TECHNOLOGY AND THE INTERNATIONALIZATION OF POLICING: A COMPARATIVE-HISTORICAL PERSPECTIVE*

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This article analyzes theoretical and empirical aspects of the role of technology in the internationalization of the police function from the mid-19th century until World War II. The findings indicate that technological advances in communication, transportation, and criminal identification significantly facilitated the internationalization of police operations. At the same time, police institutions also held technological developments accountable for an increase in opportunities for cross-border criminality, which, in turn, justified the planning and implementation of international police strategies. The article concludes with theoretical reflections on the relative autonomy of technology as a facilitating factor in the internationalization of policing.

The role of technology in police institutions and police practices has long been recognized as relevant and ambivalent. Technological advances are particularly relevant for policing because they are seen to influence the organization and practices of police in ways that intimately connect to the police function of crime control. New and more efficient means of crime detection, communication among police, and police transportation all influence how successful the police are in doing their job as crime fighters, all of which affect the level of legitimacy that the police receive from the public and relevant bodies of governments. The use of technology in policing is also

* Data collection for this research was supported by Grant SBR-9411478 from the National Science Foundation (NSF), Law and Social Sciences Program. Opinions and statements do not necessarily reflect the views of the NSF. An earlier version of the article was presented at the annual meeting of the American Society of Criminology, San Francisco, 2000. This article selectively draws from the author's book, *Policing World Society: Historical Foundations of International Police Cooperation* (Oxford University Press, forthcoming). Address correspondence to Mathieu Deflem, Department of Sociology, University of South Carolina, Sloan College, Columbia, SC 29208; e-mail: Deflem@gwm.sc.edu.

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JUSTICE QUARTERLY, Vol. 19 No. 3, September 2002

ambivalent. Striking a more general theme of societal modernization in the development of policing, police reliance on technology involves an important tension between demands for effective crime control, on the one hand, and a continued and revived focus on issues of justice and rights, on the other. In the early history of law enforcement in the United States, for instance, the use of new technologies was perceived as beneficial for enhancing efficiency and counteracting favoritism in policing (Miller, 2000; Walker, 1977).

As part of a broader trend of attempts to enhance professionalism in the police, the police reform movement of the Progressive Era viewed the use of technology in terms of an egalitarian, democratic, and unpartisan mode of policing. The increasing use of technology in police institutions, in other words, was held to be virtually synonymous with advancing progress and civilization. However, soon after technologies were introduced and applied by the police, suspicions also mounted against an excessive and unbalanced reliance on technology. In particular, civil libertarian currents sought to curb technologically driven police practices that were motivated by a blind reliance on the often-assumed, but largely unproved, merits of technologies at the expense of concerns about the civil rights and constitutional demands of due process. Technologically powerful means—wire-tapping is the classic example—are not necessarily the most opportune from a moral and legal viewpoint and can therefore not always rely on support from the public and/or find approval from the government.

The tension between the need for efficacy in crime control and the recognition and respect for citizens' and human rights has remained a central topic of controversy since technologies have been applied in policing. The problem was accentuated in the latter half of the 20th century by the unprecedented increase in the use of technology for purposes of social control, including a diverse and broad arsenal of means, such as heat, light, motion, and sound sensors; video and audio surveillance systems; biometric access codes; DNA analysis; and computerized information and analysis systems (Marx, 1998, 2001).

In addition to studies of the practical aspects of the use of technology in policing (e.g. Ackroyd, Harper, Hughes, Shapiro, & Soothill, 1992; Manning, 1996), police scholars who have debated and criticized the impact of technology have focused mainly on the clash between the quest for technical efficiency and concerns of a normative nature (see, e.g., Haggerty & Ericson, 1999; Manning, 1992a, 1992b; Marx, 1995; Meehan, 2000). Only a few scholars have attributed liberating qualities to technology in policing to argue

that a careful and responsible use of technological advances in police practices can safeguard abuses of power that are based on biased discretionary decision-making powers (e.g., Leo & Ofshe, 1998). More typically, police scholars have criticized high-tech strategies of policing because of their pervasive powers to erode civil liberties and the distorted, narrow conceptions of a crime-free social order that drive their use (e.g., Julie, 2000; Rosenberg, 1998). Problems associated with an overreliance by police on technology are particularly acute in societies that are complex in matters of economic organization, social organization, and cultural makeup and aspire to democratic ideals. Although technologically sophisticated forms of control are typically justified as objective, scientific, and neutral, critics have argued that they are socially used and culturally interpreted (Marx, 2001). Because society is an essentially moral order, there are good reasons to keep the debate on these normative issues alive, since we are reminded of the opportunities and obligations that accompany an open and free society that is also committed to a degree of order (Marx, 1988).

