

# A History of Crime Analysis

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As a concept, in its most basic form, crime analysis must be only slightly younger than crime itself. The first crime required no analysis, since it was not yet part of a pattern or trend. The second may have been related to the first, and the third to either the first or second, or both. Each subsequent crime had a greater chance of being related to a preceding one, and the development of the first crime pattern probably soon arrived.

The first crime analyst may have been a Cro-Magnon. Call him Gog. One day, while about to hunt and gather, Gog scratches his head, turns to the rest of his cave-dwelling clan, and says, "You know... every time we go down to the watering hole between the time the sun is on the horizon and the time it's above us in the sky, one of us gets his head cracked open by some goon from the Big Rock Tribe."

Gog has unwittingly started a profession and has ensconced within it a process that has changed very little since. He has correlated data (in his head, of course, but then so does the skilled analyst of the twenty-first century), found an aggravated assault pattern, analyzed and described it (including geographic, temporal, and suspect factors), disseminated it to members of his tribe, and implicitly recommended a solution. Put Gog in front of a computer, paint a map on his cave wall with berry pulp, and suit up the brawniest members of the clan in blue, and we have a modern crime analyst.

We offer this hypothetical origin not because we want to be funny, but because we want to illustrate how unbelievably basic, how absolutely fundamental, how inextricably intertwined with human development that the origin of crime analysis is. Civilization exists to promote the general welfare of its citizens, starting with ensuring their safety from each other. A society's police must carry out this most basic function, and its crime analysts are the cerebrum of this effort, allowing the society to prevent the most crime with the least expense of resources. Surely, the practice of crime analysis precedes the profession. Surely, the sentries of Assyria, the guards of Babylon, and the sentinels of Rome knew of patterns, hot spots, and repeat offenders. Surely, they knew to focus their resources on particular places, times, and on particular individuals to maximize their efforts. Surely, the farmers in Thebes, the *agora* visitors in Athens, and the serfs in London knew to keep away from certain streets, and to keep indoors when certain bands of ruffians came to town.

Rooted at the center of each of these activities is the seed of crime analysis—a seed so basic that it took ten thousand years—from the dawn of civilization to the 1960s—for the task to be given a name and a profession. That it developed within police agencies—rather than in communities or universities or press rooms, for instance—is a function of two factors: proximity to necessary information, and proximity to another profession—police—that has the best chance and ability to do something about patterns and trends analyzed.

## The London Metropolitan Police

The history of crime analysis as a profession—in contrast to its history as a concept—lies in the informal method of pattern identification used by patrol officers, detectives, and administrators. In 1973, the Law Enforcement Assistance Administration observed as much in its *Police Crime Analysis Unit Handbook*:

Informal crime analysis, in its simplest sense, is performed by all officers as they investigate crimes. Crime analysis is the quality of examining one crime occurrence and comparing it with similar past events. In essence, the officer is a walking crime analysis unit as he compares his investigations with his past experiences and with the experiences of others.

Undoubtedly, police—from the beat officer to the investigator to the patrol commander—have always performed such informal crime analysis. The *Handbook* goes on to say:

However, the officer's experiences are limited by the number of hours he works and, essentially, his experiences are not coordinated with the experiences of others.

Here lies the rationale for a full-time, dedicated crime analysis unit. Individual officers are not exposed to every crime reported to their agencies, nor do they have a ready way to compare every crime report they do receive to past incidents, beyond their own memories and anecdotal evidence from their colleagues. This informal crime analysis was not done on a systematic, regular basis, and many patterns and trends therefore went undiscovered.

As modern policing began in London in 1829 (with the formation of the London Metropolitan Police by Sir Robert Peel), so probably did the most rudimentary elements of crime analysis. By 1846, the LMP was employing two "detectives" per division, and it is likely that these early investigators used some methods of modern crime analysis to link criminal incidents into patterns. Individual crime statistics were available for the city of London as early as 1847.

It was among the London Metropolitan Police that the concept of *modus operandi*, and of classifying offenders and crimes based on it, was first developed. *Modus operandi* helped police identify patterns and series more accurately, though it was applied primarily to cases of murder. (What is arguably the most famous murder series in history occurred between 1888 and 1889 in London's East End.) It was this concept, brought to America, that would be the beginning of the profession of crime analysis.

