological Sciences from the University of Alberta and earned a second Bachelors degree from the University of Alberta (Bachelor of Arts) in Anthropology and Sociology.
Jamie Price is an assistant professor in the department of behavioral sciences at Kentucky Wesleyan College. Mr. Price is a certified instructor of the National Law Enforcement and Corrections Technology Center's Crime Mapping and Analysis Program (CMAP). His teaching interests include criminology, research methodologies, statistics, policing, and criminal courts. His research interests include the spatial-temporal analysis of crime, hot spot methodologies, police effectiveness, and evaluation research. Before joining Kentucky Wesleyan College, Mr. Price was an assistant professor in the department of criminology and criminal justice at Florida Atlantic University. He has received a B.A. in criminal justice from Kentucky Wesleyan College, a M.S. in criminal justice from the University of South Carolina, and is completing his PhD in criminal justice at the University of Cincinnati.

Karin Schmerler is a senior public safety analyst with the Chula Vista (CA) Police Department. Since joining the department in 2000, she has researched a variety of citywide and neighborhood-level crime and disorder problems. Prior to working for the Chula Vista Police Department, she spent five years as a social science analyst at the Office of Community Oriented Policing Services, U.S. Department of Justice, and seven years as a researcher at the Police Executive Research Forum. Schmerler is an author of Problem-Solving Tips: A Guide to Reducing Crime and Disorder through Problem-Solving Partnerships and Disorder at Budget Motels. She holds a bachelor's degree in public policy studies from Duke University.

Paul E. Tracy is Professor of Criminology and Political Economy in the School of Social Sciences at the University of Texas at Dallas. His research interests focus on the measurement and analysis of juvenile delinquency careers, legal and policy issues in juvenile justice, prediction models of criminal careers, and drug prohibition policy. He is a recognized expert in the application of longitudinal research designs to the study of delinquent and criminal careers. His study of a large Philadelphia birth cohort of 27,160 people is the largest study of delinquency and crime ever conducted and is now in its twenty-fifth year. Dr. Tracy has published six books and numerous articles in criminology journals. Through his appointments to crime and justice commissions by Governor Rick Perry and former Governor George Bush, he is extensively involved in working to improve the criminal justice system by applying his research and policy interests to "real life" applications. Dr. Tracy holds a PhD in sociology from the University of Pennsylvania.

Julie Wartell is the Crime Analyst Coordinator for the San Diego District Attorney’s Office. Prior to this position, Julie was the Project Director of the East Valley COMPASS Initiative, a regional analysis effort. She also worked as a crime analyst for the San Diego Police Department, a researcher for the Institute for Law and Justice and the Police Executive Research Forum, and completed a Fellowship at the National Institute of Justice Crime Mapping Research Center. Ms. Wartell has performed a wide range of research on and analysis of various crime problems and police-related issues, worked on the San Diego Police Department’s strategic planning effort, and coordinated the development of a series of crime mapping training modules. Julie has done extensive training and presentations to officers and analysts throughout the country on topics relating to crime analysis and problem oriented policing, has edited or authored numerous publications, and currently teaches GIS in Urban Studies at University of California – San Diego. Julie has a Masters in Public Administration with an emphasis in Criminal Justice Administration.

Deborah Lamm Weisel is an assistant research professor at North Carolina State University. She teaches graduate and undergraduate classes in Applied Research Methods in Criminal Justice and Crime
Analysis. Weisel has conducted numerous studies on effectiveness of policing, including studies on drug enforcement tactics, safety and security in public housing, police responses to gangs, motor vehicle theft, burglary, street prostitution, and speeding. Dr. Weisel’s publications focus on providing policy-relevant guidance to police practitioners and include “Form and Sequence of Analysis in Police Problem-Solving” in *Crime Prevention Studies* (2003), “Assessing the Impact of Specialized Gang Units” in *Policing and Program Evaluation* (2004), and monographs on burglary and graffiti in the “Problem-Oriented Guides for Police” series published by the Office of Community Oriented Policing Services. Dr. Weisel holds a doctorate in Political Science and Public Policy Analysis from the University of Illinois at Chicago.
About the IACA

The International Association of Crime Analysts is a non-profit professional association, established in 1990, dedicated to advancing the effective use of crime analysis by law enforcement agencies. Its activities and goals include:

- Providing training and networking opportunities at annual conferences
- Collaborating with other associations to offer analytical training
- Providing technical support to agencies developing crime analysis programs
- Researching, analyzing, and publishing information relevant to crime analysts
- Fostering multi-agency collaboration and information sharing
- Certifying analysts through its Certified Law Enforcement Analyst program

Membership is open to analysts, police officers, educators, students, and anyone interested in the field of crime analysis. See http://www.iaca.net for more information, or contact us at 9218 Metcalf Avenue #364, Overland Park, KS 66212, (800) 609-3419.

