Introduction to Crime Analysis, Problem-Solving, and Problem Analysis

- **Crime Analysis**
  - Definitions
  - Crime Analysis Model

- **Problem-Solving**
  - Definitions
  - SARA Approach
  - Examples

- **Problem Analysis**
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Definition of Crime Analysis

Crime Analysis is *the qualitative and quantitative study of crime and police related information in combination with socio-demographic and spatial factors to apprehend criminals, prevent crime, reduce disorder, and evaluate organizational procedures.*

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Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Definition of Intelligence Analysis

Intelligence analysis is *the study of "organized" criminal activity, whether or not it is reported to police, to assist investigative personnel in linking together people, events, and property.*

Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

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Definition of Criminal Investigative Analysis

Criminal investigative analysis is *the study of serial criminals, victims and/or crime scenes and physical, sociodemographic, psychological, and geographic characteristics to develop patterns that will assist in linking together and solving current serial criminal activity.*

Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Definition of Tactical Crime Analysis

Tactical crime analysis is *the study of recent criminal incidents and potential and possible criminal activity by examining characteristics such as how, when, and where the activity has occurred to assist in problem solving by developing patterns and trends, identifying investigative leads/suspects, and clearing cases.*

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Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.
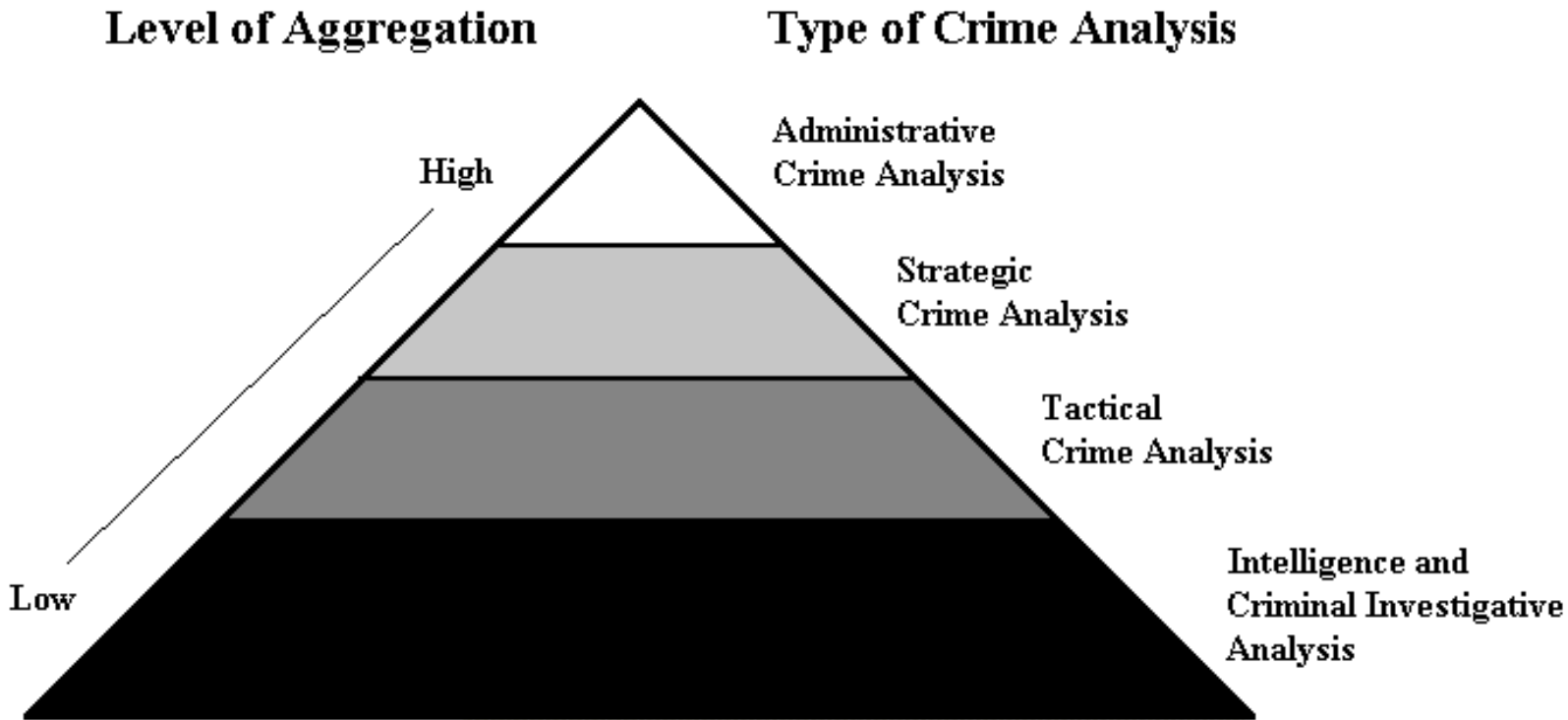
Definition of Strategic Crime Analysis