## August Vollmer

August Vollmer (1876-1955) has been called "the father of American policing," and indeed, he seems to have pioneered most of the innovations that continue to define modern police work today.



August Vollmer  
Source: LAPD Web Site

Vollmer became City Marshall of Berkeley, California in 1905. The post was re-named "Chief of Police" in 1909, and Vollmer was to occupy it until 1932. When Vollmer joined the department, Berkeley was characterized by gangs of marauders and vigilante justice. Trains refused to stop there. By the time Vollmer left, Berkeley was regarded as one of the safest cities in America.

Vollmer's list of contributions to modern policing include bicycle patrol, vehicle patrol, radio communication, scientific investigation, a fingerprint system, demands for higher police education and professionalism, and the development of a police academy and a school of criminology at the University of California.

Far more important for our purposes, though, are his innovations in crime analysis. In 1906, he directed the development of a basic records management system that helped organize police reports in a manner conducive to analysis. He encouraged regular review of police reports and mapped crime locations with colored pins. More important, he used crime information to create patrol districts.

When Vollmer mobilized his beat officers on bicycles in 1909, he laid out beats in accordance with the number of calls anticipated from each part of the city.<sup>1</sup>

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<sup>1</sup> Law Enforcement Assistance Administration. *Crime Analysis in Support of Patrol*, 1977, pg. 8.

Though the term “crime analysis” had not yet been invented, one quote from Vollmer’s “The Police Beat” shows he was familiar with its concepts:

On the assumption of regularity of crime and similar occurrences, it is possible to tabulate these occurrences by areas within a city and thus determine the points which have the greatest danger of such crimes and what points have the least danger.<sup>2</sup>

Despite Vollmer’s pioneering efforts, and despite the fact that other agencies emulated his other innovations with great enthusiasm, his early steps in crime analysis do not seem to have been followed by his contemporaries. It would take one of his admirers, O. W. Wilson, to bring the profession and term to America’s police departments.

## The Uniform Crime Reporting Program

Crime analysis depends on a careful comparison of current crime to past crime. Through this method, the analyst detects patterns and trends. It would be a waste of time, usually, for an analyst to compare a recent street robbery report to past incidents of auto theft, and while an analyst might compare a recent house burglary to past commercial burglaries, he will give much more attention to other residential burglaries. Thus, the process of crime analysis is predicated on the use of a thoughtful, consistent method of classification and categorization. In the early part of the century, however, there were few good classifications methods. Most police departments categorized crimes by the statute they violated—a method fairly clumsy for crime analysis purposes, and since statutes varied from one jurisdiction to another (a burglary in California might be defined much differently from a burglary in Maryland), no common comparisons of crime could be made.

Recognizing these issues, the International Association of Chiefs of Police began, in 1922, to discuss a national system for crime reporting. Chief Vollmer was a member of the IACP and was instrumental in the process. By 1930, the program—called the Uniform Crime Reporting Program—had been developed. The Federal Bureau of Investigation eventually assumed the administration of the UCR program, which continues to be the leading indicator of crime statistics in the United States. The UCR freed police agencies—and the nascent crime analysis programs therein—from statute-based thinking, in which “Breaking and Entering into a Dwelling House in the Nighttime with Intent to Commit a Felony while Armed” was its own category, and helped them to think in terms of broad classifications, such as “Burglary.”

## O. W. Wilson

Orlando W. Wilson (1900-1972) is regarded as one of the most significant police reformers of the century, and it is no coincidence that he was a protégé of August Vollmer. Wilson held a number of posts during his long career in policing, including Military Police Governor in postwar Berlin, Chief of Police in Fullerton, California (1925); Chief of Police in Wichita (1928-1939); Superintendent of Police in Chicago (1960-1971); and Dean of the School of Criminology at the University of California at Berkeley—a school that was founded by Vollmer. Wilson’s vision reaches us primarily through his books on police management, including *Police Records* (1942), *Police Administration* (1950), and *Police Planning* (1957).

