

Police

Police, body of officers representing the civil authority of government. Police typically are responsible for maintaining public order and safety, enforcing the law, and preventing, detecting, and investigating criminal activities. These functions are known as policing. Police are often also entrusted with various licensing and regulatory activities.

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Officers of the French National Police patrolling a housing project.
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However, police scholars have criticized this popular understanding of

the word *police*—that it refers to members of a public organization having the legal competence to maintain order and enforce the law—for two reasons. First, it defines police by their ends rather than by the specific means that they use to achieve their goals. Second, the variety of situations in which police are asked to

intervene is much greater than law enforcement and order maintenance. There is now a consensus among researchers, based on a definition first proposed by American sociologist Egon Bittner, that the common feature among all the different agencies engaged in policing is the legal competence to enforce coercive, nonnegotiable measures to resolve problematic situations. Such situations are characterized by two features: their potential for harm and the need to solve them urgently before they develop that potential. Hence, the actual use of coercion or the threat of using it allows police to put a quick, nonnegotiated, and conclusive end to problematic situations (e.g., keeping people away from the scene of a fire for their own protection and to allow firemen to do their job).

Following that definition, policing thus may be performed by several different professional organizations: public police forces, private security agencies, the military, and government agencies with various surveillance and investigative powers. The best known of these bodies are the public constabulary forces that patrol public spaces, often in marked cars, and whose members wear a uniform. They are the most visible representatives of the civil authority of government, and they provide the model typically associated with police organizations. However, in many Anglo-Saxon countries—such as Australia, Canada, the



Officer of the French National Police
arresting a suspect.

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Officers of the Metropolitan Police
Department, Tokyo, patrolling a train station.

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United Kingdom, and the United States—there are at least twice as many private security agents as public police officers. Furthermore, security and intelligence agencies that generally operate undercover have played an increasingly important role in combating terrorism, especially since the September 11 attacks in the United States in 2001. Policing has therefore become a complex undertaking that straddles the traditional institutional and jurisdictional distinctions between public and private, criminal and political.

This article focuses on the development of public police organizations and of their policing strategies in Anglo-Saxon countries and the countries of continental Europe, particularly France, which developed the original model of centralized policing. Countries in Africa, Asia, and South America are covered to a lesser extent, mainly because relatively little reliable information on their policing systems is available.

Police and society

There is a remarkable historical, geographic, and organizational diversity in the activities of people who are, or have been, defined as police. Police work has developed considerably from what it was centuries ago. As populations grew and informal institutions of socialization and social control—such as the family, schools, and the church—decreased in effectiveness,

police became increasingly necessary. However, no uniform worldwide system of policing ever emerged.

Numerous factors help to explain the diversity of police activities and systems. The types of crime typically committed in a society and the methods used by criminals play a great part in determining a police force's activities. For instance, if criminals use firearms, the police are likely to be armed, or if criminals use computers to commit crimes, the police may establish a special unit dedicated to investigating cybercrimes. History also helps to explain this diversity; e.g., former colonies tend to keep the policing system established by their

colonizers. Population plays an important role as well; policing rural areas and villages vastly differs from policing large cities. Foremost among the factors that determine a country's system of policing, however, are the political culture of the society—e.g., whether it is open and democratic or closed and totalitarian—and the state's conception of police accountability.

Policing small communities

Most people willingly obey most laws, whether a police officer is present or not. They comply with the laws because they consider them fair and because they believe that in the long run it is in their interest to observe them. In small communities in which most citizens know each other, people who live up to the community's shared ideals are rewarded with the esteem of their fellow citizens. If they break the law or fall short of other people's expectations, their lives often become more difficult because they are shamed, shunned, or ostracized by the rest of the community and are less likely to receive assistance in times of trouble. In all societies this system of informal rewards and punishments is the most potent aid to law enforcement, but it is strongest in small communities. The forces that order life in a small community thus make the task of the police much easier. Police action is needed only when such informal controls have proved insufficient.

This is why rural and sparsely populated areas are often policed by a single centralized—and often militarized—police force, even in countries that have a decentralized police system. A single police organization operating under a unified command is more cost-effective and more operationally efficient than a bevy of independent small-town police forces. Since the territory to cover may be very large and characterized by difficult terrain, police in such regions must have the long-range mobility and adaptability that are characteristic of military forces. In addition, the countryside has historically been policed by military organizations, as police forces were initially created in urban settings. (The great exceptions to this model are the United Kingdom and the United States, which have long resisted police centralization.)

Policing large societies

In larger and more complex societies, informal institutions of social control are generally weaker, and, as a result, formal institutions are generally stronger. The relative weakness of informal controls is attributable to a number of factors. In large societies people often deal with strangers whom they will never meet again, and in such circumstances there may be fewer informal rewards for honesty or fewer informal penalties for dishonesty. Such communities tend also to be more technologically advanced, which leads to the adoption

of new laws, such as those regulating the licensing and operation of automobiles and those concerned with commerce conducted on the Internet (see e-commerce). Because some of these new laws may not have the same moral significance as older laws criminalizing violence, theft, or fraud, people may feel less of an obligation to obey them. Moreover, when new laws are created, crime increases almost necessarily. There is thus a danger that people who are convicted of having violated a new law may feel aggrieved and in the future be less willing to cooperate with the police or to obey the law when they are not being observed. Finally, as societies grow, it becomes more difficult for people to place the public interest ahead of their private interests in circumstances where the two may conflict. An employer who catches an employee committing an offense within the workplace, for example, may choose not to notify the police because he fears that the firm's production, profit, or prestige would suffer if the offense was publicly exposed.

Police and the state

A country's political culture helps to determine whether its police forces are organized nationally or locally. The desire for efficiency lends itself to the establishment of centralized police forces, which can take advantage of coordination and savings in training, organization, and service delivery. However, such forces face the problem aptly summarized by the Latin question *Quis custodiet ipsos custodes?* ("Who guards the guardians?"). In some democratic countries, particularly the United States and, to a lesser extent, Great Britain, citizens have traditionally believed that the existence of a national police force would concentrate too much power in the hands of its directors. They have believed that local communities could not hold a national police force accountable for abuses of power, and they have feared that the national government could use such a police force to keep itself in power illegitimately. For those and other reasons, some democratic countries favour organizing police forces on a local basis. Decentralization brings the police closer to the community, and it often succeeds in tailoring policing to the specific needs of a community. However, a decentralized police apparatus tends to hinder the flow of intelligence between the various components of the system. Another drawback of a system of accountability to local government is that the narrow relationship between the police and their political overseers may facilitate the corruption of both parties.

The need for police accountability is made evident by the great power that police forces wield over the lives, liberties, safety, and rights of citizens. Governments empower police to compel individuals to comply with the law; they allow officers to stop, search, detain, cite, and arrest citizens and to use physical and sometimes deadly force. If police use those powers improperly, they can abuse the civil rights of the very citizens they are supposed to protect. Thus, it is critical that police be accountable for their policies and behaviour. In

democratic countries, accountability is ensured mainly by three means. First, police forces are made subordinate to elected representatives (as in the United States, where mayors or state governors oversee the police, and as in Belgium, where a town's burgomaster is also the chief of police) or to special elected officials (e.g., the police and crime commissioners of England and Wales). Second, the courts are entrusted to safeguard the respect of due process by the police. Third, official bodies are appointed to hear and act upon complaints from citizens against the police.

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The history of policing in the West

Ancient policing

Understood broadly as a deliberate undertaking to enforce common standards within a community and to protect it from internal predators, policing is much older than the creation of a specialized armed force devoted to such a task. The activity of policing preceded the creation of the police as a distinct body by thousands of years. The derivation of the word *police* from the Greek *polis*, meaning "city," reflects the fact that protopolice were essentially creatures of the city, to the limited extent that they existed as a distinct body.

Early policing had three basic features that have not wholly disappeared. First, it did not always involve coercion. An inclusive survey of 51 ancient societies on all continents has shown that interpersonal mediation was the first means to settle disputes; the creation of something akin to a police force was restricted to less than half of the sample. Thus, mediation is the most ancient and most universal form of conflict solving. Second, there was a crucial distinction between the people who were legally endowed with policing responsibility and the people who actually carried out policing duties. The police authorities generally belonged to the social elite, but the men they hired came from very diverse backgrounds, as policing was considered a lowly occupation. Finally, the police performed a very wide array of tasks, ranging from garbage disposal to firefighting, that had little direct relation to crime control and prevention.

The first policing organization was created in Egypt in about 3000 BC. The empire then was divided into 42 administrative jurisdictions; for each jurisdiction the pharaoh appointed an official who was responsible for justice and security. He was assisted by a chief of police, who bore the title *sab heri seker*, or "chief of the hitters" (a body of men responsible for tax collecting, among other duties).

In the city-states of ancient Greece, policing duties were assigned to magistrates. Ten *astynomoi* were responsible for municipal upkeep and cleanliness in the city of Athens and the port of Piraeus; 10 *agoranomoi* kept order in the marketplace, and 10 other *metronomoi* ensured that honest measuring standards were respected; and the “Eleven” dealt with courts, prisons, and, more generally, criminal justice. In order to perform their duties, the magistrates depended in part on the military, which viewed itself as primarily responsible for the external security of the state. Hence, the magistrates had to rely to an even greater extent on a corps of 300 Scythian slaves purchased by the city after the Greco-Persian Wars. Lightly armed, the Scythian slaves were charged with maintaining peace and order in various public places and in public gatherings. Only occasionally did they assist the Eleven in their criminal justice duties.

The practice of recruiting police operatives from the lower classes—slaves, freedmen, and citizens of low birth, some with a criminal past—persisted in ancient Rome. During the republic the Romans were reluctant to engage in the prevention, detection, and prosecution of everyday criminality, which was largely considered to be a matter of civil tort to be resolved between private citizens. The extent to which murder itself was prosecuted is not even clear. One of the earliest forms of organized policing was created by the emperor Augustus. In 7 BC Augustus divided the city of Rome into 14 *regiones* (wards), each consisting of *vici* (precincts) overseen by *vicomagistri*, who were responsible for fire protection and other administrative and religious duties. In AD 6, after a particularly bad fire, Augustus expanded the city’s fire brigade into a corps of *vigiles* (firefighters and watchmen), consisting of seven squads, or cohorts, of 1,000 freedmen each. Each cohort was responsible for fire and, especially at night, police protection in two *regiones*. As a further measure to impose order on the often violent streets of Rome—a city of nearly one million people—Augustus created three cohorts of police, which were part of the army of the state and were placed under the command of the urban prefect. Those cohorts could, in turn, call upon the emperor’s own bodyguard (the Praetorian Guard) for assistance.

After the collapse of the Western Roman Empire in the 5th century AD, the Eastern, or Byzantine, Empire retained some of the older Roman institutions—e.g., a *koiastor* (a Hellenized equivalent of the Roman quaestor) was the main policing authority, with the specific responsibility of overseeing the large population of foreigners that resided in the capital. Outside the Byzantine Empire, however, the urban basis for the existence of policing organizations had almost disappeared. What order that existed was enforced either by the military, often consisting of little more than armed bands, or by the community itself. Indeed, the legal codifications produced during the early Middle Ages, such as the Salic Law, show that nearly all offenses were considered forms of civil tort to be

resolved informally between the parties involved. The conflict-solving mechanisms established in England during that period offer a good example of how policing was done before modern police developed.

Collective responsibility in early Anglo-Saxon times

The earliest policing system in England, which predates the Norman Conquest in 1066, was community-based and implied collective responsibility. The Saxon frankpledge required all adult males to be responsible for the good conduct of each other and to band together for their community's protection. To formalize that obligation, they were grouped into tithings headed by a tithingman. Each tithing, in turn, was grouped into a hundred, which was headed by a hundredman who served as both administrator and judge. Each hundred was grouped into a shire, which was supervised by a shire-reeve. The role of shire-reeve eventually developed into the modern office of county sheriff in England and in the United States.

When crimes were observed, citizens were expected to raise an alarm, or hue and cry, to gather the members of the tithing and to pursue and capture the criminal. All citizens were obliged to pursue wrongdoers; those who refused were subject to punishment. If there were no witnesses to the crime, efforts to identify the criminal after the fact were the responsibility of the victim alone; no governmental agency existed for the investigation and solution of crimes.

The frankpledge method of policing continued unchanged until England's conquest by the Normans, who added the office of constable. The word *constable* comes from the Old French *conestable*, which at first simply designated a person holding a public office and evolved to mean a person exercising a higher form of authority (*connétable*). After the title of constable was introduced in England, its meaning continued to change. The English constable was originally a post in the royal court; by the late 13th century, however, it had evolved into a local office of individual manors and parishes, subordinate to the sheriff or mayor. Constables were appointed by various bodies, such as the courts, and there were two high constables for each shire division, known as a hundred. Constables were typically members of the higher class—under Henry VIII, for example, they were chosen from the class of “substantiall gentlemen”—and they did not receive a stipend. In addition to their frankpledge obligations, constables were responsible for overseeing the “watch-and-ward” system (the night watch) and for providing security for traveling justices. The primary purpose of the watch and ward was to guard the city gates at night. The duties of watchmen were later expanded to include lighting streetlamps, calling time, watching for fires, and reporting other conditions. Yet, despite the addition of constables, the

investigation and prosecution of crimes remained a private matter to be handled by the victims.

The Statute of Winchester of 1285 codified the system of social obligation. It provided that: (1) it was everyone's duty to maintain the king's peace, and any citizen could arrest an offender; (2) unpaid, part-time constables operating at various levels of governance had a special duty to do so, and in towns they would be assisted by their inferior officers, the watchmen; (3) if the offender was not caught "red-handed," a hue and cry would have to be raised; (4) everyone was obliged to keep arms and to follow the cry when required; and (5) constables had among their varying responsibilities a duty to present the offender at court tests.

The Justice of the Peace Act of 1361 began the process of centralizing the administration of justice in England. It established the office of justice of the peace, the responsibilities of which encompassed police, judicial, and administrative duties. Justices of the peace were appointed by, and derived their authority from, the monarch. The period of the Justice of the Peace Act marked the end of the law enforcement system based upon obligatory service to the community by all individuals.

Until the 19th century, except for a brief period during the rule of Oliver Cromwell (1653–58), public order and safety in England remained mainly the responsibility of local justices of the peace, constables, and the watch and ward. Constables and watchmen were supported by citizens, posses (such as the posse comitatus), and, when riots occurred, the military or the yeomanry (a cavalry force largely composed of landowners).

The stipendiary police

From the early 16th to the early 19th century, some groups of merchants, traders, church members, insurers, and others employed private individuals to protect their property and their persons. Protection thus became a commodity, available to anyone who had sufficient resources. In addition, victims of theft who could not recover their property offered rewards for its return, often resorting to hiring "thieftakers." These precursors to modern bounty hunters were private citizens who, for a fee or a reward, attempted to identify wrongdoers and to return stolen property to its rightful owners.

When communities began paying private citizens for the capture and conviction of thieves, a standard set of fees was established, and a "stipendiary" police system evolved. Sources of fees in this system included public reward programs, insurance companies, commercial houses, prosecuting associations, and subscriptions. Any citizen, not only constables and

justices, could earn such fees and rewards by becoming a thieftaker or “common informer.” (At the time, constables and justices either were not paid at all or earned a very small stipend that did not compensate them for the time that they devoted to their duties.)

The fee-based system was subject to abuse by criminal networks, perhaps the most successful of which was led by Jonathan Wild (c. 1682–1725). Wild organized the London underworld and systematically arranged to have goods stolen so that he could sell them back to the original owners. Any thief wishing to remain independent of Wild’s crime ring was delivered to the authorities and ultimately to the gallows. Finally, after a seven-year reign as the “thief-taker general,” Wild too ended up at the end of a rope.

The stipendiary system was supported by a legal system that decreed draconian punishments for crimes that would be considered petty by contemporary standards; capital punishment and serious mutilation were prescribed for almost every conceivable offense. Such harsh punishments were handed out for two reasons—to deter wrongdoers and, failing that, to provide criminals with the opportunity to repent through punishment and save their souls.

The decline of constabulary police

Although the system of social obligation remained in place for more than 800 years and was transplanted to several of England’s colonial possessions (Australia, Canada, and the United States), it had serious weaknesses that were amplified by industrialization and urbanization. The system had become corrupted, especially in cities. The status of constables deteriorated through the years, and eventually the office became subservient to the justice of the peace. Because it had become degraded, persons of high social status were no longer willing to perform its duties. (Writing in 1714, Daniel Defoe spoke of the “imposition” of the office of constable as “an unsupportable hardship,” taking so much of a man’s time that it compelled him to neglect his own affairs, too often leading to his ruin.) As a consequence, England established laws that allowed persons to hire replacements to serve their terms as constables. Indeed, in the early 18th century, virtually no man who could afford to pay his way out of serving pro bono as a high constable neglected to do so. Although this did not create serious problems in small towns and agrarian areas, only the poor, the aged, and the infirm were willing to be constables in such cities as London, Boston, and New York City.

In England reformers began to call for the creation of a permanent body of men who would be in charge of policing under the higher authority of the state. For a model some

looked to France, where such a policing body had been created at the end of the 17th century.

The French police system

The French police under the monarchy

Through a series of edicts proclaimed between 1536 and 1544, King Francis I instituted the first systematic measures to police France. The country was then intermittently at war with its neighbours, and between campaigns masses of disbanded soldiers preyed upon the peasants for their livelihood until the next war. To the chiefs of his armies—the *maréchaux* (“marshals”)—Francis allocated police officials who were charged to recruit military officers and troops to check the soldiers’ plundering. The officials were named *prévôts*, a word derived from the Latin *prepositus*, meaning an assistant assigned to a military authority. The military police roamed the countryside—they were not allowed to stay in one place for more than two days in a row—to catch military and, eventually, civilian offenders and to use their sentencing power to inflict punishment, for which there was no appeal. These special forces were not at first united in a single organization, but they came to be known collectively as the *maréchaussée*, as they were assigned to the various army marshals. Although effective in the countryside, the *maréchaussée* was not the answer to the problems afflicting France’s cities—most notably the capital, Paris. (As in England, French cities were at first policed, with little efficiency, by roving teams of watchmen.) Thus, it was in Paris in 1666 that King Louis XIV created the first modern and efficient system of policing.