Strategic crime analysis is *the study of crime and police information integrated with socio-demographic and spatial factors to determine long term "patterns" of activity, to assist in problem solving, as well as to research and evaluate responses and procedures.*

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Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Definition of Administrative Crime Analysis

Administrative crime analysis is *the presentation of interesting findings of crime research and analysis based on legal, political, and practical concerns to inform audiences within police administration, city government/council, and citizens.*

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Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Crime Analysis Model

Level of Aggregation

Type of Crime Analysis

High

Low

Administrative Crime Analysis

Strategic Crime Analysis

Tactical Crime Analysis

Intelligence and Criminal Investigative Analysis

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Source: Boba, R. (2001). *Introductory guide to crime analysis and mapping.* Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Definition of Problem-Solving

Problem solving is *a methodical process for reducing the impact of crime and disorder problems in a community. The problem-solving approach is an integral component of the philosophy of community policing.*

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SARA Approach to Problem-Solving

Scanning

- The identification of a cluster of similar, related, or recurring incidents through a preliminary review of information, and the selection of this crime/disorder problem, among competing priorities, for future examination.

Analysis

- The use of several sources of information to determine why a problem is occurring, who is responsible, who is affected, where the problem is located, when it occurs, and what form the problem takes.

Response

- The execution of a tailored set of actions that address the most important findings of the analysis phase. Responses typically focus on at least two of the following: (1) preventing future occurrences by deflecting offenders; (2) protecting likely victims; or (3) making crime locations less conducive to problem behaviors.

Assessment

- The measurement of the impact(s) of the responses on the targeted crime/disorder problem using information collected from multiple sources, both before and after the responses have been implemented.

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Source: Office of Community Oriented Policing Services (COPS).

Problem-Solving Examples

Disorderly Youth in New York City

Scanning

- Revealed a high number of neighborhood disruptions and fights because students were being dismissed from two high schools at the same time.

Analysis

- Schools' dismissal procedures contributed to the problem.
- Students were dismissed at almost exactly the same time to the same block. Students were full of energy, and petty rivalries soon turned into confrontations.

Response

- Spoke with administrators at both schools and persuaded them to stagger dismissal times by 25 minutes and direct departing students in opposite directions.

Assessment

- Revealed a 70% reduction in after-school disorder problem.

Source: Scott, M.S. (2001). *Disorderly youth in public places* (Problem-Oriented Guides for Police Series No. 6). Washington, DC: Office of Community Oriented Policing Services.

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Apartment Complex Crime in Santa Barbara

Scanning

- Police received high numbers of disturbance, littering, and vehicle crime complaints from an apartment complex. Owner resisted efforts to improve the property.

Analysis

- Owner had 34 other properties in the city, many in disrepair and requiring a disproportionate amount of police services.

- Apartments were dirty, illegally subdivided, in violation of fire and building codes. For the prior year, 758 arrestees had listed these apartments as their residence.

Response

- Toured a well-maintained property with owner; asked residents to maintain logs; photographed poor living conditions; prosecuted slumlord.

Assessment

- Ongoing. As a condition of probation, owner must appear in court monthly to document progress.

Source: Sampson, R. & Scott, M. (2000). *Tackling crime and other public safety problems: Case studies in problem-solving.* Washington DC: US Department of Justice, Office of Community Oriented Policing Services.

Group Homes in Fresno

Scanning

- Fresno had 40 group homes that served many functions, from placement of juvenile offenders to juveniles removed from dysfunctional homes.

Analysis

- Group homes generated over 1,000 calls for problems ranging from assaults to runaways (30 minutes per call). Officers becoming "supplemental staff" at the homes; they were sometimes called just to scare the children.

- Five of the 40 homes accounted for 50% of calls; eight for 75%.

Response

- Convened individuals responsible for regulating group homes (e.g., probation, social services). Arranged regular meetings so that those who ran homes without problems could assist others with problem-solving.

Assessment

- Calls in the first year dropped by 300. Two officers estimated it took less than 40 hours to study the problem, implement response, and assess the impact.

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Source: Sampson, R. & Scott, M. (2000). *Tackling crime and other public safety problems: Case studies in problem-solving*. Washington DC: US Department of Justice, Office of Community Oriented Policing Services.