Wilson was running the Chicago Police when he published his second edition of *Police Administration* in 1963. It is on page 103 of this book—under “Specialization Within a Large Planning Division”—that we find:

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<sup>2</sup> Quoted in *Ibid*, pg. 9.

**Crime Analysis.** The crime-analysis section studies daily reports of serious crimes in order to determine the location, time, special characteristics, similarities to other criminal attacks, and various significant facts that may help to identify either a criminal or the existence of a pattern of criminal activity. Such information is helpful in planning the operations of a division or district.

This is the earliest known source of the term “crime analysis,” though Wilson’s use of it suggests that there were already crime analysis sections in existence at the time of his writing. Indeed, in his 1950 edition, he mentions the importance of identifying patterns and trends but does not suggest a formal program for doing so. By the 1972 edition, however, crime analysis had increased enough in importance that Wilson devoted several pages to it, covering administrative issues and a unit’s regular responsibilities.



Orlando W. Wilson  
Source and year

(It is interesting to note that Wilson explicitly makes crime analysis a *planning* function, and recommends a crime analysis section in the planning division of a large agency. Later texts would recommend that crime analysis be separated from planning and administration.<sup>3</sup> Wilson’s recommendation may have contributed to a slower growth of crime analysis, as most agencies are not large enough to justify a separate planning division.)

By the 1960s, Wilson had become a giant in the field of law enforcement, and his recommendations were likely to be taken as gospel. *Police Administration* was the premiere textbook for police executives (and remains one today). “Crime analysis” was suddenly a buzzword, like “community policing” became in the 1990s. Without a doubt, Wilson’s book helped pave the way for a crime analysis boom in the 1970s when the LEAA began offering gobs of money to help police departments implement Wilson’s ideas.

## LEAA & ICAP

The 1960s and 1970s saw the highest crime rates in recorded history, accompanied by a plethora of new programs designed to lower them. Efforts to fund these programs in local police agencies began in 1965, when the Law Enforcement Assistance Act of 1965 created the Office of Law Enforcement Assistance. Then in 1968, the Omnibus Safe Streets and Crime Control Act created the Law Enforcement Assistance Administration—an agency dedicated to providing financial assistance to various crime control programs.

Money gushed from the LEAA like water from a firehouse, and many agencies found themselves swimming in funds. Hundreds of crime analysis units sprang up across the United States—some in large agencies, which had dire need of them, but many in smaller agencies, which wouldn’t have otherwise been able to afford them. To support these new programs, the LEAA began funding training manuals and handbooks for analysts, including *Police Crime Analysis Unit Handbook* (National Institute of Law Enforcement and Criminal Justice, 1973); *Crime Analysis Operations Manual* (Integrated Criminal Apprehension Program, 1977); *Patrol Operations Analysis* (ICAP, 1977); *Crime Analysis in Support of Patrol* (NILECJ, 1977); and *Crime Analysis Executive Manual* (ICAP, 1977). The National Advisory Commission on Criminal Justice Standards and Goals recommended a crime analysis capability in every police agency.

In the late 1970s, the many disparate crime reduction and crime prevention programs were united under the *Integrated Criminal Apprehension Program* (ICAP). Crime analysis was one of four facets of the ICAP program, and it was ICAP that first identified the four “types” of analysis—crime analysis,

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<sup>3</sup> Cf. Gottlieb, Steven, et. al. *Crime Analysis: from First Report to Final Arrest* (Alpha Publishing, 1994).

intelligence analysis, investigative analysis, and operations analysis. ICAP and its various state counterparts, such as California's CCAP (Career Criminal Apprehension Program), are responsible for the development of a number of crime analysis units in many agencies, particularly in California and the southwest. Massachusetts had two agencies with ICAP programs—Cambridge and Quincy—both of which retained their crime analysis units after LEAA funding disappeared.

LEAA and ICAP gave a needed boost to the profession, but they were not to last. Analysts who began their careers during this period recognize the Carter administration for the dissolution of the LEAA. LEAA lost the last of its funding in 1982, and its programs were transferred to the Office of Justice Assistance, Research, and Statistics until 1984, when they were adopted by the Office of Justice Programs, which still exists today.