Neither the nature of the system nor the circumstances in which it was created can be understood without knowing the meaning that the word *police* had in France in the late 17th and early 18th centuries. Nicolas de la Mare provided a comprehensive definition in his *Traité de la police* (1722; “A Treatise on the Police”). For de la Mare, *police* first meant government, whether the government of the whole state or a particular institution within the state (e.g., the military or the clergy). It also denoted the public order in a city. Finally, it designated in a more technical sense the special authority of the police magistrate to establish all regulations necessary to promote public order in an urban environment. In 1765, Denis Diderot and Jean Le Rond d’Alembert’s monumental *Encyclopédie* defined *police* as “the art of providing a comfortable and quiet life” to all the Earth’s inhabitants, but particularly to city dwellers. That definition is echoed in Samuel Johnson’s *A Dictionary of the English Language* (1755), which states that the word *police* is borrowed from the French and means “the regulation and government of a city or country, so far as regards the inhabitants.” In other words, *police* meant governance—the preservation of security

being just one component of the police mandate. The political philosopher Montesquieu stressed these important features of policing in his influential work *The Spirit of Laws* (1748). Montesquieu also hinted at what was then a crucial feature of policing in France, the distinction between serious crimes and minor violations. Serious crimes—“felonies” in contemporary parlance—were tried by the various city parliaments of the realm, which acted as courts and provided the accused with due-process safeguards stipulated by the law. Minor, everyday violations were dealt with expeditiously by police officers and, if needed, by police courts that operated with very few procedural formalities.

The edict issued by Louis XIV proclaimed the office of lieutenant of police (the title later was changed to lieutenant general of police). Nicolas de La Reynie, a magistrate, was the first person to hold the post, from 1667 to 1697. Like most government offices, the police lieutenancy had to be bought from the French treasury—a system that favoured abuse, as the appointed officer naturally wished to recoup his investment.

Many factors led Louis to create the office. In 1660 there had been a plague, accompanied by food riots that threatened royal authority. Such events increased the general insecurity that pervaded Paris, a city of some 600,000 inhabitants. There were also administrative reasons: Louis wanted to centralize within a single office the policing responsibilities shared inefficiently between many officials. The lieutenant of police possessed regulatory, judicial, and executive powers. He also briefed the king on all noteworthy events in the realm, ranging from unusual crimes to matters considered threatening to state security (e.g., religious dissent). In a much-quoted remark, Lieutenant General of Police Antoine de Sartine boasted to King Louis XV that “whenever three people speak to one another on the street, one of these will be mine.” But as the outbreak of the French Revolution would show, Sartine’s claim proved to be an empty one.

The head of the police was assisted by 48 commissioners with judicial powers who were spread over the 20 districts into which Paris was divided. About 20 inspectors—their number varied—also aided the lieutenant general of police. By 1750 the commissioners commanded more than 1,000 troops, some of them mounted on horses, who performed deterrent patrols and night watches. The number of troops grew to more than 3,000 in the years preceding the revolution. In 1788 Paris had one police officer for every 193 inhabitants.

The key officials in the policing system of Paris were the inspectors. Although their status was much lower than that of commissioners, inspectors had to pay four times as much for their office. Because they managed things in the field, they were in a position to accept countless bribes, which complemented their minimal salary. Inspectors were responsible for various aspects of city life (e.g., morality and public health), but their highest priority was

public safety. During the 18th century, no fewer than three inspectors devoted their efforts to it. One of the most famous lieutenants general of police, Jean-Charles-Pierre Lenoir, wrote in a memoir that the three inspectors responsible for public safety secured more arrests than all the rest of the police combined. He explained that the inspectors roamed the streets at night with bands of police irregulars who performed mass arrests. To locate their targets, the inspectors relied on informers, some of whom (e.g., prostitutes) were required to perform this function. Such reliance on covert informers came to be a hallmark of French policing.

In time, other countries in continental Europe showed interest in the policing system of France. King Louis XVI commissioned Lieutenant General of Police Lenoir to write an account of the French police, particularly in Paris, for Empress Maria Theresa of Austria and her daughter Maria Carolina, the queen of Naples. Maria Theresa's son Holy Roman emperor Joseph II established a policing system similar to that of France in the vast territories under Austrian authority, including parts of Italy. Policing as a form of governance was most fully developed in 18th-century Germany—particularly in the kingdom of Prussia, where it was known as *Policeywissenschaft* (the science of government). The main object of *Policeywissenschaft* was the promotion of the economic well-being of the community and the establishment of an early incarnation of the welfare state.

Postrevolutionary French police

After the collapse of the French monarchy, the revolutionaries abolished the *maréchaussée*, only to reinstate it in 1791 under the name Gendarmerie Nationale. However, the constant turmoil of the revolutionary period prevented any further reforms until the rise of Napoleon Bonaparte and his minister of police, Joseph Fouché—the emblematic figure in the history of French policing. The revolutionary government created the general ministry of police in 1796 and appointed Fouché—a former delegate to the French National Convention who was known for his ruthlessness in quashing dissent—as minister. A consummate politician, Fouché won the confidence of the future emperor Bonaparte by helping him to carry out the coup d'état that brought him to power as one of three consuls in 1799. Supported by Bonaparte, Fouché reorganized the French police in legislation enacted in 1800. A police commissioner was appointed to every town with a population of at least 5,000, and all cities of more than 100,000 inhabitants fell under the supervision of a general police commissioner, who recruited his own personnel. Paris itself gained an institution reminiscent of the former lieutenancy of police, the independent Préfecture de Police, which endures today. Fouché also reorganized the Gendarmerie Nationale.

The lasting legacy of Fouché was his distinction—inherited in great part from the ancien régime—between “high” policing, with its focus on national security, and “low” policing, with its focus on crime. After an attempt on First Consul Bonaparte’s life in December 1800 (a bomb exploded near his carriage), protecting Bonaparte from his myriad political foes became Fouché’s primary task. Showing contempt for low policing—in his words, “the policing of prostitutes, thieves, and lampposts”—which he left to his subordinates, he restricted himself to high policing, and in that pursuit he made good use of informers. In his memoirs he explained that he essentially ruled by shaping public opinion: using scarce resources, he succeeded in making people believe that they were under constant surveillance.

Fouché can rightfully be called the originator of modern political policing. His methods, exported throughout Europe during Bonaparte’s conquests, were extensively used in Prince von Metternich’s Austria, which came close to becoming a police state. They were even adopted by Russia, a country that became France’s enemy. In 1811 Tsar Alexander I created a Ministry of Police on the French model; although the ministry was abolished in 1819, Tsar Nicholas I reinstated a secret Third Department for intelligence and an associated Corps of Gendarmes. Indeed, an 1826 memorandum by Russian general Aleksandr Khristoforovich, Count Benckendorff, which contained plans for the formation of a department of political police, was written in French.

The development of professional policing in England

At the same time that the lieutenant general of police was trying to maintain public order in Paris, the reactive and inefficient urban policing system of England, in which nearly unpaid public constables had to rely on private, stipendiary thief-takers to maintain an appearance of law and order, was falling apart. The hallmark of this system was its hybrid character: it blended discredited high constables with corrupt bounty hunters. Serious crimes and disorders in the cities reached intolerable levels, and the military and the yeomanry were called upon to quell rioting with increasing regularity.

In response to the high level of crime in London, the brothers Henry and John Fielding, both of whom served as magistrates at Bow Street Court, created a salaried constabulary in 1750. The organization, known as the Bow Street Runners, patrolled the highways and streets within the parish of Bow Street. (An act of Parliament later created several more offices based on the Bow Street model.) However, there was little popular or governmental support for the creation of a salaried, professional police force throughout England at that time.

By the late 18th century, a number of political leaders and writers had called for further reforms to the system of policing in London. The Scottish economist Patrick Colquhoun, rightly considered the architect of modern policing, provided theoretical support for police reforms in *A Treatise on the Police of the Metropolis* (1796), in which he applied business principles to police administration. Colquhoun also wrote *A Treatise on the Functions and Duties of a Constable*, which may be his most novel book. Its crucial innovation was its emphasis on the personal qualities needed to be a member of a constabulary force—notably, efficiency and zeal. Colquhoun also stressed the need for police integrity and other moral virtues.

One of the most significant experiments in police reform during this period was the creation in 1798 of the Thames River Police, the first regular professional police force in London. Organized to reduce the thefts that plagued the world's largest port and financed by merchants, the force was directed by Patrick Colquhoun and consisted of a permanent staff of 80 men and an on-call staff of more than 1,000. Two features of the marine police were unique. First, it used visible, preventive patrols; second, officers were salaried rather than stipendiary, and they were prohibited from taking fees. The venture was a complete success, and reports of crimes dropped appreciably. (In July 1890 the House of Commons passed a bill making the marine police a publicly financed organization.)

Yet, despite the efforts of Colquhoun and other reformers, powerful forces in England worked to maintain the status quo. Every alternative to the stipendiary system required substantial public funding, and raising taxes was not popular. In addition, provincial leaders viewed inefficiency and corruption as “London” problems and believed that the constabulary system worked satisfactorily in their areas. Finally, the very idea that government would become actively involved in policing violated the basic tenets of the dominant political philosophy of the era, which held that the government that governed least governed best. Concerned about the threat of political centralization and aware of the political abuses of the French, or “Continental,” police, many political leaders in England feared that a standing police force would be used for political purposes. Debate about the creation of such a force raged during the early part of the 19th century.

It is significant, however, that English politicians already had instituted a standing police force in Ireland, in response to serious challenges to English rule there in the 1780s. The Dublin Police Act (1786) created a professional uniformed and armed centralized police force in Dublin (then the second largest city in the British Isles) consisting of 40 horse police and 400 constables. The creation of the force encountered great resistance at first, as it was perceived to be patterned after the French Gendarmerie Nationale—and, in fact, it

was. The Dublin police force was reformed in 1795 and 1808. By 1812, when Robert Peel, the founder of modern professional policing in England, was appointed chief secretary for Ireland, Dublin was considered relatively free of crime.

Later, as home secretary, Peel sponsored the first successful bill to create a professional police force in England. The Metropolitan Police Act (1829) established the London Metropolitan Police Department, an organization that would become a model for future police departments in Great Britain, the British Commonwealth, and the United States. The "New Police," as the force was called, was organized into a hierarchy of ranks in military fashion. Ranking officers were to be promoted from within, on the basis of merit. The basic police officer, the uniformed constable, was unarmed and had limited authority. Unlike other municipal police forces in Ireland and continental Europe, the London Metropolitan Police Department was designed to maintain close ties with and to draw support from the people it policed. The primary function of the force was crime prevention, and officers were instructed to treat all citizens with respect. Crime was to be controlled and public order maintained by preventive patrols; police were to be paid regular salaries; and no stipends were to be permitted for solving crimes or recovering stolen property. Constables also inherited many functions of the watchmen, such as lighting streetlamps, calling time, watching for fires, and providing other public services.

Nicknamed "bobbies" (in reference to Peel), the metropolitan constables were not immediately popular. Most citizens viewed them as intrusive and illegitimate, and they were often jeered. However, they eventually overcame the public's misgivings, and they gained a worldwide reputation for the excellence of their leadership. Peel appointed Charles Rowan, an army colonel, and Richard Mayne, an Irish barrister, as the first commissioners of the force; both men were strong leaders and effective administrators who instilled in their officers the values embodied in a mission statement popularly known as Peel's Principles. According to those principles, police should demonstrate impartiality, focus on crime prevention, carry out their duties within the limits of the law, work in cooperation with the public so that the public voluntarily observes the law, and use force only to the extent necessary to restore order and only when other means have been exhausted. Contemporary police scholars consider Peel's Principles to be as relevant a guide for police departments in the 21st century as they were in the 19th.

The preventive tactics of the metropolitan police were successful, and crime and disorder declined. The force's pitched battles with (and ultimate victory over) the Chartists (see Chartism) in London and in Birmingham (where a group of London officers was specially dispatched) proved the ability of the police to deal with major public disturbances and

street riots. Yet, despite those early successes, the expansion of police forces to rural areas was only gradual. The Municipal Corporations Act of 1835 ordered all incorporated boroughs to set up police forces under the control of a watch committee, but police forces for the provinces were not mandated until 1856, when Parliament passed the County and Borough Police Act. The principles embodied in the Metropolitan Police Act—in particular, that officers should be uniformed, that command and control should be exercised through a centralized, quasi-military hierarchy, and that the authority of the police should derive not from politicians but from the crown, the law, and the consent of the citizenry—shaped the development of modern policing in Britain and in many other countries throughout the world.

Early police in the United States

The United States inherited England's Anglo-Saxon common law and its system of social obligation, sheriffs, constables, watchmen, and stipendiary justice. As both societies became less rural and agrarian and more urban and industrialized, crime, riots, and other public disturbances became more common. Yet Americans, like the English, were wary of creating standing police forces. Among the first public police forces established in colonial North America were the watchmen organized in Boston in 1631 and in New Amsterdam (later New York City) in 1647. Although watchmen were paid a fee in both Boston and New York, most officers in colonial America did not receive a salary but were paid by private citizens, as were their English counterparts.

In the frontier regions of the United States in the late 18th and early 19th centuries, there arose a novel form of the Saxon tradition of frankpledge: the vigilante. In areas where a formal justice system had yet to be established or the rudimentary policing apparatus had proved inadequate in the face of rampant crime, it was not uncommon for citizens (called "regulators") to band together in "committees of vigilance" to combat crime and to introduce order where none existed. This socially constructive form of vigilantism—lawlessness on behalf of lawfulness—and the question of when and where it degenerated into rank mob rule have been popular topics in American historiography.

Beginning in the early 19th century, large numbers of immigrants from Germany and Ireland settled in the steadily growing urban centres of New York City and Boston. Their cultures and lifestyles initially offended the sensibilities of Americans whose families, mainly from England and The Netherlands, had settled in the country in the previous century or earlier. Indeed, the existence of large immigrant populations in the crowded cities of the East was perceived as a threat to the very fabric of American society. Eventually, the political, economic, and social dominance of Americans of English and

Dutch extraction was eroded. Meanwhile, crime, rioting, and other disturbances became endemic in the cities.

The American response to growing urban unrest was twofold. Versions of the constable and night-watch system were tried, and voluntary citizens' groups were encouraged to try to solve urban problems. Reformers distributed religious tracts and Bibles, started Sunday schools, created such organizations as the Young Men's Christian Association, and presented themselves as moral exemplars to immigrants and the poor. By the mid-19th century, middle-class frustration with the deterioration of the cities had led to the passage of laws regulating public behaviour and creating new public institutions of social control and coercion—penitentiaries, asylums, and police forces.

The first police department in the United States was established in New York City in 1844 (it was officially organized in 1845). Other cities soon followed suit: New Orleans and Cincinnati (Ohio) in 1852; Boston and Philadelphia in 1854; Chicago and Milwaukee (Wis.) in 1855; and Baltimore (Md.) and Newark (N.J.) in 1857. Those early departments all used the London Metropolitan Police as a model. Like the Metropolitan Police, American police were organized in a quasi-military command structure. Their main task was the prevention of crime and disorder, and they provided a wide array of other public services. There were no detectives.

In part because of an ideological commitment to local control over most institutions, police power in the United States became the province of state and local governments, and each city established its own police department. The authority for policing was decentralized to the level of political wards and neighbourhoods, which developed relatively autonomous police units. The police established intimate relations with neighbourhoods and neighbourhood leaders and initially did not even wear uniforms. Middle- and upper-class reformers believed that one of the primary tasks of the police was to reestablish political and social control over a population racked by ethnic and economic rivalries. The tension between being closely linked to communities and being an instrument for reforming them inevitably resulted in a struggle for political control of the police—a struggle that was one of the dominant themes in the history of police in the United States.

Detective policing in England and the United States

The investigation of crimes was not a central function of the early preventive police departments in England and the United States. Yet, despite the high hopes of reformers when they created police forces, the number of preventable crimes was limited. As crimes continued to occur, police were pressured into accepting responsibility for investigations

and creating detective units. The London Metropolitan Police established the first detective branch in 1842; that unit became the Criminal Investigations Department (CID) in 1878. Detective units later were established in the police departments of many American cities, including New York City in 1857 and Chicago in 1861.

Investigators usually were former thieftakers or constables who had continued their stipendiary investigative activities after the creation of police departments. Although they brought investigative skills to the police, they also brought the bane of stipendiary police—corruption. In 1877 three of London's four chief inspectors of the detective branch were found guilty of corruption; that scandal led to the branch's abolition and its reorganization the following year as the CID. Chicago disbanded its criminal investigative division in 1864, as did Boston in 1870, and New York City suffered major scandals in 1877—all as a consequence of corruption. All those cities soon reconstructed their investigative units, but significant improvement in the professional conduct of detectives did not occur until well into the 20th century.

English and American policing in the late 19th century

After passage of the County and Borough Police Act in 1856, police departments spread throughout England. Provincial police were funded by both local and central governments. After the Home Office certified the quality of a provincial police department, the central government paid half the cost of local policing, and local taxes paid the rest. The dominant methods of provincial policing were foot patrols and criminal investigations.

Policing in the United States during the late 19th century was complicated by migration and immigration, which continually reshaped the ethnic and cultural makeup of cities, and by the radical decentralization of police authority within the cities. The major strength of the decentralized approach was that it brought the police and the public into close contact. Police knew the local citizens, and they were often recruited from the very neighbourhoods they policed. Such close contact allowed police to spot troublemakers, identify local problems, and provide various public services.