Disorder Reduction in Green Bay, Wisconsin

Scanning

- Broadway Street was a high-crime area marked by litter, broken alcohol bottles, and homeless people who were often drunk and disorderly. Sixteen taverns operated in a three-block area.

Analysis

- Interviews conducted with residents and business owners.

- Analysis of offense reports revealed that approximately 20 people were responsible for most of the complaints. Problem taverns produced shootings, stabbings, and prostitution.

- Analysis of building designs highlighted many deficiencies (e.g., dark alleys).

Response

- Enforcement of public ordinances on open intoxicants, trespassing, and lewd behavior.

- Gain cooperation from liquor store and tavern owners in denying alcohol to habitually intoxicated people.

- Improved maintenance, lighting, and access control.

Assessment

- The area experienced a 65% reduction in police calls and a 91% reduction in demand for rescue services to handle injuries stemming from assaults. Five problematic taverns were closed through joint efforts by community policing officers and citizens.

Traffic Accidents in Arlington, Virginia

Scanning

- During 1999, 4,082 accidents were reported to police. Due to underreporting, the actual number of accidents was estimated to be three times higher.

Analysis

- GIS was used to identify accident hotspots. Using a threshold of at least ten accidents in the preceding twelve months, 49 hotspots were identified.

- Accident reports were analyzed to determine most prevalent times, prevailing road conditions, and likely causes. Officers observed hotspots at various times of day.

- Interviews were conducted with individuals involved in accidents.

Response

- Problem-solving training for traffic officers, installation of turn-lane arrows, reconfiguration of light cycles. Ongoing at time of publication.

Assessment

- Regular meetings are held to determine progress. Officers are evaluated not only on their effectiveness in reducing accidents, but on their ability to incorporate problem-solving principles.

Source: Brito, C., & Gratto, E. (Eds.). (2000). *Problem oriented policing: Crime-specific problems, critical issues, and making POP work, vol. 3*. Washington, DC: Police Executive Research Forum.

State of Analysis
in Problem-Solving

Beat-Level Problem Solving

- At the beat level, officers typically work to identify and resolve small-scale problems.

- The use of analysis is fairly limited; officers may use some crime counts or simple analysis of data but rarely need to conduct an in-depth examination of a problem or formally evaluate the response.

Crime Analysis

- Currently, the most common type of activity police agencies conduct is short-term pattern and trend identification, or tactical crime analysis.

- Departments are not focusing their crime analysis efforts on the problem-solving process or on action research, but have chosen to focus on analysis that supports traditional policing practices.

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Source: Boba, R. (2003). *Problem analysis in policing.* Washington, DC: Police Foundation.

Problem Analysis Forum 2002

Two-day meeting held by the Police Foundation and the COPS Office in February 2002. Brought together academics, managers, practitioners, and government personnel to discuss problem analysis:

- Herman Goldstein, University of Wisconsin, Madison
- Ron Clarke, Rutgers University
- John Eck, University of Cincinnati
- Gloria Laycock, The Jill Dando Institute, London, UK
- Ed Flynn, Arlington County, VA
- Bob Heimberger, St. Louis, MO Police Department
- Pat Drummy, San Diego, CA Police Department

- Ron Glensor, Reno, NV Police Department
- Karin Schmerler, Chula Vista, CA Police Department
- Rachel Boba, Police Foundation
- Mike Scott, Police Foundation Consultant
- Matthew Scheider, COPS Office
- Veh Bezdikian, COPS Office
- Nancy Leach, COPS Office
- Debra Stoe, National Institute of Justice

Problem Analysis Forum 2002

- What is problem analysis?

- What are the skills needed to conduct problem analysis?

- What is the knowledge needed to conduct problem analysis (education and training)?
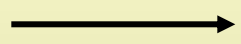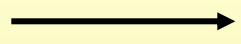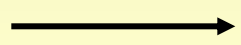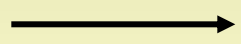
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Problem Analysis Definition

Problem analysis is *an approach/method/process conducted within the police agency in which formal criminal justice theory, research methods, and comprehensive data collection and analysis procedures are used in a systematic way to conduct in-depth examination of, develop informed responses to, and evaluate crime and disorder problems.*

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Problem Analysis…

Is not…

- "blobs on maps" or the where, when, and who $\longrightarrow$ Why
- Identifying short term trends and patterns $\longrightarrow$ Examining the underlying causes of complex problem
- Finding support for current assumptions $\longrightarrow$ Being critical, curious, innovative
- Apprehension focused $\longrightarrow$ Prevention focused
- Anecdotal or exploratory $\longrightarrow$ Systematic and hypothesis driven

Is…

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Knowledge

- Criminological theory
- Research methods and statistics
- State and dynamics of Policing
- Current research, both academic and practical
- Crime mapping

Skills

- Communication
- Data and technology
- Critical thinking
- Research skills
- Project management

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Advancing Problem Analysis

What can be done to assist policing agencies in implementing and subsequently institutionalizing problem analysis into their organizations?

