

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 7, July 2017

A Study on: Crime Analysis and its Types

R.Vanitha¹, Prof B.Murali²

M.Phil Research Scholar, Department of Computer science, PSG college of Arts and Science, Coimbatore,
Tamilnadu, India¹

Associate Professor, Department of Computer science, PSG college of Arts and Science, Coimbatore.,
Tamilnadu, India²

ABSTRACT: Advances in technology, which allow analyses of large quantities of data, are the foundation for the relatively new field known as crime analysis. Criminal analysis is an emerging field in law enforcement without standard definitions. Criminal analysis is the act of analyzing crime. More specifically, crime analysis is the breaking up of acts committed in violation of the law into their parts to find out their nature and reporting statements of these findings. This paper provides an overview of the key definition and concepts in the field of crime analysis.

I. INTRODUCTION

Crime analysis is defined as a set of systematic, analytical processes directed at providing timely and pertinent information relative to crime patterns and trend correlations to assist operational and administrative personnel in planning the deployment of resources for the prevention and suppression of criminal activities, aiding the investigative process, and increasing apprehensions and the clearance of cases. Within this context, crime analysis supports a number of department functions including patrol deployment, special operations and tactical units, investigations, planning and research, crime prevention, and administrative services (budgeting and program planning).

Crime analysis includes all types of analysis performed within a police agency, with the exception of evidence (including DNA) analysis and some administrative analysis related to budgeting, personnel (e.g., overtime, sick and vacation leave, salary), and equipment. In particular, and despite some historical precedent, the IACA recognizes no distinction between crime analysis and crime intelligence analysis as performed within a police organization. Certain analysts may specialize in certain functions, of course (as per the types of crime analysis below), but otherwise, within a police agency, we see crime intelligence analysis as a set of techniques performed by crime analysts.

II. OBJECTIVES OF CRIME ANALYSIS

The objective of the most crime analysis is to find meaningful information in vast amounts of data and disseminate this information to officers and investigators in the field to assist in their efforts to apprehend criminals and suppress criminal activity. Assessing crime through analysis also helps in crime prevention efforts. Preventing crime costs less than trying to apprehend criminals after crimes occur.

III. NEED AND IMPORTANCE OF THE CRIME ANALYSIS

To help justify the existence as a crime analyst in the law enforcement agency to those who do not have an understanding of what the crime analyst does or what crime analysis can provide, it is important to be able to articulate some reason to analyze.

The reason are:

- Analyze crime to take advantage of the abundance of information existing in law enforcement agencies, the criminal justice system, and the public domain.
- Analyze crime to maximize the use of limited law enforcement resources

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 7, July 2017

- Analyze crime to inform law enforcers about general and specific crime trends, patters, and series in an ongoing, timely manner.
- Analyze crime to have an objective means to access crime problems locally, regionally, statewide, and globally within and between law enforcement agencies.
- Analyze crime to be proactive in detecting and preventing crime.
- Analyze crime to meet the law enforcement needs of a changing society.

Type of Criminal Analysis

The types of crime analysis are organized around several factors, including the nature and source of the data, the techniques applied the results of the analysis, the regularity and frequency of the analysis, and the intended audience and purpose. No typology will ever result in a set of definitions that are completely exclusive or exhaustive. The goal is to provide a structure for the focus and work of crime analysts, to assist with crime analysis education and training, and to support professional activities such as job descriptions, roles, and responsibilities. The IACA recognizes four major categories of crime analysis, ordered from specific to general:

- 1) crime intelligence analysis,
- 2) tactical crime analysis,
- 3) strategic crime analysis, and
- 4) administrative crime analysis.

Each of these types has a number of sub-categories and processes.

Crime Intelligence Analysis

Crime intelligence analysis is the analysis of data about people involved in crimes, particularly repeat offenders, repeat victims, and criminal organizations and networks. It seeks to understand more about the context of the lives, jobs, activities, motives, and plans of these individuals and networks, using this information to find ways to deter or disrupt harmful activity, often through priority enforcement, prosecution, and military or paramilitary action, but also strategies that do not depend on enforcement, such as focused deterrence. Crime intelligence analysis may use police record data as a starting point, but the crux of the process involves the confidential collection of information—“intelligence”—about individuals and networks, with associated concerns related to data security, access, and privacy, and the subsequent transformation of that information from data into intelligence through analysis.

Processes and techniques of crime intelligence analysis include:

- Repeat offender and victim analysis
- Criminal history analysis
- Link analysis
- Commodity flow analysis
- Communication analysis
- Social media analysis

Tactical Crime Analysis

Tactical crime analysis is the analysis of police data directed towards the short-term development of patrol and investigative priorities and deployment of resources. Its subject areas include the analysis of space, time, offender, victim, and modus operandi for individual high-profile crimes, repeat incidents, and crime patterns, with a specific focus on crime series (see International Association of Crime Analysts, 2011, for definitions of crime pattern types). Most of the data used in tactical crime analysis comes from police databases, particularly police report of crimes.

Processes and techniques of tactical crime analysis include:

- Repeat incident analysis

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 7, July 2017

- Crime pattern analysis
- Linking known offenders to past crimes

Criminal “profiling” or criminal investigative analysis occurs within local police agencies, we regard it as inherent in the tactical analysis process, as its focus is almost always on a series of crimes.