Acknowledgements

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## List of Common Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AFIS</td>
<td>Automated Fingerprint Identification System</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer-Aided Dispatch</td>
</tr>
<tr>
<td>CFS</td>
<td>Call(s) for Service</td>
</tr>
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| CMAP         | Crime Mapping and Analysis Program  
               (NIJ/NLECTC Program) |
| CPTED        | Crime Prevention Through Environmental Design |
| DEA          | Drug Enforcement Administration (U.S.) |
| FBI          | Federal Bureau of Investigation (U.S.) |
| FI           | Field Interview |
| GIS          | Geographic Information Systems |
| GPS          | Global Positioning System |
| IACA         | International Association of Crime Analysts |
| IACP         | International Association of Chiefs of Police |
| IALEIA       | International Association of Law Enforcement Intelligence Analysts |
| IT           | Information Technology |
| MAPS         | Mapping and Analysis for Public Safety (NIJ Program) |
| M.O.         | Modus Operandi |
| NIBRS        | National Incident-Based Reporting System |
| NIJ          | National Institute of Justice (U.S.) |
| NLECTC       | National Law Enforcement and Corrections Technology Center (U.S.) |
| ODBC         | Open Database Connectivity |
| POP          | Problem-Oriented Policing |
| RMS          | Records Management System |
| UCR          | Uniform Crime Reporting |
| USDOJ        | United States Department of Justice |
| VBA          | Visual Basic for Applications |
Exploring Crime Analysis
Foreword

Thomas K. Casady

Everyone, it seems, has his or her own definition of crime analysis. Some commentators and experts can spend several pages dissecting the subtle differences between crime analysis, problem analysis, intelligence analysis, management analysis, and investigative analysis. My own definition is basic:

*Crime analysis is the process of finding information that would otherwise be lost in the volume of work being done by police agencies.*

This information might be as simple as figuring out that the connection of two robbery cases to a common suspect based on the words he spoke, or as complex as multivariate analysis of thousands of motor vehicle collision reports uncovering a correlation between right-turn-on-red and increasing car-bicycle accidents. The plain fact is that police agencies are often so busy doing what they do that these findings elude them and an opportunity for intervention passes unexploited.

Crime analysis is about increasing these discoveries. It is not new, but the systematic analysis of data and information is increasingly being valued by police agencies seeking to improve their effectiveness. The crime analysis function is integral to good policing and the efficient use of limited resources.

Today more than any time in the history of policing, we have access to incredible analytical tools and data sets. Geographic information systems, relational databases, investigative analysis software, access to huge amounts of information on the Internet, and a variety of other technological developments have opened new and amazing opportunities. Training, certification, publications, and professional associations have blossomed in the field. In some respects, though, we have made crime analysis seem more esoteric than it really is. Some of the most effective approaches to finding stuff are deceptively simple: reading police reports, sorting columns of data, searching for text strings in lengthy narrative case files, or looking at cell phone records. We should never let crime analysis become more about the technology than the utility of the information uncovered.

The quality of analysis should always be measured by the extent to which it leads to action. Give a graveyard shift Sergeant a handwritten note on the back of an envelope notifying that there have been a handful of robberies this week in the downtown area near automated teller machines at bar closing time, and you have accomplished something that can be acted upon tonight. A detailed analytical bulletin replete with full color bar charts, incident maps, and erudite narrative observations about this trend is a useless waste of paper if it does not find its way into the hands of those who are in a position to act, or if the trend has changed, stopped, or moved by the time they have received the information.
How we use the information uncovered by our exploration is critical. If crime analysts have one collective shortcoming, it is that they do not participate sufficiently in turning their analyses into action. It is not enough to deliver the report. Crime analysts should be expert consultants not only on what, but also on what to do about it. As the field evolves, crime analysts will need to hone these skills.

Far too many crime analysts are frustrated by their role as technical support for the PowerPoint-challenged, and producer of the monthly statistical report that nobody really wants, needs or uses. At a crossroads in the development of our field, it is time for crime analysts to step forward in policing and become like risk managers in the insurance industry, financial analysts in business, and policy analysts in government: experts not only in finding information, but in applying this new knowledge in order to reduce risk, increase gains, and empower effective public policy. Exploring Crime Analysis provides the fundamentals that will help new and experienced analysts strive toward these goals.

Thomas K. Casady

Chief of Police
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