The decentralization of police jurisdictions to individual cities also created problems. It did not produce effective crime control, well-policed cities, or efficient public services. Although crime did not respect jurisdictional lines, police forces were required to do so; the policing powers of officers were restricted to the jurisdiction they policed and were not transferable to other areas. Thus, no police organization had jurisdiction over the American western frontier, though crime was rife there. A further problem was that there was no

national policy of policing in the United States, as there was in England following the adoption of Peel's Principles.

During the 19th century the authority of municipal police officers in the United States derived from the local political power, but their ability to gain the cooperation of citizens depended most often upon the abilities of individual officers. As a result, American police departments developed a personalized style of policing that allowed officers greater discretion than that used by the London bobby. This form of policing led to the creation of the myth of the "tough street cop" who handled all problems on his beat through the application of physical punishment—an image that still dominates police lore and media portrayals. During this period, however, American policing was characterized by corruption, inefficiency, political interference, and discriminatory law enforcement.

In response to intrajurisdictional crime waves in the second half of the 19th century, states enacted laws giving many business corporations the authority to create their own private police forces or to contract with established police agencies. The Coal and Iron Police of Pennsylvania was a company police force that later became notorious for its antilabour vigilantism. The most famous independent police force was the Pinkerton National Detective Agency. Created in 1850 by Allan Pinkerton, a political fugitive from Scotland whose father was a police sergeant, the Pinkerton agency provided a wide array of private detective services and specialized in protecting trains, apprehending train robbers, and strikebreaking and other activities directed against labour unions.

Attempts in the late 19th century to develop a coherent vision of an intercity police system were largely unsuccessful, and the police theory that did develop was formulated mainly in local political halls. As immigrant groups gradually gained political control of city wards and neighbourhoods, the link between the police and neighbourhood politics became closer. In some instances the relationship was so close that the police actually became adjuncts of local political machines. The linking of police and politics bred political and financial corruption and injustice. Police became involved in partisan political activity to ensure the election of particular candidates; they received "gratuities" for not enforcing unpopular vice laws; and they excluded strangers from social and political life.

The political and organizational problems associated with municipal policing in the United States prevented the development of professional policing according to the English model. By the end of the 19th century, middle- and upper-class citizens in many cities were trying to centralize local political power to end the control of some wards by ethnic minority groups. Reformers attempted to centralize services on a citywide basis, create a civil service

that would end political patronage, provide police chiefs with tenure in office, and transfer control of police to cities at large—or, if all else failed, to the state government.

The development of police in Australia

Australia, settled as a penal colony in 1788, initially used the English constabulary and watch-and-ward systems. Problems plagued those systems, however, because both constables and watchmen were often recruited from the ranks of convicts. Modeled after England's Metropolitan Police Act, the Sydney Police Act of 1833 led to the establishment of urban police forces. Police coverage was extended to rural areas in 1838, when each of the country's six states created its own police agency.

Although the state police encountered a lack of public acceptance and many of the same problems of police in England and the United States, their task was complicated by additional responsibilities. They were mandated not only to capture criminals but also to inflict corporal punishment on convicted persons. Australian police duties also included the enforcement of health and welfare provisions of the law.

The development of police in Canada

Canada's earliest legal traditions can be traced to both France and England. Quebec city followed the early models of French cities and created a watchman system in 1651. Upper Canada, later renamed Ontario, adopted English traditions and established both a constabulary and a watch-and-ward system. The English system was imposed on French areas after 1759. Using England's Metropolitan Police Act as a model, Toronto created a police department in 1835, and Quebec city and Montreal followed suit in 1838 and 1840, respectively. In 1867 provincial police forces were established for the vast rural areas in eastern Canada.

The North West Mounted Police (renamed the Royal Canadian Mounted Police [RCMP] in 1920) was created in 1873 to police the western plains. The original 300 officers initially were assigned the task of eliminating incursions by whiskey-trading Americans who were inciting Canadian Indians (now known as First Nations) to acts of violence, and later the force spearheaded attempts to make the Canadian frontier an integral part of Canada. It protected immigrants and fought prairie fires, disease, and destitution in the new settlements.

The Canadian mounted police represented a significant departure from Anglo-Saxon policing traditions. Similar in organization, style, and method to the models of France and Ireland, they operated more like a military organization than a traditional police force.

Strong leadership ensured that they operated with restraint and within Canadian political traditions.

Developments in policing since 1900: the United States example

The struggle for political control of the police in the United States gave rise to a distinctive strategy of policing that became influential throughout the Western democracies in the 20th century. The strategy involved new managerial techniques, integrated sources of authority, innovative tactics, and a narrowed definition of police work. Many of the reform leaders were police administrators who desired to make policing more professional. They sought to improve the administration and organization of their departments while at the same time isolating them from the corrupting influence of local politics. The strategy eventually led to the rejection of the Peelian principle that effective policing needed community approval and support. Instead, administrators adopted an insular view of professionalism that emphasized crime fighting as the primary function of police work. That rejection of the alliance between the community and police and the narrowing of the mission of police work would lead to disastrous consequences in later decades.



Policeman at a street meeting in San Francisco, photographed by Dorothea Lange, 1936.

Library of Congress, Washington, D.C.

The period from about 1900 to 1920 was a tumultuous time for police in the United States: progressives battled entrenched ward and “machine” leaders for political control of cities; labour unrest and concerns about communist influence preoccupied many politicians and police officials; political and economic corruption was widespread at all levels of government; and the Prohibition movement was becoming a political force. Riots, mass demonstrations, and bombings were not unusual. The limited ability of local police departments and private detective agencies to handle such problems eventually forced federal and state governments to create their own police organizations.

Federal and state police

The United States Secret Service was created in 1865 to prevent counterfeiting. Never numbering more than a few dozen agents during the 19th century, the agency operated in the traditions of the previous century. During the 1890s

the Secret Service occasionally was called upon to guard the president, a duty that did not become permanent until 1901.

The Bureau of Investigation—which later developed into the Federal Bureau of Investigation (FBI)—was created in 1908. Many members of the U.S. Congress had opposed the creation of a secret investigatory agency. In this case the concern was more than ideological: the Secret Service had been investigating corruption in Congress as well as in governmental agencies, and many congressmen were wary of increasing the president's investigatory powers. Nevertheless, Pres. Theodore Roosevelt issued an executive order directing his attorney general, Charles Bonaparte, to bypass the reluctant politicians and create the bureau after Congress had adjourned. The Bureau of Investigation began with a modest mandate to investigate antitrust cases, several types of fraud, and certain crimes committed on government property or by government officials.

In 1920 the Department of the Treasury created the first sizable federal police agency. Charged with enforcing Prohibition, the “T-Men,” as they came to be known, grew to a force of approximately 4,000 officers during the peak of the crusade against alcohol.

During the early 20th century, some states began to create police forces, as other states (such as Texas and Massachusetts) had done on a smaller scale before then. In 1905 Pennsylvania established the first modern state police department. Formed with the professed purpose of fighting rural crime, state police in Pennsylvania (and later in other states) were used primarily to circumvent corrupt or inefficient local police forces and to control strikes in areas where local police were sympathetic to unions. Pennsylvania's lead was soon followed by other states, including New York (1917), Michigan, Colorado, and West Virginia (1919), and Massachusetts (1920). Regarded as models of efficiency and honesty, state police were the prototypes of what came to be known as professional police organizations: highly disciplined, narrowly focused, centrally administered, and organized into a quasi-military hierarchy of command and control.

Early reform efforts

Efforts to reform the police system during the late 19th century originated from outside the occupation of policing. During the early 20th century, however, pressures for reform were initiated from within the police system itself. Those efforts were assisted by American scholars of police administration, who urged the adoption of a system of long-term professional administration by experts responsible to a public authority that would be immune to political interference. During this initial period of reform, the Boston Police Department, under the leadership of Stephen James O'Meara (1906–18), came closest to

implementing that administrative ideal. O'Meara was a strong chief executive who used the power of his office to create a high standard of integrity and legality in his department. As a result of his example, the strong chief executive as an agent of change became a characteristic of police administration in other cities. In 1919, however, the Boston Police Strike devastated Boston's police department and spoiled O'Meara's legacy.

One factor motivating police reform in the United States in the 1920s and early '30s was Prohibition. The nationwide ban on the manufacture, sale, and transportation of alcohol led to a vast black market in the major cities and to the rise of powerful criminal gangs that corrupted and intimidated political leaders and police. The decline of public confidence in the police was reflected in their portrayal in Hollywood as the inept and venal Keystone Kops.

The founder of the professional policing reform movement in the United States was August Vollmer. Beginning his career in 1905 as the head of a six-person police department in Berkeley, Calif., Vollmer ultimately produced a vision around which the country's police forces rallied. He promoted the application to policing of concepts from the study of management, sociology, social work, psychology, and technology, and he was the first major police official to argue that police officers should have a college education. In 1916 Vollmer helped to create at the University of California, Berkeley, the first university-level police educational program in the United States. His police department attracted many university students, including Orlando W. Wilson, who became Vollmer's protégé and the administrative architect of the new model of professional policing.

Vollmer and his colleagues also were concerned about the broad social issues of policing. Reform-minded police saw changes in morals, increasing crime and corruption, and later the Great Depression as symptoms of the erosion of such basic social institutions as the family, churches, schools, and neighbourhoods. Accordingly, Vollmer viewed the police as a vanguard force for socializing the country's youth. He believed that, while police should continue their traditional law enforcement role, when necessary they should arrest and process delinquent youths through juvenile and adult courts. He argued that special juvenile bureaus should be created to handle problems of children and families, that police should take a more active role in casework for social agencies, and that police should exploit their intimate knowledge of the community and place themselves at the hub of community activities with youth and families.

In addition to giving police an ideal to strive toward, Vollmer also helped to transform the International Association of Chiefs of Police, founded in 1893, into a truly national police organization. Under its auspices he created the Uniform Crime Reports program, which

became (after it was taken over by the FBI in 1930) an important indicator of the annual national crime rate and of the performance of local police departments. Finally, through his work on the Wickersham Commission, which was set up to examine law observance and enforcement in the era of Prohibition, Vollmer exposed to public scrutiny many unconstitutional police practices, particularly the use of physical or mental torture—the “third degree”—in the interrogation of suspects.

The professional crime-fighting model

When J. Edgar Hoover became head of the Bureau of Investigation in 1924, he laid the groundwork for a strategy that would make the FBI one of the most prestigious police organizations in the world. The public’s opinion of detectives was ready for change. Inspired by detective-heroes in the novels and short stories of Charles Dickens, Edgar Allan Poe, and Sir Arthur Conan Doyle, readers developed a new interest in real-life accounts of detectives’ exploits. Hoover set out to make the fictional image of the detective into reality. He eliminated corruption by suspending bureau investigations requiring considerable undercover or investigative work (e.g., vice and, later, organized crime) and by creating a strong bureaucracy that emphasized accountability. He also established educational requirements for new agents and a formal training course in modern policing methods. In 1935 he created the FBI National Academy (originally the Police Training School), which trained local police managers. The academy extended the influence of the FBI—and of Hoover himself—over local police departments while at the same time contributing to the exchange of professional expertise. Hoover concentrated the bureau’s resources on crimes that received great publicity and were relatively easy to solve, such as bank robberies and kidnappings, and he assiduously cultivated the public image of the “G-Man” (the “government man”) as the country’s incorruptible crime fighter. The national academy, its scientific crime laboratory (created in 1932), and the Uniform Crime Reports compiled by the bureau were critical factors in establishing crime fighting as the primary mission of police forces in the United States.

As a result of Hoover’s changes, Vollmer’s idealistic vision of police work, with its strong emphasis on social work, was replaced with Hoover’s strategy. Instead of broadening police responsibilities as Vollmer had proposed, the new reformers narrowed them to concentrate on fighting serious street crimes. They also moved to sever the close ties between officers and neighbourhoods. Assignments were changed often; officers no longer patrolled areas in which they lived; and, most important, the police began to patrol in automobiles. To insulate police from political influence, civil-service systems were created to hire and promote officers. The basic source of police authority was changed from law and politics to law only (especially criminal law). Finally, administrative decentralization was abandoned in

favour of centralized citywide bureaucracies characterized by standardized operating and training procedures and minimal discretion at all levels, a strict division of labour (usually into separate divisions responsible for patrolling, investigating, and providing support services), and a military-style command and control structure. The basic strategy of policing shifted to what became known as the “three Rs”: random preventive patrols, rapid response to calls for service, and reactive criminal investigation. That model came to dominate policing in the United States. After World Wars I and II, as American political influence grew, the model was adopted in other countries.

The full motorization of the American police was largely accomplished after World War II, when the automobile became a more important part of American life. The rationale for using automobiles in preventive patrols was manifold. The random and rapid movement of police cars through city streets would create a feeling of police omnipresence that would deter potential criminals and reassure citizens of their safety. Rapidly patrolling police also would be able to spot and intercept crimes in progress. The use of radios in police cars increased the value of automobile patrols, because it enabled rapid responses to calls for assistance. Police throughout the United States set an optimum goal to arrive at the scene of a crime within three minutes of an initial report.

Ironically, Wilson, Vollmer’s protégé, became the architect of the new crime-fighting model. As chief of police in Fullerton, Calif., and Wichita, Kan. (1928–39), professor and dean of the School of Criminology at the University of California, Berkeley (1939–60), and superintendent of the Chicago Police Department (1960–67), he supported the development of crime-focused police departments and specifically the use of motorized patrol units and radio communication systems. Wilson’s *Police Administration* (1950) was for many years considered the bible of American policing.

Wilson’s strategy of policing came to fruition during the 1960s. Indeed, in 1967 the President’s Commission on Law Enforcement and Administration of Justice, which was critical of the strategies of other criminal justice agencies, endorsed both preventive patrols and rapid responses to calls. The commission concluded that the basic strategy of policing was satisfactory and that improvement would come as a result of fine-tuning police organizations, equipment, and personnel. The commission noted that preventive patrols elicited hostility from some communities, especially those of ethnic minorities, but argued that the patrols’ anticrime potential was so great that they had to be maintained. Police community-relations programs were proposed to offset the negative results of preventive patrols.

Despite its initial promise, the professional crime-fighting model of policing had many drawbacks. The strategies of motorized preventive patrols, rapid responses to calls, and emergency on-demand systems (such as the 911 system in the United States) resulted in the creation of “incident-driven” patrol units whose dominant task in many cities was responding to calls for service. The responsibility of citizens for crime prevention was thus reduced to that of an activator of police services. In addition, the complete motorization of police patrols isolated officers from the communities and citizens they served. Police interacted with citizens primarily in situations where a crime had been committed (or alleged) and officers were expected to take some action to enforce the law. Those often negative encounters tended to increase hostility between police and citizens, especially in minority communities, and to reinforce negative stereotypes on both sides. Finally, under the professional model, police departments tended to become inflexible and more concerned with their own needs than with those of the communities they served.

Meanwhile, in Britain, Peel’s police strategy enjoyed success during the 20th century. Foot patrols continued in most cities, which lacked the suburban “sprawl” of American cities. Although “fire brigade” policing, as many British characterized the rapid-response orientation of American police, had some influence in Britain, it was counterbalanced by the continued emphasis on the neighbourhood bobby.

George L. Kelling William Francis Walsh Jean-Paul Brodeur

The crisis of policing

In the 1960s and '70s, policing in the United States underwent a crisis. Crime continued to rise despite massive financial outlays for more officers. From 1963 to 1968 hundreds of urban riots and violent demonstrations occurred. The depth of hostility that minority groups, especially African Americans, felt toward police surfaced during those disturbances. African Americans resented the sometimes harsh tactics used by police, and many believed that the police themselves were often the original cause of the violence. Meanwhile, police arrests and beatings of participants in civil rights and antiwar demonstrations—some of which were broadcast live on national television—were widely condemned. In 1967 President Lyndon Johnson created a national commission to study the causes of urban riots in the country. The commission, finding that the ultimate cause was racism, concluded in a famous passage that the United States was “moving toward two societies, one black, one white—separate and unequal.” It also found that police tactics, such as the unwarranted use of deadly force, often made the riots worse. Yet, despite the violence in such cities as Los Angeles, Chicago, New York City, and Detroit, it can fairly be said that during this period the fear of crime escalated more rapidly than crime itself. Many

citizens took measures to defend themselves and their homes and stayed away from parks and other public facilities; many even fled the cities completely.

In the late 20th century, urban rioting in ethnic minority communities was also a serious problem in Britain. The Scarman Report (1981), which resulted from an official inquiry into rioting in the Brixton neighbourhood of London, concluded that police had become too remote from their communities, that local citizens should have more input into police policy making, and that police tactics should be more sensitive to the growing cultural pluralism of Britain's major cities. At the same time, the report endorsed the traditional view that the primary duty of the police is to maintain public order. Nevertheless, periodic rioting continued to plague such cities as Bristol, Birmingham, and Bradford in the last decades of the 20th century.

In response to the crisis in policing, several significant research studies were undertaken. In the 1950s and '60s, both civilian and police groups assumed that the primary activity of police officers was fighting crime (e.g., by making arrests)—and that crime fighting by police involved little discretion. New research on how police actually functioned, however, revealed that crime fighting constituted less than one-fifth of patrol activities. The remainder included resolving conflicts, providing emergency and other public services, and maintaining order. Often citizens called on the police to perform a variety of functions not specified in the law or in police department manuals and procedures. Moreover, it was discovered that police officers regularly used discretion in handling events, criminal or otherwise, and that the use of discretion was an essential ingredient of policing.