Strategic Crime Analysis

Strategic crime analysis is the analysis of data directed towards development and evaluation of long-term strategies, policies, and prevention techniques. Its subjects include long-term statistical trends, hot spots, and problems. Although it often starts with data from police records systems, strategic analysis usually includes the collection of primary data from a variety of other sources through both quantitative and qualitative methods.

Processes and techniques of strategic crime analysis include:

- Trend analysis
- Hot spot analysis
- Problem analysis

Problem analysis often exists as a separate type of analysis, or even external to the crime analysis field.

Administrative Crime Analysis

Administrative crime analysis is analysis directed towards the administrative needs of the police agency, its government, and its community. As a broad category, it includes a variety of techniques and products, performed both regularly and on request, including statistics, data printouts, maps, and charts. Examples include workload calculations by area and shift, officer activity reports, responses to media requests, statistics provided for grant applications, reports to community groups, and cost-benefit analysis of police programs. Administrative analysis is a valid and valuable category of crime analysis, supporting a police agency’s efforts in planning, community relations, and funding, among many other areas. It does not include administrative tasks that are not truly “analysis,” such as preparing leaflets for police events or performing basic technology support. That crime analysts often do many things unrelated to analysis is a reality of the profession.

Processes and techniques of administrative crime analysis include:

- Districting and re-districting analysis
- Patrol staffing analysis
- Cost-benefit analysis
- Resource deployment for special events

Discussion of a Crime Analysis Typology

As noted, no crime analysis typology will result in an entirely mutually-exclusive set of definitions. There is considerable overlap between tactical and strategic crime analysis in the vague definition between “long-term” and “short-term”; between tactical crime analysis and crime intelligence analysis depending on whether we start with a set of crimes with unknown offenders or a set of offenders with unknown crimes; and between strategic crime analysis and administrative crime analysis in considerations such as when a statistical report becomes a “trend analysis.” The justification for the dimensions that make up this typology comes from a general separation of data, tasks, and results among four categories. The first dimension is the confidentiality of the analytical product, and it tends to line up with the second dimension. Crime intelligence analysis and tactical crime analysis products are almost always internal products, kept confidential so as to avoid compromising an investigative or patrol strategy. Strategic crime analysis and administrative crime analysis products are more likely than tactical and intelligence analysis products to inform audiences outside the police agency. The second dimension is the regularity and speed of the analysis in each category and it tends to line up with the first dimension. Tactical analysis is a daily process by which the analyst (among other things) searches for emerging patterns, and the regularity of administrative analysis requests makes it a very frequent process as well. Strategic crime analysis and crime intelligence analysis are slower and more careful, deliberate processes that rarely result in daily products, as they tend to support long term strategies (though of different types)

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 7, July 2017

rather than short-term operations. 6 The third dimension is the importance of the offender relative to the analysis process. Except in repeat victim analysis, an offender is almost always the focus of crime intelligence analysis, and except in the case of short-term crime patterns that are not series, much of tactical crime analysis focuses on describing and identifying offenders. Apprehension and prosecution of offenders is often the outcome of both processes. The analysis of specific offenders takes on much less importance in both strategic crime analysis and administrative crime analysis, though for different reasons. The fourth dimension is the importance of police incident data relative to primary data collected by the analyst, officers, or other police personnel. Both tactical crime analysis and administrative crime analysis can be performed largely from the data that exists in the typical police computer-aided dispatch or records management system, while both crime intelligence analysis and strategic crime analysis depend on the deliberate collection of additional data to place either persons or crimes in a broader context.

Dimensions of Analysis



Crime Analysis Model

Type of crime analysis relate to one another in terms of the level of aggregation of the information. Types with low levels of aggregation focus on individual cases and used qualitative data and analysis techniques and those with high levels of aggregation focus on a limited scope of large amounts of data and information. Criminal investigative analysis and intelligent data utilize the least aggregated and most qualitative data. The data consist of information about informal networks criminals and non-criminal acquaintances and relatives as well as where individuals live, work, and “play”. The focus here is on the specifics of criminals, the nature of their crimes, their relationships, and their lives in general.



International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 7, July 2017

IV. CONCLUSION

This paper provides an overview of the key definition of crime analysis, concept in the field of crime analysis and its designation of four major types. These definitions, fully describe the work of analysts at local-level police agencies, reduce confusion inherent in previously-published typologies, and provide a template for literature, training, and professional development.

REFERENCES

1. Baker, T. E. (2004). Introductory criminal analysis: Crime prevention and intervention strategies. Upper Saddle River, NJ: Prentice-Hall.
2. Central Intelligence Agency. (2011). A definition of intelligence. Retrieved May 11, 2014.
3. International Association of Crime Analysts. (2008). Exploring crime analysis (2nd ed.). Overland Park, KS: Author
4. International Association of Crime Analysts. (2011). Crime pattern definitions for tactical analysis [Standards, Methods, & Technology Committee white paper 2011-01]. Overland Park, KS: Author.
5. INTERPOL. (2014). Intelligence analysis. Retrieved May 10, 2014, from <http://www.interpol.int/INTERPOLexpertise/Intelligence-analysis>
6. Peterson, M. (1998). Intelligence analysis. Retrieved May 10, 2014, from <http://www.interpol.int/INTERPOLexpertise/Intelligence-analysis>
7. Applications in criminal analysis: A sourcebook. Westport, CT: Praeger. Ratcliffe, J. (2007).
7. Integrated intelligence and crime analysis: Enhanced information management for law enforcement leaders (2nd ed.). Washington DC: Police Foundation.