The loss of the LEAA and other means of federal funding led to a lean period in which few new crime analysis programs (outside of states such as California, where state funding was available) were initiated. Many analysts hired with LEAA money found themselves out of a job—only those units that had been brought under their agencies' permanent budgets were safe.

## The Golden Age of Crime Analysis

The 1990s brought a renaissance in crime analysis, characterized by new ideas, new funding, and hundreds of new crime analysis programs all over the country. The decade opened with a re-dedication to the basic principles of problem-solving and crime prevention, in the form of a book called *Problem-Oriented Policing* by University of Wisconsin Professor Herman Goldstein (who, not coincidentally, served as O. W. Wilson's Executive Assistant at the Chicago Police Department from 1960 to 1964). It's difficult to gauge the long-term impact of a book written only ten years ago, except to say that a web search for the term "Problem-Oriented Policing" returns 1,560 pages; that thousands of agencies have adopted POP programs and principles; and that it would be extremely difficult to find someone in the field of law enforcement who is *not* familiar with the concept.

Problem-oriented policing describes a set of procedures that seek to make police operations more effective by focusing on the crime *problem* rather than the crime incident, and by finding ways to eliminate root causes before the problems themselves develop. As Goldstein himself explains:

In handling incidents, police officers usually deal with the most obvious, superficial manifestations of a deeper problem—not the problem itself. They may stop a fight but not get involved in exploring the factors that contributed to it...They may investigate a crime but stop short of exploring the factors that may have contributed to its commission, except as these are relevant to identifying the offender...The first step in problem-oriented policing...calls for recognizing that incidents are often merely overt symptoms of problems.<sup>4</sup>

The implications for crime analysis are self-evident: for problems to be solved, they must first be identified and analyzed—the job of the crime analyst.

Crime analysis...is a base on which police can build in meeting much wider and deeper demands for inquiry associated with problem-oriented policing. In a police agency in which individual officers may not know what has occurred outside the areas in which they work or during periods when they are not on duty, crime analysis has been the primary means for pooling information that may help solve crimes...Problem-oriented policing actually provides an incentive to make much more effective use of the data typically collected as part of crime analysis.<sup>5</sup>

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<sup>4</sup> Goldstein, Herman. *Problem-Oriented Policing*. New York: McGraw-Hill, 1990, pg. 33.

<sup>5</sup> Ibid, pg. 37.

Agencies endeavoring to approach problem-oriented policing responsibly found themselves in need of an analysis capability. Many officers and civilians found themselves so employed, whether formally or informally.

1990 also provided one other boon to the profession of crime analysis: the establishment of the International Association of Crime Analysts, founded by a group of analysts seeking to share information and ideas, advocate for professional standards, and provide educational opportunities. The IACA has



sponsored an annual conference for analysts in various cities across the country for the last twelve years. Although the emphasis of these conferences has been on training, the most significant benefit revolves around the network and information and idea sharing opportunities that present themselves when hundreds of analysts come together.

The 1990s brought a new font of federal funding from the COPS office, the Bureau of Justice Assistance, and the National Institute of Justice. The COPS office opened its doors in 1994, after President Clinton's State of the Union pledge to add 100,000 police officers to America's streets, and to re-deploy other officers in community policing roles. Many crime analysis programs found funding for positions and equipment with this money. Several of state crime analysis associations were established during this period, including the Massachusetts Association of Crime Analysts in 1997.

Serious advances arrived in the 1990s in the form of powerful, affordable technology—made possible in the nation's police agencies, in part, by the new federal funding. Applications for word processing, number crunching, database management, communications, and presentations have allowed crime analysts to become much more effective at their jobs.

In no area is this more true than in the burgeoning field of crime mapping. During the first half of the decade, two companies—ESRI (Environmental Systems Research Institute) and MapInfo—introduced the first crime mapping applications accessible—in terms of both cost and technology—to the average crime analyst. Suddenly, mapping crime was no longer a matter of sticking colored dots on paper maps. Basic pin maps could be done in one twentieth of the time as before, and many new advanced GIS features—from raster mapping to buffer analysis to three-dimensional imaging—were suddenly available to analysts everywhere.