American studies of the effectiveness of preventive automobile patrols found that, despite the commitment of substantial amounts of police time, relatively little crime-fighting activity resulted directly from police patrols. More than nine-tenths of arrests, for example, resulted from citizens' requests for police action. Later studies, such as one in Kansas City, Mo., in the mid-1970s, found that preventive patrols by automobile did not effectively reduce crime, increase public satisfaction with police, or decrease citizens' fear of crime. Moreover, during the late 1970s several studies on the efficacy of rapid response to calls for service found that it had little impact on crime prevention or criminal apprehension and that alternative approaches might produce greater levels of citizen satisfaction. Such findings led to an increased questioning of the professional crime-fighting model of policing and helped to usher in a period of unprecedented experimentation and openness to change.

Due process and individual rights

Just as the dominant model of policing was being challenged, the U.S. Supreme Court initiated a “rights revolution” that placed new restrictions on police searches and interrogations. In a series of rulings on due process that applied the Bill of Rights to state actions, the court extended the exclusionary rule to the states, forbidding the use at trial of evidence obtained as a result of an unlawful search and seizure by police (*Mapp v. Ohio* [1961]); held that a suspect is entitled to the presence of an attorney during interrogation at a police station and that denying a request for counsel is a violation of the suspect’s constitutional rights that renders any statements made by the suspect inadmissible in court (*Escobedo v. Illinois* [1964]); and required that a suspect be informed of his rights before the police began a custodial interrogation (*Miranda v. Arizona* [1966]). Those decisions directly affected the day-to-day investigative activities of police. They also helped to improve the professionalism of police officers, because departments reacted to their increased liability by raising recruitment standards, improving legal training for officers, and establishing procedures for investigating officers to follow in the handling and arresting of suspects.

Community policing

Meanwhile, many police departments in the United States sought to increase their effectiveness by improving their relationships with the communities in which they worked. Community relations programs were established by many departments in the mid-20th century, and the “team policing” strategy was adopted in New York City and other areas in the 1970s. Later, in the 1980s and '90s, an increasing number of departments employed an approach known as community policing, which many observers saw as a revival of the more socially conscious policing methods of Peel and the London Metropolitan Police.

Beginning in the 1940s, some police departments created communication and education programs aimed at ethnic minority communities. Those initiatives were based on the ideas of the American sociologist Joseph D. Lohman, who studied the interaction of police and minority groups, and the psychologist Gordon W. Allport, who studied the nature of prejudice. One goal of such programs was to enable police to understand and overcome their prejudice toward minorities and thereby improve their treatment of members of those groups. Although the programs drew support from the National Conference of Christians and Jews (now the National Conference for Community and Justice) and the National Institute on Police and Community Relations, most of them took the form of specialized community-relations units staffed by minority officers. However, those units received little support from rank-and-file police officers and eventually degenerated into public-relations efforts aimed at overcoming community dissatisfaction with police tactics.

Their failure was made apparent by the violent confrontations between police and minority groups during the civil disturbances of the 1960s.

Team policing was introduced in the early 1970s in New York City. Patterned after earlier efforts in Britain, the approach emphasized the delivery of round-the-clock decentralized patrol services by a team of officers, usually under the direction of a sergeant or lieutenant, in a specific geographic area. Team commanders were responsible for conditions in the patrol area, regardless of whether they were on duty. Deployment decisions were made in consultation with local leaders and residents. The fixed territorial responsibility of the teams, it was hoped, would break down barriers between residents and police, enable police to provide services tailored to the needs of residents, and improve the job satisfaction of police officers. However, studies of the effectiveness of team policing in several cities in the United States failed to show an improvement over the crime-fighting model. Resistance by police administrators, resentment by officers on the street, and inadequate training eventually contributed to the demise of team policing by the mid-1970s.

During this period a new wisdom began to emerge, one that fully recognized the complexity of the tasks that police perform in society. Police administrators as well as researchers and other outside observers maintained that police deal with many behaviours that are not defined as criminal, that many of the functions of police concerning noncriminal behaviour are as important as their traditional tasks of enforcing public order, that there are many methods that police use to perform their duties, that police must be afforded discretion in carrying out their duties (particularly regarding whether to arrest a suspect), that a police force that is not in close contact with its community will have difficulty controlling crime and disorder, and that police must be accountable to elected officials and to the public.

The new wisdom led in the 1980s to the gradual displacement of the professional crime-fighting model by a set of strategies and programs collectively known as community policing. The basic premise of community policing is that the police should involve the community in their efforts to prevent and control crime and to solve communitywide problems. Community policing departs from the crime-fighting model by making the police officer a neighbourhood problem solver rather than an incident-driven crime fighter. Police officers assigned to community-policing duties are expected to maintain close contact with the community and to become familiar with its residents and its problems through foot patrols, community meetings, and service at police substations. The same familiarity with the community is also expected of police administrators.

Advocates of community policing believe that the approach mobilizes a variety of resources to solve problems that affect community safety and stability over the long term. They also contend that the more traditional crime-fighting model allows problems to fester by simply responding to incidents as they occur rather than addressing their underlying causes.

A considerable body of research also supported the move toward community policing. The American legal scholar Herman Goldstein argued in *Problem-Oriented Policing* (1990) that rapid-response, incident-based policing paid insufficient attention to the underlying community problems that create the majority of the incidents to which police departments must respond. In "Broken Windows: The Police and Neighborhood Safety," a groundbreaking article published in 1982, the American political commentator James Q. Wilson and the American criminologist George L. Kelling maintained that the incidence as well as the fear of crime is strongly related to the existence of disorderly conditions in neighbourhoods. Using the metaphor of a broken window, they argued that a building in a constant state of disrepair conveys the impression that it has been abandoned and encourages criminals or delinquents to damage it further. As the building is eventually destroyed, nearby residents grow less concerned about their neighbourhood and community, which leads to an increase in incivility and disorderly behaviour. Such behaviour in turn creates public fear and encourages those with means to leave the neighbourhood, which eventually becomes crime-ridden and unlivable for those who remain. According to Wilson and Kelling, the crime-fighting model of policing ignores the law enforcement equivalent of broken windows.

Wilson and Kelling argued that police departments should institute patrol tactics designed to counteract disorder and to preserve the community in troubled neighbourhoods. The visibility of police in those areas deters potential criminals and generates goodwill among law-abiding citizens, who are encouraged to assert control over their public spaces. The problem of crime and community safety then become the responsibilities of both residents and police.

Community policing became part of a national strategy to combat crime in the United States in the 1990s. Legislation enacted in 1994 provided for the hiring of 100,000 new community police officers and the establishment of the Office of Community Oriented Policing Services, under the jurisdiction of the Department of Justice. By the early 21st century, some two-thirds of local police departments in the United States, employing some nine-tenths of the country's police officers, had a community-policing plan of some type.

(In many police departments, organized subunits, rather than the entire police force, carried out community policing.)

Despite its widespread adoption, community policing has faced obstacles. Some police administrators have been reluctant to support programs that require officers on the street to exercise considerable discretion and authority, especially in departments where such officers lack experience or are otherwise ill-prepared to identify and address complex community problems. Other administrators have continued to believe that the more traditional crime-fighting model, despite its deficiencies, is still an effective overall policing strategy.

Compstat

In the late 20th century, police agencies and departments throughout the United States and in some areas of Britain began adopting computerized systems, known as Compstat (computerized statistics), that could be used to plot specific incidents of crime by time, day, and location. By revealing previously unnoticed patterns in criminal activity, Compstat enabled police departments to allocate their resources more effectively, and it was credited with significant decreases in crime rates in several of the cities in which it was used. Compstat became so widely used (in the United States) that many police administrators began to regard it as the basis of a new model of policing for the 21st century. Be that as it may, Compstat has proved to be compatible with policing strategies based on the crime-fighting model, the community-policing model, or a mixture of the two.

William Francis Walsh

Police and counterterrorism

In the early 21st century, terrorism, particularly the September 11 attacks in the United States, profoundly affected the nature of policing. Although police had been combating terrorism long before 2001, the magnitude of the September 11 attacks and of subsequent acts of terrorism in other countries (including Spain, Britain, Morocco, and Egypt) showed that conventional tactics were no longer adequate. Police departments would have to work more closely with national security agencies, and many police resources would have to be redirected toward the surveillance of suspected terrorists.

From about 1960 to about 1980, police in Europe confronted a wave of terrorism that swept over several countries. Although some of the organizations involved are still active—for example, the Basque ETA in Spain—police eliminated most of them, such as the Front de Libération du Québec in Canada, the Red Army Faction in what was then West Germany,

and the Red Brigades in Italy. (The remnants of the Red Brigades splintered into two factions: the New Red Brigades/Communist Combatant Party and the Red Brigades/Union of Combatant Communists. Although occasionally active, these splinter groups have too little in common with the original Red Brigades to be considered their heirs.) The police owed their success mostly to their ability to infiltrate the terrorist networks with human sources, who then cultivated informants. To a large extent, police used the same methods against terrorism that they had successfully used in certain countries against organized crime, with some significant exceptions. They were at times granted emergency powers that allowed them to detain suspects for longer periods for questioning. Some states also instituted policies against terrorist sympathizers, such as the *Berufsverbot* (“work ban”) in West Germany, which prohibited a person identified as a sympathizer from working in government service. (The *Berufsverbot* is still used in Germany today.) Police operatives also resorted to various dirty tricks (e.g., break-ins, intimidation, the publication of fake terrorist communiqués, the spread of false and destructive rumours about individuals, and entrapment), euphemistically called “destabilization tactics,” that were of questionable legality. (Those abuses were investigated and made public by various commissions of inquiry.)

After the September 11 attacks, it was recognized that the changed nature of terrorism would require corresponding changes in counterterrorism tactics. First, terrorism was more difficult to combat. Because terrorism had become truly global, the languages and customs of terrorists often differed from those of local police, making infiltration more difficult. Moreover, although the community-policing movement had enabled police to develop closer ties to the communities they served, it also sometimes created feelings of allegiance that discouraged police from sharing knowledge of their communities with intelligence agencies. Second, the scale of devastation caused by terrorist attacks like those of September 11 made them seem more like acts of war than crimes. Especially in the United States, the perception of terrorism as a military as well as a law enforcement problem only complicated the task of developing effective policing strategies against terrorists.

Cooperation between law enforcement agencies and national-security and intelligence agencies in investigations of terrorism also has been hampered by institutional factors of longer standing. Police investigators and intelligence collectors often do not share common goals: investigators aim at prosecuting an offender, whereas intelligence officers hoard intelligence until they can wipe out whole terrorist networks. The so-called “wall” between law enforcement agencies, such as the FBI, and the intelligence community is no myth. The sharing of information is made even more difficult by the fact that members of

local law enforcement agencies, whose contribution may be vital, may not possess the level of security clearance necessary for access to sensitive intelligence. Such problems are only magnified when the law enforcement and intelligence agencies involved are located in different countries.

The surveillance and arrest of terrorist suspects require significant police manpower and resources, as does preparation for future terrorist attacks. As a result, some observers fear that the reform programs instituted since the 1980s will be underfunded and will grind to a halt.

Jean-Paul Brodeur

National police organizations

Police organizations around the world form a wide spectrum: the national police forces of most countries in continental Europe represent extreme cases of the centralized model, and the police system of the United States represents the decentralized extreme. In between are hybrid cases, such as Canada. Although two provinces of Canada, Ontario and Quebec, have decentralized police systems, a single force, the Royal Canadian Mounted Police, has jurisdiction in the rest of the country. Police forces also may be classified as centralized or decentralized relative to each other. For example, police organizations in the United Kingdom—including about 50 regional police forces in England, Scotland, and Wales—are generally considered decentralized, but when compared with the tens of thousands of police forces in the United States, they appear fairly centralized. However, the United Kingdom also has a domestic security service, MI5, that bridges the customary gap between intelligence gathering and criminal policing. Attempts to bridge that gap are a feature of more centralized policing systems.

Centralized police organizations

Western continental Europe favours the centralized model of policing, as do Russia and other eastern European countries. However, there is considerable variation among the centralized police organizations of western European countries. Most fall under one of four categories: (1) complete centralization in one police force; (2) high centralization, with a small number of national police forces; (3) regional centralization under federal authority; and (4) decentralized local policing, with a strong national agency. Other commonalities among European police systems are a strong domestic security arm that is integrated partly or wholly into the police apparatus and unarmed municipal police forces that enforce various local bylaws and regulate traffic.

Sweden is an example of a country with a completely centralized police force: it has only one national police force, the Rikspolis. It comprises a number of police authorities, each of which is responsible for policing one of the counties of the country. The counties are further subdivided into police districts, of which there are several hundred.

France, Italy, and Spain exemplify the model of high centralization with a small number of national police forces. There are two national police agencies in France: the National Police and the Gendarmerie Nationale. The National Police operates in cities, whereas the Gendarmerie Nationale polices rural areas and small towns. A third force, the State Security Police (French: *Compagnies Républicaines de Sécurité*), is a part of the National Police but is organized like a military unit. Italy's national police agencies include the State Police, which is responsible for public order and security; the *Carabinieri*, which functions both as a military police force and as a civil police force; and the Financial Police, or Treasury Guard, which deals with economic crimes such as tax evasion and counterfeiting. Spain's police system consists of two national police agencies: the National Police, which is responsible for most police duties, and the Civil Guard, which is a militarized force that patrols rural areas and also specializes in the protection of national security (counterterrorism) and crowd control.



Officers of the State Security Police
(*Compagnies Républicaines de Sécurité*)
performing an order-maintenance exercise,
France.

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Germany and The Netherlands typify regional centralization under federal authority. Germany has two federal police forces: the Federal Criminal Police Office, whose role is similar to that of the FBI in the United States, and the Federal Border Guard. However, the basic policing structure rests on the state or province police forces, which are similarly structured. In The Netherlands, the National Police Agency operates under the authority of the Ministry of the Interior, but the regional police forces provide the backbone of the policing system. There is also a military police force, the Royal Dutch Constabulary (Dutch: *Koninklijke Marechaussee*), which operates in rural areas and

polices the Dutch borders.

The Belgian police system features a federal police force, which brought together the former gendarmerie and the national criminal investigation unit, and numerous local police forces, each of which is responsible to a mayor. Belgium's system of policing is closer to an Anglo-American decentralized model than the other European centralized models.

The police forces in Russia and the former Soviet-bloc countries of eastern Europe entered a state of transition after the collapse of the Soviet Union in 1991. The Soviet Union was policed by a single centralized police force, the Militia, that operated in the various territorial divisions of the country under the rigid authority of the Ministry of the Interior (MVD). After the former Soviet republics gained independence, many of the constituent parts of the Militia also became fully independent, while other parts remained in the Russian Federation. The police forces within the states of the Russian Federation enjoy some independence from the federal government. Although much of the centralized police apparatus of the former Soviet Union is still in place, it is weaker; similar institutions in the former Soviet-bloc countries also have been weakened to varying degrees.

Decentralized police organizations

The United States has what may be the most decentralized police system in the world, characterized by an extraordinary degree of duplication and conflicting jurisdiction. Although every community is entitled to run its own police department, none can prevent federal or state officials from conducting local investigations into offenses over which they have jurisdiction. There are five major types of police agency: (1) the federal system, consisting of the Department of Homeland Security and the Department of Justice, including the FBI, the Drug Enforcement Administration, the Secret Service, the Postal Inspection Service, and many others; (2) police forces and criminal investigation agencies established by each of the 50 states of the union; (3) sheriffs' departments in several thousand counties, plus a few county police forces that either duplicate the sheriffs' police jurisdictions or displace them; (4) the police forces of about 1,000 cities and more than 20,000 townships and New England towns; and (5) the police of some 15,000 villages, boroughs, and incorporated towns. To this list must be added special categories, such as the police of the District of Columbia; various forces attached to authorities governing bridges, tunnels, and parks; university, or "campus," police forces; and some units that police special districts formed for fire protection, soil conservation, and other diverse purposes. Although there are tens of thousands of police forces throughout the United States, the majority of them consist of just a few officers.

The existing American police structure to some extent reflects public opposition to any concentration of police power. It has been argued that the nation would suffer, and local governments would be enfeebled, should all offenses become federal offenses and all police power be transferred to Washington, D.C. Local problems require local remedies, according to this view. On the other hand, it also has been argued that the integration and consolidation of police forces would reduce costs and increase efficiency. As this debate

continues, many small municipalities in the United States have chosen to maintain their own police forces, while others have joined together to form regional police departments.

Other countries with federal political structures have federal police forces as well as state forces that operate on the same principles as those observed in the United States. In Australia, for example, each of the six states has its own police force and its own laws but does not legislate in matters pertaining to federal organizations and cannot pass laws at variance with those of the commonwealth. Yet even countries like Australia have attempted to move away from the fragmentation that is characteristic of American policing. The model that many countries have adopted blends strong central leadership with a limited number of regional police forces, as in the United Kingdom.

After India's accession to independence in 1947, the minister of home affairs, Vallabhbhai Jhaverbhai Patel, established the All-India Services for public administration. One of those services is the Indian Police Service, which trains officers for the police forces of the states and big cities, such as New Delhi and Mumbai (Bombay). Although police leaders are trained at least in part by the Indian Police Service, the various states and main cities have different police forces with their own specific features, making for a complex policing structure. India also has central security agencies, such as the Border Security Force, the Central Reserve Police Force, and the National Security Guard, which specialize in counterterrorism. Although they are national services, their members may be dispatched to particular areas to help solve local problems.

The police forces of Japan are deployed in a number of regional police prefectures. Each regional force has a certain degree of autonomy. The police operate out of small police posts—*koban* in cities and *chuzai* in rural areas—and maintain an unparalleled closeness to the communities they serve. The central government's National Police Agency exerts strong leadership over local police forces and promotes common standards; it also engages in secret intelligence gathering. Japanese policing methods have been thoroughly studied by Western scholars and were influential in the development of community policing in Anglo-Saxon countries. Police ministrations and storefronts, for example, were in part modeled on the *koban*.