- The role of the policing community
- The role of academia
- The role of the Federal government
- The role of other organizations
- The role of current analysts

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Policing Community

- Value and adopt problem solving.

- Be supportive of problem analysis (e.g., respect, data, time, access, and resources).

- Give it time to be successful.

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Academia

- Expand the knowledge of academics.
- Training and classes (for both traditional and professional students).
- Encourage this as a career opportunity.
- Conduct quality evaluations.
- Provide advice and guidance.
- Fellowships and internships.
- Articles and journals.

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Source: Boba, R. (2003). *Problem analysis in policing.* Washington, DC: Police Foundation.

Federal Government

- Challenge organizations.
- Include problem analysis in programs.
- Provide funding.
- Synthesize and summarize current literature and practice.
- Provide training and guidance.
- Provide a forum for publication.
- Conduct nationwide evaluation.
- Provide a place for problem analysis.

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Other Organizations

Non-profits and member organizations

- Encourage and promote problem analysis (e.g., conferences, presentations, information).

- Assist the Federal government.

- "Raise the bar" (i.e., expect more).

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Other Organizations

Local Government

- Take a holistic approach to solving public safety problems.

- Encourage analysis and accountability.

- Share information and data.

Community

- Educate itself about crime problems.

- Pressure police departments and local government to analyze and assess, not just respond.

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Practitioners

At the end of the pilot eight day training, we sat down with the participants and discussed the role current analysts can have in advancing problem analysis. They came up with the following recommendations:

1. Provide quality work products to the department and community.
2. Share work with other analysts.
3. Educate/promote problem analysis.
4. Publish practical work in publications.
5. Continue education.
6. Work with academics to bridge the gap.
7. Take the initiative.

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Source: Boba, R. (2003). *Crime Mapping News. Volume 5, Issue 4.*

What Next?

Generally:

Build a critical mass. That is, start with problem analysis in a few departments that support problem solving and advertise success.

Specifically:

- Problem Analysis Forum publications

- Problem analysis training curriculum

- Institutionalization of problem analysis

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Source: Boba, R. (2003). *Problem analysis in policing*. Washington, DC: Police Foundation.

Problem Analysis Project Discussion

Suggested Readings: Problem-Solving

- Office of Community Oriented Policing Services. (2001). *Problem-oriented guides for police series.* Washington, DC: Author.*

- Office of Community Oriented Policing Services. (1997). *Problem-solving tips: A guide to reducing crime and disorder through problem-solving partnerships.* Washington, DC: Author.*

- Police Executive Research Forum. *Excellence in problem-oriented policing: The Herman Goldstein award winners.* Washington, DC: Author.*

- Read, T. & Tilley, N. (2000). *Not rocket science? Problem-solving and crime reduction* (Crime Reduction Research Series Paper 6). London: Home Office Policing and Reducing Crime Unit.*

- Sampson, R. & Scott, M. (2000). *Tackling crime and other public-safety problems: Case studies in problem-solving.* Washington, DC: Office of Community Oriented Policing Services.*

* Available free of charge.

Suggested Readings: Problem Analysis

- Boba, R. (2003). *Problem analysis in policing.* Washington DC: Police Foundation.*

- Boba, R. (2003). "Problem analysis in policing: An executive summary." *Crime Mapping News Special Issue.* Volume 5, Issue 1.*

- Bynum, T. (2001). *Using analysis for problem-solving: A guidebook for law enforcement.* Washington DC: Office of Community Oriented Policing Services.*

- *Crime Mapping News.* (2002, Spring).Volume 4, Issue 2.*

- Eck, J.E. (2001). *Assessing responses to problems: An introductory guide for police problem solvers.* Washington, DC: Office of Community Oriented Policing Services.*

- Scott, M. & Sampson, R. (2001). *Problem-oriented guides for police series.* Washington DC: US Department of Justice, Office of Community Oriented Policing Services.*

- Scott, M. (2000). *Problem-oriented policing: Reflections on the first 20 years.* Washington DC: Office of Community Oriented Policing Services.*

* Available free of charge.   **33**