In 1994, the New York City Police Department introduced its "Comstat" system—a crime analysis, strategy development, and management accountability process that relies heavily on crime mapping data. Departments across the country have attempted to replicate its purported successes. In 2000, a new CBS police drama entitled *The District* premiered, loosely based on the career of Jack Maple, former New York City deputy police commissioner and co-creator of the Comstat process. The program features complex, dynamic crime mapping, and it marks, as far as we can tell, the first time that the words "crime analysis" have been said on prime time TV. At the time of this writing, *The District* is in its second season.

The National Institute of Justice Crime Mapping Research Center was established in 1997 with the stated goals of "promotion, research, evaluation, development, and dissemination of GIS technology and the spatial analysis of crime." The CMRC held its first conference in Denver in October of that year, and has offered an annual fall conference every year since. Their conferences, and their GIS projects, attempt to merge policing with cartography, academics with practitioners, and end-users with software vendors.

## The 21<sup>st</sup> Century

As the 21<sup>st</sup> century opens, crime analysts find themselves faced with several trends that will affect the development of the profession over the next ten years:

1. **Uncertain Funding.** The year 2000 saw the election of a new administration, with different philosophies and goals towards federal funding. Already, some funding sources, including community policing, have been slashed. An economic slowdown has contributed to budgetary problems in some agencies. The long-term effect of this reduced funding on crime analysis remains to be seen.
2. **Certification.** Crime analysis remains a fairly disorganized profession, with few professional standards outside the one state (California) with a certification process. Almost anyone can become a crime analyst, regardless of educational or professional background. In the coming decade, we should see more state and national associations and universities developing professional standards for the employment and training of crime analysts.
3. **Training & Education.** Training for crime analysts has long been dominated by a couple of companies. As we move into the new century, this is changing, with dozens of new training opportunities offered by universities, associations, government agencies, and private corporations. Crime analysis certificate programs at universities may turn into crime analysis majors, and private corporations currently offering analysis training will have to vigorously update their curriculums to compete with the availability of new sources.
4. **Uncertain Crime Trends.** Criminologists and social scientists predict an increase in crime over the next 15 years. The profession of crime analysis has been lucky enough to experience its golden age during a period of historical declines in reported crime. An increasing crime rate will test the adaptability and resiliency of the profession.
5. **Technology.** Technology has been both the bane and the blessing of crime analysts. The blessing because it enables us to do our jobs faster and more effectively than manual methods do; the bane because as we become technologically proficient, we receive more and more demands to perform information technology tasks. Technological improvement shows no signs of slowing as we enter the twenty-first century. New releases of products crucial to crime analysis arrive several times a year. As analysts incorporate this technology into their daily operations, they will also have to become more and more creative in finding ways to keep crime analysis their first focus.
6. **The Terrorist Impact.** Since September 11, 2001, the nation's attention has been focused on combating the terrorist threat. Does crime analysis have a role to play in the investigation and prevention of terrorism? Will priority, in terms of funding and training, now go to intelligence analysts? Will traditional crime analysts need to take up intelligence analysis to thrive, or even survive?

The question on our minds now is this: Does the "golden age" of the 1990s signify a new beginning for the profession of crime analysis, or does it represent its peak? Is the dedication displayed by federal, state, and local agencies a strong foundation on which to build during the coming years, or is it already waning?

To ensure success, analyst will need to embrace professional standards, and will need to arrive at some kind of common agreement on what, exactly, we do. At the same time, police agencies need to recognize crime analysis as a core function, rather than a peripheral one. Few police departments would operate without a detective, a canine officer, or an identification technician—crime analysis programs should be considered similarly inviolable.

Failure means a degradation of police abilities, and a regression to the days of informal, infrequent crime analysis performed sporadically by patrol officers. Success can offer greatly improved problem-oriented policing capabilities, optimal resource allocation, reduced crime rates, and the prevention of thousands of crimes. That will still have to make this case, that we still must argue so fervently the benefits of crime analysis, and that most police agencies have yet to develop a formal crime analysis program, goes to show how short a distance we have come since Gog.

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