The police system of Brazil, a federal state, also features a balance between a central authority and a limited number of regional police forces. The police force of each state is under the authority of the state's Secretariat for Public Security. Like many other countries of Latin America, Brazil also possesses a military police force that is controlled by the armed forces, as are the gendarmeries in Europe. Hence, although military police are deployed in the various Brazilian states, they report to the headquarters of the various military regions.



Officers of the Metropolitan Police Department, Tokyo, operating out of a small police post called a *koban*.

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Police organizations in Africa

Because of political fragmentation and the disruption caused by numerous covert or overt civil wars, it is difficult to give an account of policing in Africa.

Enduring civil conflict has generated a breakdown of law and order in such countries as Rwanda, Liberia, Sierra Leone, Côte d'Ivoire, the Democratic Republic of the Congo, and Somalia despite the nominal existence of policing organizations. In some countries, such as Nigeria, endemic police corruption fundamentally undermines all attempts to bring justice to the population. In countries with very high rates of violent

crime, such as South Africa, there is a massive resort to private policing of every kind.

In fact, although many African countries have national police forces, policing functions are commonly performed by the private sector and sometimes by the populace itself. In addition, all countries in Africa depend to various extents on the military for the maintenance of order and for crisis intervention. They also have created national agencies responsible for state security.

European colonial powers established policing systems in both North Africa and sub-Saharan Africa, and the legacy of colonialism accounts for many differences in national policing systems on the continent. In Algeria, Morocco, Mauritania, and Tunisia, policing systems replicate the centralized police model applied in France, while Libya follows the centralized Italian model. The countries of West and Central Africa that were colonized by France, Belgium, and Germany also have centralized police systems. In general, the police forces in those countries are tripartite, comprising an independent municipal police force for the capital city, a national police force for all other cities, and a militarized gendarmerie for the countryside. Countries that fell under the British sphere of influence, such as Egypt and Kenya, tend to have less-centralized police systems, with both regional police forces and municipal police organizations in large cities. Unlike other former British colonies, South Africa is policed by a single force—the South African Police Service (SAPS)—which conducts criminal investigation, intelligence, and forensics at the national level and is also deployed in the provinces of the country. Whether operating at the national or provincial levels, SAPS is under the command of a single national commissioner. These generalizations on policing in Africa allow for other exceptions as well; for instance, Eritrea, Ethiopia, and Uganda developed their own mixtures of federal (centralized) and regional (decentralized) policing in the postcolonial era.

International police organizations

Interpol, first known as the International Criminal Police Commission (ICPC), was founded in 1923 in Vienna by the city's head of police, Johann Schober. Vienna had been the seat of the Austro-Hungarian Empire, which had maintained an extensive system of police files. The Nazis took over the ICPC in 1938, when Germany annexed Austria, but the organization's operations ceased with the outbreak of World War II. After the war, at a conference held in Brussels in 1946, the organization was reconstituted as Interpol, with headquarters in Paris (since 1989 in Lyon, France). Interpol's present constitution was ratified in 1956.

Each of Interpol's more than 180 member countries has a bureau that maintains close contact with the organization's General Secretariat. The bureaus transmit criminal information that may be of interest to other countries; within their own countries, they undertake inquiries, searches, and arrests requested by other countries and take steps to implement resolutions voted on by the annual assembly. Interpol also maintains and develops databases of fingerprints, DNA records, photographs, and other information that might be useful in tracking down criminals. Crimes of particular concern for Interpol are trafficking in human beings, transboundary financial and organized crime, and international terrorism.



Interpol

Interpol headquarters, Lyon, France.

© Interpol

Interpol's effectiveness is limited by the fact that it resulted from a practical agreement between police forces rather than from an official convention between states. Interpol can act only within the framework of national laws; criminals can be returned only if an extradition treaty is in force and the offender is a national of the country requesting return. Moreover, because Interpol's operations depend crucially on the exchange of intelligence, countries that cannot afford efficient intelligence databases cannot contribute significantly to the organization.

In the early 21st century, Interpol was no longer the only international policing organization. Police cooperation between members of the European Union (EU), for example, was rapidly developing on the basis of various pieces of transnational legislation enacted by the European Parliament, including agreements and conventions against terrorism, drug

trafficking, trafficking in human beings, money laundering, and organized crime. European police forces, which had participated in Interpol since its inception, increased their cooperation in 1975 with the launch of a counterterrorist initiative known as the TREVI group (TREVI being the French acronym for “terrorism, radicalism, extremism, and international violence”). The Schengen agreements (signed in 1985 and 1990), which allowed freedom of movement between the signatory countries, provided for further coordination between European police forces.

The European Police Office (Europol), established in 1992 as the European Drugs Unit, supports the law enforcement agencies of all countries in the EU by gathering and analyzing intelligence about members or possible members of international criminal organizations. Headquartered in The Hague, Europol is far removed from police field operations; its priority is building trust between the many law enforcement organizations with which it liaises.

The International Association of Chiefs of Police, with headquarters near Washington, D.C., draws its members largely from the United States and is the leading voice in the United States for professional police standards. It is active in training, research, and public relations. The International Police Association was founded in Britain in 1950 as a social organization. Although it is most active in Europe, its members come from dozens of countries worldwide. The association grants scholarships for study abroad and travel and arranges annual conferences.

Michael Parker Banton William Francis Walsh Jean-Paul Brodeur

Police work and law enforcement

Routine police activities

The activities of police forces are adapted to the kinds of societies in which they operate. Some common features of police work in different societies are the result of similar technologies. Yet within the same society—and sometimes even within the same police force—there may be variations. One police administrator, because of his personal beliefs or because of his perception of public opinion, may allocate more resources to certain types of crime or to certain police duties than to others. Thus, police officers in different neighbourhoods may develop different patterns of policing.

Within the framework of enforcement policy, police work is divided into various branches. The largest number of officers is usually allocated to uniformed patrol, either on foot or with motor transport. As noted in the above section The crisis of policing, studies of the

activities of police on patrol indicate that only a small portion of their time goes to making arrests or initiating formal actions under criminal law. Moreover, whether one considers the types of calls for service that police receive, the calls to which police are dispatched, or the activities that police initiate on their own, it is clear that the majority of police activities consist of providing emergency services, maintaining order, resolving disputes, and providing other services.

Police and courts

One of the most important ways in which police are held accountable for the manner in which they perform their duties is through the courts. In France (and in countries with similar juridical procedures, such as Italy), police officers making inquiries are under the direction of an investigating magistrate. The supervision exercised by the magistrate is in the vast majority of cases perfunctory. The police conduct their inquiries with a large degree of independence and are generally successful in closing investigations by obtaining confessions from suspects. Investigating magistrates play an important role only in high-profile investigations, such as those directed at pedophilia, political corruption, economic crime, organized crime, and terrorism. The British and American common-law procedure is in principle different, as there is no equivalent of the investigating magistrate, but the institution of the grand jury plays an analogous role. The grand jury works with the prosecution, which has the investigative services of the police at its disposal. Once a case is brought to court, the proceedings are not as different between the two systems as legal terminology suggests. (The Anglo-Saxon procedure is called adversarial or accusatorial, whereas the procedure in continental Europe is called inquisitorial.) In both traditions, the accused is presumed innocent, and the judge (and a jury in jury trials) listens to the prosecution's argument and its evidence that the accused has broken a particular law, as well as to arguments to the contrary presented by the defense. The judge or jury reaches a verdict, and the defendant, if convicted, is sentenced.

If the accusatorial system is to function justly in Anglo-Saxon countries, the police must bring all cases of lawbreaking before the courts. It is for the court to decide whether punishment is merited. In practice, however, the police exercise considerable discretion as to whom they will prosecute. Three chief arguments favour police discretion in this area. First, it has proved impossible to draft and keep up-to-date a criminal code that unambiguously encompasses all conduct intended to be deemed criminal; there are technical offenses or offenses that public opinion no longer regards as culpable. Second, because those charged with enforcing the law do not have sufficient resources to enforce all the laws all the time, enforcement must be selective. Third, bringing to court a person

who has only technically violated a law may, in practice, unduly damage that person's reputation.

The courts control police activities in other ways. In Britain, for example, a set of publicized Judges' Rules (first drawn up in 1913 and since revised) outlines safeguards for accused persons while they are under investigation. If it can be proved in court that the police failed to warn a person properly that he was under suspicion of having committed a particular offense and that any statement he made could be used as evidence against him, then the prosecution might fail. In a celebrated case (*Miranda v. Arizona*), the U.S. Supreme Court ruled in 1966 that accused persons must be informed by the police of their right not to answer police questions and to consult a lawyer before questioning; accused persons also are entitled to assigned counsel (also called public defenders), paid for by the public, if they cannot afford to hire a lawyer. In other decisions police have been prevented from submitting at a trial any evidence that was obtained by unreasonable search and seizure.

Police and minorities

The relationships between police and ethnic and racial minorities present some of the more enduring and complex problems in policing throughout the world. Such relationships can be harmonious, but they often are problematic. For example, minorities may be generally deprived of police protection and other services to which they are entitled. More specifically, police may refrain from addressing criminal behaviour (e.g., domestic violence) within a particular minority group because they believe that members of that group typically engage in such behaviour. A more acute problem is direct conflict between police and minorities. On the part of police, conflict may take the form of harassment, brutality, or excessive enforcement.

Although it is no excuse for lack of fairness, police attitudes toward minorities reflect the values of the larger community. When the community is hostile toward a particular minority group, police may feel that discriminatory behaviour toward that group is justified. Police even may aggravate an existing prejudice, though they seldom generate prejudice on their own.

The intensity of community and police prejudice against minority groups depends on historical and social factors. The longer a minority has been seen as inferior or alien, the more likely it is to be discriminated against. Such groups may include perennial nomads (such as the Roma in Europe), indigenous peoples in former European colonies, or smaller tribes in societies where tribal membership is socially significant. A war or a warlike situation can provoke hostility toward certain immigrant groups or other minorities

perceived as the “enemy”: Japanese Americans were treated in this way during World War II, as were many Muslims in Western countries after the terrorist September 11 attacks in the United States in 2001. Police discrimination also may occur when the majority of a society perceives a minority group as refusing to endorse the majority’s values. For instance, the conspicuously inferior status of women in some immigrant communities in Western countries has engendered considerable hostility toward the men in those communities. Finally, circumstantial resentment plays an important part in discrimination against minorities: immigrant workers who were welcomed by the majority when work was plentiful may be the target of harassment in periods of unemployment.

Recruitment policies that determine the racial and ethnic makeup of a police force can significantly affect the relationships between the police and minorities. Although it is no guarantee of harmony, it is desirable that the racial and ethnic composition of the force reflect that of the larger community. However, that goal is often difficult to achieve. For instance, in large American cities such as Chicago, significant segments of the Hispanic minority speak only Spanish, which precludes their being recruited by the police. The worst-case scenario occurs when the whole police organization is made up of members of a community that is in open conflict with another group. That was the case in the United States during the segregation of African Americans in the South—some police officers actually were members of racist organizations such as the Ku Klux Klan. It was also the case in the late 1960s in Northern Ireland, where despite a provision that the Royal Ulster Constabulary (RUC) recruit one-third of its members from among Ulster Catholics, the proportion of Catholics in the force was much smaller than that. The RUC was severely criticized for its brutality in policing the Catholic civil rights marches in 1968–69. The bias in police recruitment was even worse in South Africa under apartheid, when the police forces were all-white organizations that frequently abused their power in dealings with black South Africans.



Civil rights demonstrator attacked by a police dog on May 3, 1963, in Birmingham, Alabama. Prompted by the revived Ku Klux

Today, although troublesome relationships between police and minorities remain common, police are increasingly aware of such problems and have taken broad steps to solve them. The community-policing reforms of the late 20th century (see above Community policing), for example, were motivated in part by the desire to reduce conflict with minorities. However, improvements can happen only in societies in which there is police accountability. Without accountability, complaints about police actions may be

Klan and by the quickly organized White Citizens Councils, the general reaction of the white South to the sit-ins and other civil rights demonstrations of the 1960s was violence.

Bill Hudson/AP Images

met with severe reprisals, including the killing of complainants by police officers.

Crowds and riots

Collective violence is one of the most intractable problems of policing. Riots have played a role both in the creation of police forces and in their reform. For instance, frequent and serious rioting in Britain during the 18th century, such as the anti-Catholic Gordon riots of 1780, left a lasting impression on police reformers. The subsequent Peterloo Massacre of 1819, in which cavalry killed 11 protesters and injured several hundred, helped to spur the British government to create the London Metropolitan Police in 1829. Riots also had played a considerable part in the creation of the French police in 1666. By the end of the 20th century, however, many police forces were coming under increasing criticism for their often brutal methods of controlling crowds.

Types of mass events

Crowds that have the potential to become violent form for various reasons, including planned political protests; such crowds also may gather spontaneously. The nature of the mass event to be policed determines what kinds of police tactics may or may not succeed.

In democratic countries, political demonstrations have several common features. They generally are structured events, and the courses of marches often are predetermined and negotiated with the police. Political protests that occur in the context of international events—for example, political summits and meetings of global economic bodies such as the World Trade Organization—differ from national or local political protests in one respect that is important for policing: they bring together groups of protesters that may have different aims. Some groups simply may want their message to be heard; others may aim to disrupt the meeting as much as possible. Although the police may come to an understanding with some protesters, others may generate confrontations despite any attempts at negotiations. Thus, a great deal of collective violence may accompany meetings of international bodies, as was the case at the Asia-Pacific Economic Cooperation summit in Vancouver in 1997; the World Trade Organization meeting in Seattle in 1999; and the Summit of the Americas in Quebec, the European Union summit in Gothenburg (Sweden), and the Group of Eight (G-8) summit in Genoa (Italy) in 2001.

Still, political protests and other events that are planned in advance tend to have less potential for violence than spontaneous gatherings. In many cases, riots occur against a backdrop of long-smoldering frustration and anger—e.g., over racial or ethnic

discrimination—and are triggered by a single controversial event. Riots in Los Angeles in 1992, for example, were sparked by the acquittal of two police officers on charges stemming from their beating of an African American motorist, and in 2005 riots broke out in France (in large suburbs mainly populated by immigrants) after two youths of North African origin were accidentally killed while allegedly running from police.

Methods of crowd policing

Four basic types of organization may police crowds: military forces, paramilitary forces, militarized police units, and unspecialized police forces. These organizations use primarily two strategies: escalated force and negotiated management.



Officers of the French State Security Police
(Compagnies Républicaines de Sécurité)
practicing crowd control.
© *Ministère de l'intérieur-DICOM, France*

In many countries, excepting Western-style democracies, the military, rather than the police, performs crowd control. There are many variants of this model, which differ primarily according to the level of force the military is willing to use. In some countries ruled by dictatorships, such as Iraq under Ṣaddām Ḥussein, the whole might of the army, including the air force, has been used to quash any kind of public demonstration against the regime. Other countries in Asia, Africa, and Central and South America also leave crowd control to the military, though limited resources

may prevent the military from mobilizing sophisticated weapons or vast numbers of soldiers. Even in Western democratic countries, governments increasingly call on the military to police crowds, especially in disaster situations—such as the U.S. city of New Orleans following Hurricane Katrina in 2005—and in situations in which rioters are heavily armed.

In some countries, such as Germany, Italy, and France, paramilitary forces within the centralized police apparatus are charged with policing crowds. In France, for example, the State Security Police (a component of the National Police) specializes in order maintenance and crowd control. In democratic Anglo-Saxon countries, militarized police units, embedded within a police force and lacking institutional autonomy, are a common instrument of policing crowds; all large police forces in those countries have such units. Some of their members are officially assigned to other units (e.g., patrol) and are called upon only in cases of emergency. Militarized police units bear various names, such as special weapons and tactics teams (SWAT teams), but their methods of training and operation, as well as their equipment and firepower, are similar.

Small police forces cannot afford special units and have to police crowds on their own. In crisis situations they generally fare badly, as did the municipal forces in various parts of the United States during the 1960s and '70s when civil rights and Vietnam War protests were frequent.

The most ancient strategy of crowd control, escalated force (the use of increasing amounts of force until the crowd disperses), still prevails in most countries that have not adopted Western-style democracy. Even in democracies, however, escalated force was the traditional way of controlling crowds until the 1970s, when the strategy of negotiated management emerged. The success of the latter strategy depends on two key factors: the willingness of the police and the groups involved to negotiate control of the event and, more fundamentally, the availability of group representatives with whom to negotiate. Such people are easily found in cases of domestic political protests and labour unrest, which naturally involve political and union leaders. In the case of international protests, however, negotiating control requires the cooperation of all the groups involved. In general, the greater the perceived threat to the controlling party, the less inclined it will be to negotiate, particularly if the force that it can summon is overwhelming. Although many scholars of policing expected that the strategy of negotiated management would gradually supersede the strategy of escalation of force in Western-style democracies, their belief was belied by numerous violent confrontations between police and protesters at various international meetings held in democratic countries at the beginning of the 21st century.

Meanwhile, a third strategy of crowd control, called command and control, emerged in the United States. Spearheaded by the New York City Police Department, the strategy was basically an updated version of the escalation of force paradigm, with advanced technological underpinnings. The strategy involves the fragmentation of crowds before they may become rioting mobs and the tight control by police of public spaces allocated to demonstrators. Police may install large concrete and metal barriers, thereby establishing zones where protesters cannot congregate and organize. They also may disperse crowds with nonlethal weapons, some of which are based on sophisticated technology—for example, the Active Denial System (ADS), which projects a strong blast of heat into a crowd. In addition, police may use electronic surveillance to monitor a crowd's size and movements, and they may make preemptive arrests of protest leaders or potential troublemakers.

Michael Parker Banton William Francis Walsh Jean-Paul Brodeur

High policing: the protection of national security

In continental Europe, police work that is directed at protecting national security is known as high policing, in reference to the “higher” interests of the state. There is no conventional designation for this category of policing in Anglo-Saxon countries, however. Calling it “secret” or “political” policing would be too vague, as all police work is to a certain extent both secret (police generally do not reveal their methods until a case is completed) and political (police enforce laws determined by the political system in power). Furthermore, the term *secret police* is usually used to refer to clandestine and extralegal organizations like the Gestapo, whose main functions are to eliminate opponents of the regime and to make the population passive through intimidation and terror. Whatever it may be called, high policing in Anglo-Saxon countries is performed by both national police forces and specialized agencies, such as the FBI and the Secret Service in the United States, MI5 in the United Kingdom, the Australian Security Intelligence Organisation, the Canadian Security Intelligence Service, and the New Zealand Security Intelligence Service. These organizations usually confront domestic or internal threats to national security, whereas the military or military-intelligence agencies generally handle foreign or external threats. This distinction can become blurred, however, especially in cases involving terrorism. For example, after the September 11 attacks of 2001, José Padilla, a U.S. citizen accused of being an al-Qaeda operative, was arrested by the FBI but detained by the U.S. military as an “enemy combatant.”

The primary tool of high policing is intelligence, which is derived from both human and technological sources, the latter including electronic surveillance and eavesdropping. In the former country of East Germany, the Stasi, the state secret police agency, relied on vast numbers of informers for intelligence on the activities of East German citizens; the extent of the cooperation it obtained was so great that it tore the social fabric of the country apart when the agency’s files were opened to the public after the fall of the Berlin Wall in 1989. In the United States the USA PATRIOT Act of 2001 (formally, the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act) allowed for expanded domestic electronic surveillance of both U.S. citizens and foreign residents, including by means of roving wiretaps and the seizure of voice-mail messages. In a provision that maintained the traditional high-policing function of monitoring the circulation of ideas in society, the PATRIOT Act also allowed law enforcement and intelligence agencies to obtain the library borrowing records of individuals without their knowledge.

Because organizations involved in high policing tend to be granted extensive legal powers, there is a tendency, even in democratic countries, for such organizations to abuse their powers or even to operate outside the law. In some countries, for example, high-policing

organizations regularly engage in actions of dubious legality, such as detaining people without charge, without legal representation, and without means of communication; some high-policing forces also engage in torture. In the worst cases, high policing becomes a substitute for the whole criminal justice system: suspects are arrested, tried, convicted, and sentenced by a national security agency, usually very expeditiously and in complete secrecy. Concerns about the possibility of such abuses in the United States and Canada prompted many investigations into the national security services of those countries in the 1960s and later. A report commissioned by the Canadian government in 1966 supported these concerns, concluding that “a security service will inevitably be involved in actions that may contravene the spirit if not the letter of the law, and with clandestine and other activities which may sometimes seem to infringe on [an] individual’s rights.” In the early 21st century, particularly in the period that followed the September 11 attacks, some U.S. citizens were held in preventive detention in jails, and many foreign nationals were imprisoned without charge at the U.S. naval base at Guantánamo Bay, Cuba. Some critics, including the United Nations, claimed that the interrogation techniques used on prisoners at Guantánamo amounted to torture.

The most egregious high-policing abuses occur in countries ruled by authoritarian or totalitarian regimes. High-policing organizations in such countries tend to have the following characteristics in common. First, they are accountable not to elected officials but only to the executive power. Second, they possess, and in fact are dominated by, a large military wing. (This is a crucial feature: Tsar Nicholas I’s Third Department of secret police relied on a huge body of gendarmes to execute its repressive operations; the Gestapo was a part of the Reich Security Central Office, which was supported by battalions of SS troops; and the Soviet NKVD under Joseph Stalin was both a political police force and a military corps.) Third, the military wings maintain their own penal administration and control a network of detention facilities (most often concentration camps). Fourth, these organizations systematically resort to torture, which is applied without concern for the human rights or even the lives of the victims.

The wide extent of such practices should not be taken to show that protecting national security requires gross violations of human rights. On the contrary, in most democratic countries the conduct of high policing, when subject to proper oversight, does not contradict democratic values or infringe upon basic civil or human rights.

Jean-Paul Brodeur

Police work as an occupation

Public policing used to be a low-status and underpaid occupation. Until modern times, police recruits typically had no qualifications other than military service; thugs and former criminals also were hired, in keeping with the common beliefs that “it takes a thief to catch a thief” and that one need not be educated to wield a stick. (In 19th-century France a former convict, François Vidocq, rose to the position of chief of the public safety brigade, whose mission was to infiltrate the criminal milieu and to arrest notorious offenders.) Not surprisingly, underpaying the police resulted in massive corruption, particularly in the urban police forces of the United States at the beginning of the 20th century. Today, police corruption remains a severe problem in countries where policing is still considered a lowly occupation—that is, in almost every country except the Western-style democracies (including Japan). In the latter countries, 20th-century reformers transformed policing into a professional occupation that commanded decent wages and public respect. Careers in these police forces can even be lucrative, especially for those in the top echelons. In North America, police recruits of large-city police forces can embark on their careers in their early 20s and retire in their early 50s as top managers with sizable pensions. Many then undertake new careers as chiefs of small-town police forces, as officials in other public-service departments, or as managers of private security companies.

The police recruiting system used in Anglo-Saxon countries differs from that used in continental Europe. In such countries as the United States, the United Kingdom, Australia, Canada, and New Zealand, nearly all recruits enter at the lowest level of the organization, regardless of their educational background. They may be promoted during their career on the basis of performance assessments and competitive examinations. In the United Kingdom the most able among the younger officers are selected for a 12-month course at the national police training college at Bramshill, where they divide their time between on-the-job training and study. However, training at Bramshill does not guarantee promotion, and Bramshill graduates who subsequently join other police forces still must start at the bottom of those organizations.

The situation is different in continental Europe, particularly in France, where police forces use a dual system of recruitment: entrants may start their careers at the base of the organization and progressively rise higher, or they may use lateral entry for an appointment at the *commissaire* (“commissioner”) level. The channel of lateral entry is reserved for applicants with a university degree, generally in law or political science; after their selection, they are trained at the national academy for police commissioners.

Lateral entry is the rule for the highest positions in the police organizations of both continental Europe and North America. In France the government directly appoints the

chief of the National Police, who may be a civil servant without a police background. In Canada and the United States, chiefs of police or their top assistants are directly appointed by the relevant political authority. After the September 11 attacks, the New York City Police Department directly appointed persons from the intelligence community and the armed forces to head its intelligence and counterterrorism departments.

Most police forces are unionized, though there are important exceptions—e.g., the Royal Canadian Mounted Police, the largest Canadian police force. As in the case of recruitment, there are two basic models for police unions, one used in Anglo-Saxon countries and the other used in continental Europe.

In many Anglo-Saxon countries, or in some jurisdictions within those countries, police unions have long been forbidden. To circumvent such prohibitions, police in these areas created brotherhoods, benevolent organizations, and other associations that performed the role of a labour union. As a result, for most police forces in the Anglo-Saxon tradition, there is a single body acting as a union to which both rank-and-file personnel and their supervisors belong. In periods of conflict with top managers—who usually are not members of the labour association—mid-level officers must choose between their duty to obey the top managers and their loyalty to the labour association; usually they choose the latter. The customary alliance between rank-and-file officers and their supervisors has given such associations considerable clout; little change can be effected in police forces without at least their partial assent. Police associations in the United States also act as brokers in the private employment of public police. For example, organizers of large events might ask the police association to provide a certain number of police officers to keep order. The officers are then compensated on a private basis through the association.

In continental Europe the tradition of organized labour is much older. Governments did not oppose the creation of police unions, which were modeled on existing unions in industry and some professions. As a result, rank-and-file police do not generally belong to the same association as their supervisors; in France, for example, there are separate unions for the rank and file and for commissioners. It is actually in France that the incipient forms of police labour unions first appeared. In 1855 police commissioners stated their demands regarding working conditions in the *Journal des commissaires*. French commissioners finally created an official labour organization to represent them in 1906. It is one of the oldest police unions, if not the oldest.

Jean-Paul Brodeur

Police technology

Police technology refers to the wide range of scientific and technological methods, techniques, and equipment used in policing. As science has advanced, so too have the technologies that police rely upon to prevent crime and apprehend criminals. Police technology was recognized as a distinct academic and scientific discipline in the 1960s, and since then a growing body of professional literature, educational programs, workshops, and international conferences has been devoted to the technological aspects of police work.

Many examples of an incipient police technology date from ancient and medieval times. For example, the ancient Egyptians used detailed word descriptions of individuals, a concept known in modern times as *portrait parlé* (French: “spoken portrait”), and the Babylonians pressed fingerprints into clay to identify the author of cuneiform writings and to protect against forgery. Nevertheless, early technology was quite crude, such as the medieval methods of trial by ordeal and trial by combat, in which the innocence of suspects was established by their survival. A more humane medieval method, and a step toward modern concepts, was compurgation, in which the friends and families of a disputant took oaths not on the facts but on the disputant’s character. Formalized police departments were established in the late 17th century in continental Europe, and since that time technologies have developed rapidly—transforming police work into a more scientific endeavour.

Yet police technology differs greatly in type and sophistication from country to country. It is generally more sophisticated in countries that are wealthy and that produce or import a high level of technology. (However, undemocratic countries tend to invest a great share of their gross national product in police technology, even when they are poor.) Police technology also depends on the physical setting and the political environment where police work is done. Urban policing relies more on technology than small-town and rural policing, and the degree to which a police force is militarized has a strong impact on its weaponry. Finally, some newer crimes, such as cybercrime, can be fought only by using an extensive array of technology that exceeds the scope of police technology proper.

Mobility

To be effective, police forces must be in close proximity to the citizens they serve. The first and most basic means of maintaining that close contact was the foot patrol. Officers were deployed by time of day (watches) and area (beats). Beats were kept geographically small to allow officers to respond to incidents in a timely manner. In larger rural jurisdictions, officers were deployed on horseback. Both foot and mounted patrols continue to be used throughout the world. Foot patrol is used in congested urban areas, in high-density

housing complexes, and at special events; mounted patrol is also used for special events and for crowd control.



Officers of the New York City Police Department and their various means of transportation.

Courtesy of the New York City Police Department

Foot and mounted patrols were followed by bicycle patrol, which spread throughout continental Europe at the end of the 19th century. Bicycle patrol made a comeback in the late 20th and early 21st centuries as a compromise between foot and car patrols. Bicycle patrol officers are specially trained and equipped with robust but lightweight urban bicycles. Bicycles are very useful for patrolling urban parks, housing complexes, school campuses, and locations where there are multiple large walkways not immediately accessible from the street.

The development of the automobile in the late 19th century dramatically transformed police work in the early 20th century. The city of Akron, Ohio, U.S., claims to have deployed the first automobile police patrol wagon in 1899. The vehicle was powered by an electric battery, however, which greatly limited its range over distances. A motorcycle patrol was instituted in New York City in 1905. By 1910 in France, 12 regional mobile brigades of police had become fully motorized; they used gasoline-powered automobiles manufactured by the De Dion-Bouton company to crisscross France. The motorization of police forces took place simultaneously in virtually all Western countries; by World War I, many urban police departments were using motorized patrols. Automobiles allowed police to expand patrol beats and reduced the time required for responding to incidents. However, the mobility and speed that police cruisers provided came at the expense of police visibility, as officers were increasingly encapsulated in their cars.

The police cruiser played a bigger role in the cities of the New World—Australia, Canada, New Zealand, and the United States—than elsewhere. New World cities generally were laid out in a gridlike pattern with large intersecting avenues that facilitated motorized police patrols. By contrast, European cities typically featured a maze of small, crowded streets that required foot patrols. The equipment carried by the standard police vehicle in these New World cities significantly evolved from the 1970s to the early 21st century. In the 1970s the police car was basically the same as the mass-produced vehicles owned by citizens. It was fitted with few accessories for enhancing comfort, such as air conditioning, and the specific police equipment that it carried consisted of a two-way radio with limited

capacities and an external rotating light fitted on its roof; a metal screen between the front and the back seats was common but not standard. By the 21st century, the modern big-city patrol vehicle was routinely fitted with heavy-duty alternators to power numerous electronic devices and a powerful cooling system to handle engine heat while idling during hot weather. It also was equipped with an array of electronic devices, including radios, siren and light controls, a public-address system, a cellular telephone, a radar unit to measure motorists' speed, and, in many jurisdictions, a mobile digital terminal for access to police databases. Even the trunk was filled with equipment, such as first-aid and biohazard-response kits. Like the police vehicle itself, such equipment reflects the technologies produced by domestic industries. In countries whose industrial sectors are large and technologically advanced, such as the United States, Germany, and Japan, police cruisers tend to be very sophisticated instruments; elsewhere, they are more rudimentary.



Police officer using radar to check motorists' speed, France.

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The array of duties performed by police today requires a variety of different vehicles, ranging from minicars to buses and fully equipped mobile headquarters. For example, traffic-law enforcement is often conducted by patrol officers on motorcycles, but cars also are commonly used. In the United States, police often drive sport-utility vehicles (SUVs) for highway patrol. Police cruisers are generally smaller in Europe and Japan than in the United States and Canada, reflecting the standards of domestic auto industries. In Germany and Italy, police may use sophisticated sports cars, such as Porsches, BMWs, and even Ferraris, for high-speed chases.

Some police vehicles have been adapted from military vehicles. Police in South Africa use the Buffel, a vehicle derived from an armoured personnel carrier, and the Police Service of Northern Ireland (formerly the Royal Ulster Constabulary) uses military vehicles in its patrols. In the United States, some police departments have converted armoured scout vehicles to assist in high-risk operations. Vehicles built on large chassis can be used to transport a fully equipped command centre to a crime scene or disaster area.



Truck from the 1930s (left) used by the New York City Police Department (NYPD) next to a contemporary truck used by the NYPD Emergency Service Unit.

Courtesy of the New York City Police Department

The environment is another factor that determines the types of vehicles used by police forces. In many rural jurisdictions the typical four-door sedan has been replaced by SUVs and four-wheel-drive trucks. In areas where there are no paved roads (e.g., open country, beaches, and forests), the police use all-terrain vehicles

and off-road motorcycles. Snowmobiles and tracked vehicles are used in areas where large snow accumulations are typical.

Police departments that patrol waterfronts employ small to midsize open-cockpit motorboats. Customs and border-surveillance agencies have access to some of the most complex and exotic watercraft to combat illicit drug-running and border incursions. In areas with large swamps, the police use airboats (flat-bottomed boat hulls with an aircraft engine and propeller for propulsion).



Boat belonging to the Harbor Unit of the New York City Police Department patrolling the city's waterfront.

Courtesy of the New York City Police Department

Various types of aircraft are used in police patrols as well. Helicopters, the most common type, are often equipped with a high-intensity spotlight that can provide overhead illumination for units on the ground. Another device used by aircraft, a passive infrared unit sometimes called forward-looking infrared (FLIR), provides night vision. FLIR units can measure the heat energy emitted by objects and living things, enabling ground units to be directed to a particular location. The police also employ fixed-wing aircraft for operations such as border patrols and drug surveillance, police-personnel transport over long distances, and highway traffic control. They range in size from single-seat

planes to multiengine jet aircraft.

Communication

The vehicles discussed above would be nothing more than efficient conveyances if police officers were unable to communicate instantly with each other and the public. In the earliest police forces, communication was accomplished through oral or written orders in an administrative chain of command. As society progressed, the military was used less for domestic



Bell Helicopter Textron 206B-3 JetRanger III civil helicopter, in police service, Fort Worth, Texas, U.S.

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peacekeeping. Depending on whether a country evolved toward more or less centralization, systems of national or local control were established. In England the watch-and-ward system evolved to provide citizens with protection from crime. During times of duress, the men on watch would raise the hue and cry to summon assistance from the citizens of the community or, in the case of a larger community, from others already on watch. The watch standers were equipped with various signaling devices, including bells, ratchets, and rattles.



Police officer using the radio in his patrol vehicle.

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With the passage of the Metropolitan Police Act in 1829, the police in England were formalized into a full-time paid service, as they had been in France, Austria, and Prussia. The system was directed by a central command through face-to-face contact between supervisors and subordinates. As urban areas expanded and the police were deployed to more beats over larger geographic areas, this system of human communication became increasingly inefficient. Face-to-face contact gave way to the use of telegraphs in the mid-19th century, and in the late 1870s police departments began installing telephone systems. In urban jurisdictions call boxes, or street telephones, were placed on beats to enable patrol officers and citizens to alert the central command of disturbances. In 1937 the first emergency telephone system was established in London, where callers could dial 999 to speak to an operator.

Early systems of police dispatch involved a single operator who took calls from the public and dispatched officers via radio. In 1917 the police department of New York City began equipping patrol vehicles with a one-way radio receiver that enabled the central command to send emergency messages to officers. However, that and other early radio-communications systems were fraught with technical problems. In 1928, following several years of experimentation, the police department of Detroit improved the technology to allow regular contact between headquarters and patrol units; the system developed in Detroit was subsequently the basis of police communications systems used throughout the United States. Two-way radio receivers were first deployed in 1933 in Bayonne, N.J., and their use proliferated in the 1940s. Radios in patrol cars were eventually supplemented by portable radio transceivers carried by individual officers to allow uninterrupted radio

contact between officers and the dispatch centre. Dispatch was improved in the United States in the late 1960s with the establishment of the 911 emergency telephone system. Similar systems have since been adopted in other countries throughout the world.



Officers of the French National Police at a command post.

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Police radio-communications systems benefited from the development of computers, which made possible the quick retrieval of information on stolen property, wanted persons, and other police intelligence.

Computers were eventually placed in patrol cars. These mobile digital terminals (MDTs) enable officers to check licenses, wanted-persons lists, and warrants from the patrol vehicle without making an oral radio transmission. MDTs have been supplemented with a wide variety of digital pagers and cellular phones.

Computerization

The police were early adopters of computer database technology. In the United States the National Crime Information Center (NCIC) was established in 1967; police records were subsequently computerized and made available to police agencies throughout the country. The NCIC's database enables local police departments to apprehend offenders who might otherwise evade capture. The database contains fingerprints, a registry of sexual offenders, and mug shots, and it can be queried for detailed information on stolen vehicles and warrants for firearms violations; it can even search for phonetically similar names. Similar databases maintained by U.S. states provide police with access to misdemeanor warrants, driver-citation records, and vehicle-ownership information.

The European Union (EU) established a computerized information system—the Schengen Information System (SIS)—which allows the authorities of certain member states, plus some other European countries, to send or receive data about criminals, missing persons, stolen property, and other matters of interest to law enforcement officers. Each member of the EU, however, must devise its own computerized system to connect to the SIS. The European Police Office (Europol) also maintains a computerized database. In addition, Interpol manages databases of fingerprints, DNA profiles, and information on stolen property and other matters, which member countries can retrieve through a global police-communications system known as I-24/7.

Computer-assisted-dispatch (CAD) systems, such as the 911 system in the United States, are used not only to dispatch police quickly in an emergency but also to gather data on every

person who has contact with the police. Information in the CAD database generally includes call volume, time of day, types of calls, response time, and the disposition of every call. The Enhanced 911 (E911) system, adopted in the United States, instantly identifies the number of the phone from which the call is made, as well as the name and physical address of the person who owns the phone. Data maintained in the E911 system sometimes include a history of calls to the police from the caller's location. When the CAD system is linked to a global positioning system (GPS), dispatchers can immediately identify the police cruiser nearest the scene of the emergency.

Although records are essential for effective police operations, police departments would be overwhelmed without a mechanism for filtering information and making sense of it. Police have long been able to gather information from related cases by using whatever records were available to them, but, until the advent of computerized databases, such cases could be found only through the recollection of experienced investigators. Computerized records systems can be extremely effective in drawing out relationships between past and present cases and suspects. The computer acts like a seasoned detective with an encyclopaedic memory. Systems known as Compstat (see *above* Compstat), used by a variety of large cities, enable police departments to piece together information and to deploy personnel efficiently.

Equipment and tactics

Personal equipment

Police officers, whether plain-clothed or uniformed, carry a variety of equipment with them on service calls. Police in uniform carry much more equipment than those in plain clothes, and members of special operations teams, such as SWAT and crowd-control units, carry even more, sometimes including full body armour complete with helmet, leg pads, and shield.

The amount of equipment carried by uniformed officers has grown considerably since the 1950s, when it basically consisted of a handgun in a holster, handcuffs, and a nightstick. The holster was attached to a Sam Browne belt—a wide belt, usually made of leather, supported by a strap extending diagonally over the right shoulder. The belt was ill-adapted to changes in other police equipment, however, and its use declined in the late 20th century. Today, the belts worn by uniformed police officers in urban North America typically have a number of holsters or cases for carrying an automatic pistol, spare clips of ammunition, metal and plastic handcuffs, a portable radio, pepper spray, a collapsible baton, and a video microphone transmitter (if the officer's car contains a camera). A



French National Police officer wearing a helmet and a radio.

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clipboard with spare report forms also is standard equipment. In addition, many police officers carry first-aid kits and other medical equipment, such as a defibrillator, in their patrol cars; they also may carry a portable breath analyzer for testing drivers who may be intoxicated. To this basic equipment many police officers add cell phones or pagers, flashlights, binoculars, tape recorders, portable scanners, plastic gloves, and extra weapons (e.g., a spare gun, a confiscated knife, a blackjack, or brass knuckles). The practice of bearing extra weapons, being of questionable legality, is mostly done surreptitiously, making it difficult to assess how extensive it is. However, it has been acknowledged by most police researchers. Finally, an essential piece of equipment is the bulletproof vest, which covers the torso of the officer and is worn either over or under the uniform shirt. Many such vests are made with the fibre Kevlar,

which is capable of stopping most handgun projectiles and many types of knives. More robust vests, made of ceramic and fibre combinations that can withstand rifle fire, are used in bomb-disposal operations.

The quantity and diversity of equipment carried by police officers naturally depend on the financial resources allocated to police forces. North American police forces are generally better equipped than police forces in most other parts of the world; indeed, their equipment levels tend to be treated as benchmarks that other forces try to meet. Nevertheless, with the important exception of firearms, police equipment throughout the world is becoming increasingly standardized.

Arrest-and-control technologies and techniques

Nonlethal tactics and instruments

Police officers routinely arrest suspects in the course of their duties. Although most suspects surrender without incident, some resist being taken into custody. In most such cases, police are able to subdue the suspect by using unarmed techniques, some of which are drawn from various martial arts (e.g., judo and aikido) or are based on knowledge of nerve pressure points.



Students at the Tokyo Metropolitan Police Academy undergoing martial-arts training.

© Metropolitan Police Department, Tokyo; all rights reserved, used with permission

Nonlethal weapons include electronic devices, chemical agents, and a variety of different striking instruments, such as straight, side-handle, and collapsible batons and an array of saps, truncheons, and clubs. The nightstick carried by police officers was originally made of wood, but most now are made of composite materials.

The straight baton was developed in the mid-20th century. Known as a nightstick or billy club, it ranges in length from 12 to 36 inches (30 to 90 cm). Because it is smooth and can be held from either end, it tends to inflict few cuts or lacerations; it can be used for both striking and control tactics. Additional features of modified batons may include a built-in flashlight, an electric charge, or a syringe (e.g., for administering an antidote to nerve gas).

Electronic technologies include the stun gun, which delivers an electric charge that causes muscle spasms, pain, and incapacitation, and the TASER (a registered trademark), a type of electronic control device that fires two barbed projectiles which deliver an electric charge without requiring the officer to come within arm's reach of the suspect. Stun-gun technology is a good illustration of the globalization of police equipment. Most police forces that can afford nonlethal electric weaponry have invested in it—including those that resist the use of firearms.



Taser

Taser.

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Tear gas is traditionally used to disperse large crowds. Early aerosol sprays were used only sparingly, because they vaporized quickly and could affect officers and others in close proximity to the suspect—particularly inside a squad car. Sprays containing capsiicum oleoresin (see capsaicin), an irritant derived from pepper plants, proved to be more effective than other aerosols, and they possessed the additional advantage of being nonvaporizing.

For high-risk operations and crowd control, various irritating chemicals can be delivered by a handheld low-yield burst grenade, shotgun, or grenade launcher. The less-harmful PepperBall, which combines a compressed-air launcher and a projectile filled with capsiicum oleoresin, was developed in the 1990s. Because the projectiles break upon impact, they usually do not



demonstrations at the 2001 Summit of the Americas

Police firing tear gas at demonstrators during the 2001 Summit of the Americas, Quebec, Canada.
Devinasch

cause permanent injury, even when fired at close range. The so-called “beanbag” projectile, which can be fired from shotguns and grenade launchers, contains a weighted flexible filler within a soft fabric pouch. Other nonlethal weapons include devices that use sound, light, or heat to cause confusion, pain, or temporary blindness.

Police dogs

Dogs were first trained for police work at the turn of the 20th century in Ghent, Belg., and the practice was soon adopted elsewhere. Although certain breeds with especially keen senses have been used for special

purposes—such as detecting caches of illegal drugs and explosives and tracking fugitives and missing persons—the most widely trained dog for regular patrol work is the German shepherd, or Alsatian. Other breeds that are sometimes used include boxers, Doberman pinschers, Airedale terriers, rottweilers, schnauzers, and bloodhounds. For detection tasks, the size of the animal is less important than its olfactory sensitivity. Selected animals must meet specific criteria regarding physical characteristics and temperament, and their training is comprehensive and rigorous.



Accompanied by a specially trained dog, officers of the French National Police demonstrate the apprehension of a suspect.
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Firearms and explosives

Although police forces commonly authorize their officers to possess firearms and to use them when necessary, not all police carry these lethal weapons. There are four distinct cases in respect to the use of firearms by police.

First, there is the case of most police forces in the world: police officers carry firearms and are instructed to make minimal use of them. The number of police-caused fatalities varies greatly among such countries,

the highest number being recorded in the United States.

Second, there are military police forces that are heavily armed with automatic rifles and submachine guns, such as the AK-47 used in countries in the Middle East, Asia, and other regions. Military police operate in most developing countries, where civilian police forces



Officer of the French National Police displaying his firearm.

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Armed police officers preparing to test the blood alcohol level of a motorist.

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are typically underfunded and undertrained. Although many governments consider the use of heavy weapons by police to be justified by the threat to society posed by dangerous criminals, critics have claimed that heavily armed police tend to kill large numbers of people unnecessarily, sometimes in circumstances that amount to extrajudicial execution. In the Brazilian state of São Paulo, for example, military police shot and killed hundreds of people each year in the late 20th and early 21st centuries in what were officially reported as shoot-outs with criminals.

Third, there are some police forces that do not carry firearms in any circumstances. Such police operate in the cities of continental Europe under the local authority of a mayor. Unarmed, they perform various order-maintenance duties, such as the enforcement of local bylaws and traffic regulations.

Finally, a small number of police forces severely restrict the use of firearms by their personnel. Today police

officers do not normally carry firearms in New Zealand, Norway, and the United Kingdom (except in Northern Ireland, where officers of the Police Service of Northern Ireland are armed). In New Zealand only the members of Armed Offenders Squads (AOS), which were established in 1964 after the fatal shooting of four police officers, are allowed to carry and use firearms. Each AOS is staffed with part-time police volunteers drawn from all branches of the police, and the squads operate only on a call-out basis. In Norway only a police chief can authorize the use of firearms by officers, and in the United Kingdom officers are allowed to use firearms only in specific circumstances. The Special Air Service, a paratrooper unit of the British military, administers special training in firearms to authorized police officers in the United Kingdom. In England and Wales, as in other countries, restrictions on the use of firearms by police have helped to minimize the number of unintended fatalities resulting from police operations. Nevertheless, after a series of terrorist bombings in the London public transportation system in 2005, there were calls in Britain for increasing the number of police officers authorized to use firearms.

Handguns, shotguns, and rifles

The first practical police firearm, the multishot revolver, was patented in 1835 by Samuel Colt. In the 1850s the British gun manufacturer Beaumont-Adams introduced the self-cocking double-action revolver. In contrast with the Colt, which needed to be cocked before firing, the double-action revolver could be fired by just a direct pull on the trigger. This allowed for quicker fire, at the expense of precisely aimed shots. In the United States and throughout the British Empire, the double-action revolver became, with few exceptions, the police sidearm of choice for more than a century.

Semiautomatic pistols were developed in Germany in the late 19th century by Peter Paul Mauser, whose Mauser rifle became a standard infantry weapon. In 1911 the .45-calibre single-action semiautomatic pistol developed by the American weapons designer John Browning was adopted by the U.S. military. Yet despite the advent of semiautomatics, double-action revolver pistols remained important police weapons not only for their capacity for quick firing; they also were perceived as more reliable than semiautomatics, whose firing mechanism tended to jam. In addition, double-action pistols were more secure than semiautomatics, as it took a significant amount of pressure on the trigger to fire them. Nevertheless, semiautomatics had more firing power and could be refilled with cartridges much more quickly through the use of magazines. In the 1970s, police departments in the United States began slowly to replace revolvers with semiautomatic pistols. The replacement of revolvers by semiautomatic firearms is now a worldwide police trend. Yet many plainclothes police officers all over the world still use a remodeled type of revolver with a very short barrel that makes it easier to carry.

In Western-style democracies, the standard police sidearm is strictly a defensive weapon. For offensive operations such as gunfights, more powerful firearms—e.g., shotguns and rifles—are necessary. Shotguns are capable of firing a variety of ammunition, including buckshot, slugs, tear gas, baton projectiles, and grenades. The pump-action shotgun, which was widely used in police departments from the early 20th century, began to be replaced by the semiautomatic shotgun in the late 20th and early 21st centuries.

The lever-action rifle accompanied the lawmen of the American West as they policed their jurisdictions in the 19th century. During the 20th century, police continued to use rifles of various descriptions and calibres. From the 1920s until World War II, some police departments in the United States adopted the Thompson submachine gun, or tommy gun, a weapon that was also embraced by the criminal underworld. The advent in the late 1960s of SWAT teams brought police countersniper units into service. Weapons used by such teams varied but typically included bolt-action high-calibre rifles fitted with telescopic sights.

Explosives

Explosives are used only sparingly by police, generally for breaching barricades and as distraction devices. Explosive “flash-bangs,” which generate a loud explosion and a brilliant flash that disorient suspects, are usually tossed by hand or launched from firearms. One variation of the flash-bang, used particularly for riot suppression, discharges multiple small rubber balls or baton projectiles. Other explosives can be used to deliver tear gas or aerosolized capsicum. Police also use sophisticated automated devices to handle explosives planted by terrorists or other criminals. Operated by police from a safe distance, the small tanklike vehicles with steel pincers can defuse or explode bombs after the public has been evacuated from the area.

Surveillance systems

Audio surveillance, or electronic eavesdropping, became practical for obtaining evidence and investigating leads after the development of magnetic recording in the early 20th century. Among the earliest automated surveillance systems were telephone pin registers, which recorded the phone numbers called from a certain surveillance location. Modern systems allow investigators to record the numbers of both incoming and outgoing calls, as well as any conversations. Other technologies enable audio surveillance through covert miniature microphones and radio transmitters and a variety of radio-receiving and voice-recording equipment. Self-contained wireless microphones are now so small that they can be secreted into virtually any object.

Police conduct visual surveillance with binoculars, telescopes, cameras with telephoto lenses, video recorders, and closed-circuit television (CCTV). Cameras fitted with telescopic and other specialty lenses have become a standard covert surveillance tool. Night-vision devices, or “starlight scopes,” can be combined with telescopic lenses, both film and digital cameras, and video recorders. Similar to the forward-looking infrared units on aircraft, handheld passive thermal-imaging devices allow for covert observation in complete darkness. These instruments are particularly useful for searches inside unlit structures, for operations in which darkness must be maintained, and for locating lost persons in open areas.

CCTV is widely used by both public law enforcement and private security providers. Cameras may be equipped with telephoto or variable-power lenses and motor drives. Low-light cameras can record images in almost complete darkness; those equipped with infrared emitters can record images in total darkness. In high-risk operations, CCTV cameras enable police to look under doors, through windows, or around corners. They also



Police officer conducting visual surveillance.
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may be placed in waterproof housings attached to umbilical cables as long as 150 feet (45 metres) to conduct underwater search operations. A specialized application of CCTV cameras captures images of drivers committing specific traffic offenses (such as speeding) and automatically issues citations to them. In addition, CCTV cameras are often placed in patrol vehicles to record traffic stops and other events. The recorded images may be used as evidence in court to confirm or refute allegations of improper or illegal

conduct by police officers.



closed-circuit television camera

Closed-circuit television camera.
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CCTV technology is used extensively in the United Kingdom to monitor both public and private spaces, including underground train stations, urban commercial spaces, suburban shopping malls, parking structures and loading bays, bus stations, supermarket aisles and entrances, hospital entrances and exits, workplaces, schools, police precincts, and prisons. First implemented in the 1980s as a part of an initiative called Safer Cities, CCTV monitoring was eventually accepted by a majority of the British public despite initial objections from civil libertarians. Its popularity

was boosted in 1993, when the taped abduction of a two-year old boy helped to identify and convict those responsible for kidnapping and murdering him, and in 2005, when the system helped to identify the terrorists behind the bombings of London's public transportation system.

Some other countries, however, have opposed the use of CCTV in public spaces because they consider such monitoring by the police without prior grounds for suspicion to be an unacceptable infringement of civil liberties. Nevertheless, CCTV is used to monitor private spaces in nearly all countries, and its use in various public spaces continues to increase.

Lie detectors

Throughout history, those responsible for enforcing the law have attempted to develop lie detectors. One ancient interrogation method used in Asia was based on the principle that salivation decreases during nervous tension. The mouths of several suspects were filled with dry rice, and the suspect exhibiting the greatest difficulty in spitting out the rice was

judged guilty. In India, suspects were sent into a dark room where a sacred ass was stabled and were directed to pull the animal's tail. They were warned that if the ass brayed it was a sign of guilt. The ass's tail had been dusted with black powder; those with a clear conscience pulled the tail, whereas the guilty person did not, and an examination of the hands of the suspects revealed the person with the guilty conscience.

Scientific advances led to the development of polygraphs in the 1920s. The polygraph is based on the premise that an individual who is lying will have subtle but measurable changes in specific physical indicators. Lie detectors utilize sensors placed on the test subject to record respiration, heart rate, blood pressure, and galvanic skin response or moisture in the fingertips. Taken together under highly controlled interview conditions and interpreted by an expert, the results of such measurements may indicate an attempt to deceive. Although the polygraph has proved an invaluable aid to police, its scientific validity has been questioned by some psychologists. Accordingly, the results of polygraph tests are not always admissible in judicial proceedings.

Voice-stress analyzers (VSAs), which became commercially available in the 1970s, rely on the detection of minute variations in the voice of the subject. Advocates of voice-stress analysis contend that inaudible vibrations in the voice, known as microtremors, speed up when a person is lying. During a VSA test, computer equipment measures the microtremors in a subject's voice and displays their patterns on a screen; certain patterns may indicate lies. Despite their initial promise, VSAs have not gained universal acceptance; critics argue that VSAs cannot distinguish between stress that results from lying and high stress in general. Other lie-detection techniques developed in the late 20th century relied on thermal images of facial-skin temperature and on measurements of brain-wave activity.

Criminal identification

Criminal identification based on various scientific methods has acquired a mythical dimension thanks to popular fictional accounts of police investigation. However, scientific methods of criminal identification are actually more useful for producing evidence to be used in court to secure the conviction of a suspect—typically identified through the traditional investigative method of questioning the witnesses of a crime—than they are for identifying who the perpetrator of a crime is, particularly if the perpetrator has no previous criminal record.

Scientific means of criminal identification can be classified in two categories. The oldest and most traditional means, such as photography and anthropometry, depend initially on the arrest of a suspect, who is then photographed and described physically. These

photographs and anthropometric descriptions can be used at a future time to reidentify a criminal, but this person needs to have been caught in a first offense to trigger the system. Newer identification techniques have no such limitations. They do not consist of depictions of a whole individual; rather, they involve the scientific analysis of traces that a perpetrator may leave behind—e.g., fingerprints or blood (a source of DNA). The results of such analyses can be matched with the physical characteristics of a suspect who has never been arrested before and thus can result in a new positive identification.



Police officer collecting fingerprints.
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Nevertheless, the few studies of criminal investigation that have been conducted stress the limited contribution of such scientific methods to the identification of unknown perpetrators. The most efficient identification technique—that is, the questioning of witnesses—is also the most time-honoured. The probability of solving a crime drops dramatically when there are no witnesses of any kind.

Photography

As early as the 1840s in Brussels, police used photographs to keep track of criminals. Such photographs, or mug shots, are an essential tool for police investigators. A variety of different formats have been used—including, most recently, digital images—and there is no single universal system employed throughout the world. Digital mug shots have the advantage of being instantly transmittable anywhere in the world via the Internet.

Anthropometry

The science of anthropometry was developed in the late 19th century by Alphonse Bertillon, chief of criminal identification for the Paris police. The Bertillon system, which gained almost immediate acceptance worldwide, used meticulous physical measurements of body parts, especially the head and face, to produce a detailed description, or *portrait parlé*. Initially, the system was used much less to identify unknown perpetrators than to allow investigators to determine whether the suspects they arrested had been involved in previous crimes. Known recidivists were believed to be more dangerous and were accordingly punished more severely.

Fingerprinting

Anthropometry was largely supplanted by modern fingerprinting, which developed during roughly the same period, though the origins of fingerprinting date from thousands of years ago. As noted above in the introduction to the section on police technology, the Babylonians pressed fingerprints into clay to identify the author of cuneiform writings and to protect against forgery. The Chinese also were using fingerprints in about 800 CE for purposes of identification. Following the pioneering work of Francis Galton, Britain adopted fingerprinting as a form of identification in 1894. In Argentina, police officer Juan Vucetich, inspired by Galton's work, developed the first workable system of classifying fingerprints—a system still widely used in many Spanish-speaking countries. In Britain, a system of classifying prints by patterns and shapes based on Galton's work and further developed by Sir Edward R. Henry was accepted by Scotland Yard in 1901; that system, or variants of it, soon became the standard fingerprint-classification method throughout the English-speaking world.

Fingerprint identification, or the science of dactyloscopy, relies on the analysis and classification of patterns observed in individual prints. Fingerprints are made of series of ridges and furrows on the surface of a finger; the loops, whorls, and arches formed by those ridges and furrows generally follow a number of distinct patterns. Fingerprints also contain individual characteristics called “minutiae,” such as the number of ridges and their groupings, that are not perceptible to the naked eye. The fingerprints left by people on objects that they have touched can be either visible or latent. Visible prints may be left behind by substances that stick to the fingers—such as dirt or blood—or they may take the form of an impression made in a soft substance, such as clay. Latent fingerprints are traces of sweat, oil, or other natural secretions on the skin, and they are not ordinarily visible. Latent fingerprints can be made visible by dusting techniques when the surface is hard and by chemical techniques when the surface is porous.



Fingerprint patterns. From top left to bottom right: loop, double loop, central pocket loop, plain whorl, plain arch, and tented arch.

Courtesy of the Federal Bureau of Investigation

Fingerprints provide police with extremely strong physical evidence tying suspects to evidence or crime scenes. Yet, until the computerization of fingerprint records, there was no practical way of identifying a suspect solely on the basis of latent fingerprints left at a crime scene, because police would not know which set of prints on file (if any) might match those left by the suspect. This changed in the 1980s when the Japanese National Police Agency established the first practical system for matching prints electronically. Today police in most countries use such systems, called

automated fingerprint identification systems (AFIS), to search rapidly through millions of digitized fingerprint records. Fingerprints recognized by AFIS are examined by a fingerprint analyst before a positive identification or match is made.



DNA fingerprinting

The technique of DNA fingerprinting, which involves comparing samples of human DNA left at a crime scene with DNA obtained from a suspect, is now considered the most reliable form of identification by many investigators and scientists. Since its development in the 1980s, DNA fingerprinting has led to the conviction of numerous criminals and to the freeing from prison of many individuals who were wrongly convicted.

The Combined DNA Index System (CODIS), developed by the U.S. Department of Justice and the FBI, combines computer technology with forensics, enabling investigators to compare DNA samples against a database of DNA records of convicted offenders and others. CODIS is used worldwide for sharing and comparing DNA data; it is available for free to all police forensics laboratories. The first national DNA fingerprinting database (NDNAD) in the United Kingdom was established in 1995. Other countries, including France, Canada, and Japan, created DNA databases as well.

Although DNA fingerprinting cannot empirically produce a perfect positive identification, the probability of error—a false positive—can be decreased to a point that it seems nonexistent. When enough tests are performed, and when the DNA sample is suitable, DNA testing can show that a suspect cannot be excluded as the source of the sample. Sufficient testing also may exclude virtually every other individual in the world as the source of the sample. However, making scientific identification coincide exactly with legal proof will always remain problematic. As low as it may be, even a single suggestion of the possibility of error is sometimes enough to persuade a jury not to convict a suspect, as was shown spectacularly by the acquittal of O.J. Simpson, the American former gridiron football star, of murder charges in 1995. By contrast, DNA can exculpate a suspect with absolute certainty. If there is no DNA match between a sample taken from a crime scene and a sample provided by a suspect, then there is no possibility at all that the DNA-fingerprinted suspect may be guilty. Consequently, DNA fingerprinting is playing a crucial role in proving the innocence of persons wrongly convicted of violent crimes.

Biometrics

In criminal investigations biometric analysis, or biometrics, can be used to identify suspects by means of various unique biological markers. Biometric devices can map minutiae in a single fingerprint and then compare it with an exemplar on file, conduct a retinal or iris scan of the eye, measure and map an entire handprint, or create a digital map of the face. Biometric facial-mapping systems, or “facecams,” when linked to offender databases and CCTV cameras in public places, can be used to identify offenders and alert police. Such facecam systems were implemented in London and other areas of Britain beginning in the 1990s and in several U.S. cities and airports in the early 21st century. Some advocates of biometric technology have proposed that biometric data be embedded into driver’s licenses or passports to enable security officials to identify suspects quickly; such arguments were made more frequently after the September 11 attacks in 2001. However, critics of the technology contend that it unduly infringes upon the civil liberties of law-abiding citizens; they also point out that biometric systems such as facecams and thumbprint matching would not have identified most of the hijackers involved in the September 11 attacks—much less foiled their plot—because only 2 of the 19 hijackers were on the CIA’s “watch list.”

Crime-scene investigation and forensic sciences



Metropolitan Police Department officers in Tokyo investigating a crime scene.

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The first police crime laboratory was established in 1910 in Lyon, France, by Edmond Locard. According to Locard’s “exchange principle,” it is impossible for criminals to escape a crime scene without leaving behind trace evidence that can be used to identify them. That principle gave rise to the forensic sciences, which are the accumulated methods for developing and analyzing physical evidence from crime scenes. Crime-scene investigation, which is often performed by experts known as crime-scene investigators (CSIs), involves the careful gathering of such evidence, which is then analyzed at a crime laboratory. In some cases evidence gathered by CSIs and analyzed by forensic experts is the only incontrovertible evidence presented at trial.

Evidence collection

Because there is rarely more than one opportunity to obtain evidence from a crime scene, the investigation by the CSIs must be methodical and complete. In keeping with Locard's exchange principle, CSIs collect evidence from the crime scene that may have been touched or microscopically "contaminated" by the suspect or suspects. They also take samples of fibres, dirt, and dust.

After a preliminary search, the crime scene is photographed; some police departments also make a videotape of the scene. CSIs take careful measurements, make detailed notes, and draw sketches. Evidence is collected and carefully catalogued. Scientific and technological advances have resulted in the development of laser and alternative-light sources that can reveal latent fingerprints, stains, hairs, fibres, and other trace evidence. For example, luminol, a substance that fluoresces when in contact with blood, is capable of detecting blood traces that have been diluted up to 10,000 times, making it useful for searching crime scenes that were cleaned in order to conceal evidence. In addition, the patterns of blood stains often indicate many of the dynamics of the crime; investigators trained in blood-pattern analysis, for example, can determine whether a victim was standing still, walking, or running at the time of death. Although some larger police departments have specialists to take photographs and fingerprints and to collect trace evidence, most CSIs are generalists who are trained to perform all these tasks.

Forensic analysis

Hairs and fibres

Although a single hair or fibre cannot place a suspect at a crime scene, collections of hair or fibre can be used to establish with a high degree of probability that the suspect is connected to the crime. Hairs possess class characteristics (patterns that naturally occur in specific percentages of the population) that indicate some general features of the individual from whom they are obtained, such as what diseases he may have and sometimes what race he belongs to. If the hair has any follicular material or blood on it, a DNA test can determine with a certain degree of probability whether the sample came from a particular individual.

Toxicology

Toxicology was first systematized by the Spanish physician Matthieu Orfila (1787–1853). Toxicologists examine blood and tissues to ascertain the presence and quantity of drugs or poisons in a person's body. Toxicological reports can assist investigators by showing

whether the drug ingested was fatal and the approximate time the drug was introduced into the body.

Serology

Serology is the study of serums such as blood and other human fluids. In 1901 Karl Landsteiner, a researcher at the University of Vienna, published his discovery that human blood could be grouped into distinct types, which became known as the ABO blood group system. In 1915 the Italian scientist Leone Lattes developed a simple method for determining the blood type of a dried bloodstain. The Rh blood group system, which classifies blood according to the presence or absence of the Rh antigen, was developed in 1939–40. Since that time more than 100 different blood factors have been discovered. Because those factors appear unevenly in the population, they can be used to identify the particular groups to which potential suspects belong. As various blood factors are defined in a sample, the percentage of people who have that combination of factors is narrowed, and the sample becomes more individualized. The introduction into forensics of DNA analysis has enabled investigators to detect identifying characteristics of body fluids and cells with unprecedented precision, making them better able to implicate or eliminate potential suspects.

Examining documents

The work of the “questioned document” examiner concerns such problems as identifying handwriting and typewriting, determining the age of a document, and determining the sequence of events involved in a document’s preparation, handling, or alteration.

Document examiners employ a variety of technologies and techniques. Handwriting analysis, for example, is based on the premise that, by the time people become adults, their writing has acquired peculiarities that may be used to identify them.

A forged signature presents other problems. Simulated signatures based upon recollection contain a combination of the forger’s own writing habits and his recollection of the victim’s habits. In many cases such simulations can be identified. When the perpetrator makes a careful drawing of the victim’s signature or traces an authentic signature, however, the forgery can be exposed but cannot be identified with the handwriting of the perpetrator. Two individuals making careful tracings of the same signature can produce virtually identical drawings.

In the era before computers, investigators would sometimes examine typewriters to determine the make and model used to prepare a document. Ink comparisons provided

evidence that was frequently of value. Chemical tests of various kinds are used for ink comparisons.

Papers can be differentiated on the basis of fibre, filler, and sizing constituents. Fibres can be identified by differential staining and microscopic examination. Fillers can be distinguished by X-ray diffraction because they are crystalline substances. Chemical tests are used for the identification of sizing constituents. Through chemical analysis it is even possible to identify paper by batches.

Firearms and tool marks

Firearms identification was developed in the 1920s by American ballistics expert Calvin Goddard, who first applied his new technique to help solve the St. Valentine's Day Massacre in Chicago in 1929. Each firearm leaves individual markings on a bullet and case when it is fired. Such markings can be used to determine whether evidentiary bullets were fired from a suspect weapon. Similar techniques are applied to marks left behind at crime scenes by pry bars, screwdrivers, and other tools.

Organic and inorganic analysis

Police use organic and inorganic analysis to examine the chemical composition of trace evidence found at a crime scene, which may then be matched to substances associated with a suspect. Organic analysis, which is performed on substances containing carbon atoms, involves various techniques, including chromatography, spectrophotometry, and mass spectrometry. Inorganic analysis, which is performed on all substances that do not contain carbon, employs spectrophotometry, neutron-activation analysis (a technique involving chemical analysis by radioactivity), and X-ray diffraction, among other techniques.

Supplemental forensic sciences

Various other life and physical sciences are used to assist police investigations. Specialists approach the problem from different scientific perspectives, and the results of their investigations can provide police with a wealth of information about a case.

Forensic pathology is a specialty within the field of medical pathology. Forensic pathologists conduct an autopsy in cases of violent, unexplained, or unattended deaths, closely examining the decedent's wounds, blood, and tissue to ascertain how he died. Often said to be "speaking for the dead," forensic pathologists can establish a cause and a rough time of death and can often provide clues regarding the physical characteristics of the person or persons responsible for the crime.

Forensic anthropology is primarily concerned with the identification of human skeletal remains. Forensic anthropologists can differentiate animal remains from those of humans and, given the proper bones, can determine the gender and in some cases the race of the victim. In the 1970s American forensic anthropologist William Bass established the first human-decay research facility, known as the “body farm,” at the University of Tennessee, Knoxville. The centre’s studies of the physical changes that decomposing corpses undergo over time have helped to establish an empirical basis for estimating time of death.



Forensic anthropologist examining a human skull found in a mass grave in Bosnia and Herzegovina, 2005.
Marco Di Lauro/Getty Images

Facial reconstruction combines both art and science. A skull can be used as a foundation and the face reconstructed with clay. By using charts of specific points of skin and tissue thickness, scientists can produce a relatively unique face that can then be used to help identify the decedent.

Forensic entomology is another field that assists police in determining time of death. Insects infest a corpse at a very predictable rate. Certain insects immediately invade the body to feed or to lay eggs, while others will not approach the body until it has reached a more advanced stage of decomposition. Thus, the types of insects or eggs present in a corpse indicate how long the victim has been dead. A forensic entomologist also can assist in determining where packages or cargo originated if insects or eggs are found in the shipment.

Forensic odontologists examine teeth and bite marks. They can compare the teeth of an unidentified body with an individual’s antemortem dental X-rays or dental molds. They also may tie a suspect to a crime by comparing a bite mark taken from the crime scene with dental casts taken from the suspect.

Forensic botanists examine plants and plant matter to determine their species and origin. In some cases suspects may leave behind plant parts, spores, or seeds that had adhered to their clothing. If the plant species in question is found only in limited areas, its presence at the crime scene may indicate where suspects have been or where they live. Forensic botanists also can be essential in locating clandestine gardens or greenhouses used to cultivate such illegal plants as marijuana.

Forensic engineers perform accident reconstructions and failure analyses of vehicles and structures. The science of forensic engineering was instrumental in understanding the

physical dynamics of the Oklahoma City bombing in 1995 and in explaining the collapse of the twin towers of the World Trade Center in the September 11 attacks of 2001. Forensic engineering also is useful in police investigations of motor-vehicle accidents.

Forensic art or illustration is used for reconstructing crime or accident scenes. Artists can produce sketches of suspects from the recollections of victims or witnesses; they also can produce illustrations to assist prosecutors in court. An increasingly used technique involves illustrating the step-by-step development of accidents or crimes by means of computer-generated animations.

As the use of computers and the Internet in all types of activities grew rapidly in the late 20th century, forensic computing became an important field for investigating cybercrimes, including crimes involving computer hacking (the illegal entry into and use of a computer network) and the programming and distribution of malicious computer viruses. In many cases personal computers are confiscated at crime scenes or pursuant to warrants. Police may require the assistance of a computer expert to break any password protections or to unlock encrypted files to reveal evidence of criminal activity. Some police departments have assigned officers to pose as minors in Internet “chat rooms,” where pedophiles sometimes attempt to discover the physical locations of teenagers and children or to arrange illicit rendezvous with them. Identifying pedophiles or cyberstalkers (people who engage in stalking by means of computers) sometimes requires police to seek the cooperation of Internet service providers, which maintain records (such as Internet protocol addresses) that may indicate the particular computer network used by the suspect.

Criminal profiling

Criminal or offender profiling, also known as criminal investigative analysis, rests on the assumption that characteristics of an offender can be deduced by a systematic examination of characteristics of the offense. Criminal profiling is most effective in investigations of serial crimes, such as serial murder, because details may be gathered from more than one case. Many law enforcement agencies now use computerized systems to aid them in such investigations; the FBI’s Violent Criminal Apprehension Program (ViCAP), for example, is a database that contains information on violent crimes committed across the United States. The system compares all new cases with all previously entered cases; when two cases are similar enough to have been committed by the same offender, the system alerts the appropriate law enforcement agency. Other countries have developed systems similar to ViCAP; one of the most elaborate is the Violent Crime Linkage Analysis System (ViCLAS), which is managed by the Royal Canadian Mounted Police. ViCLAS collects extensive data on all homicides and attempted homicides, sexual assaults,

missing persons, unidentified bodies of persons known or thought to be homicide victims, and nonparental abductions and attempted abductions. A number of countries, including Australia, Austria, Belgium, The Netherlands, and the United Kingdom, as well as some U.S. states, have adopted ViCLAS. However, although such systems have become an important part of police technology worldwide, their effectiveness has not been independently assessed.

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