However, from a perspective aimed at describing and explaining social life, there are clear limitations to the research on police technology. Indeed, in terms of the scholarly quest to account for variation in reality, it appears that a certain fixation on the powers and potential abuses of technological advances has held critics of police technology captive. Most critical in this respect is that the potential risks associated with police technology are often conceived and criticized as actual dangers, thereby ironically adopting some of the ideological baggage that comes with the successful development and implementation of technology. Avoiding the pitfalls of these normatively guided fears and ideals in police scholarship, my analysis favors a sociological model that clearly separates analytical and moral questions (Durkheim, 1906/1974). Thus, in this article, I do not primarily argue for or against the use of police technology, but instead uncover some of its empirical manifestations and the conditions and consequences of them. Specifically, I analyze the role of technology in a variety of historically relevant international police practices and the circumstances under which they have taken place.

Empirically, I focus on developments from the middle of the 19th century until World War II, involving law enforcement agencies in the United States and Europe. Theoretically, my analysis concentrates on the status of technology as a relatively new and independent force in society, qualitatively altering social relations and institutions. On the basis of a bureaucratic organizational perspective rooted in the sociology of Max Weber, I uncover a dual role

of technology in influencing both the means and objectives of international police activities. In these developments, I argue, technological advances were instrumental in facilitating the internationalization of policing in a form that is independent of law and politics. This relative autonomy of international police practices and organizations has significant implications for efforts to provide adequate democratic oversight and due-process protections.

THE POWERS AND LIMITS OF POLICE TECHNOLOGY

A Brief History of International Policing

This analysis is part of a larger project on the history of international police cooperation from the mid-19th century until World War II (Deflem, in press). I defend a theoretical model that attributes the internationalization of policing to the fact that modern police agencies behave as bureaucracies (sanctioned by states with the task of maintaining order and controlling crime) that tend to be independent of their political centers on the basis of professional expertise and acquired knowledge. Inspired by the sociology of Weber (1922/1980), my perspective defends the argument that police institutions are organized along bureaucratic lines and tend to be bureaucratized (Deflem, 2000). The bureaucratic organization of police can be observed from the fact that police agencies are subject to a principle of delineated jurisdiction; are hierarchically ordered; rely on specialized training; and are guided by general, impersonal rules. Bureaucratization refers to the trend of bureaucratic organizations to claim and gain a high degree of autonomy in their operations and internal organization relative to outside control and supervision from political and popular bodies. On the basis of a Weberian perspective, the key factor responsible for this development of the bureaucratization of police is the technical superiority of modern police institutions in using the most efficient means to achieve the objectives of crime control and maintenance of order.

Although there are important variations in the history of police systems across national states, the processes of bureaucratic organization and bureaucratization have influenced police institutions in many societies around the world. Accompanying these historical developments are two stages that can be differentiated in the historical conditions that determine the internationalization of the police (Deflem, 2000). First, certain structural conditions need to be met that enable police institutions to cooperate internationally, and, second, specific motivational incentives need to be developed for cooperation to become operational in international police practices and organizations. In terms of the structural opportunity of international police cooperation, I argue that cooperation among police

of different nations can be achieved when police institutions have gained a degree of independence from their respective governments to move beyond the confines of their respective nationally circumscribed jurisdictions.

Structurally similar positions of institutional independence of police across nations create conditions that are favorable for cooperation as the police recognize one another as fellow professionals, rather than as diverse nationals. And with respect to the operational motives that police agencies must develop to construct a field of international activities, police bureaucracies develop "myths" or systems of knowledge that detail definitions and solutions to problems for their organizational domain of operations. In the case of international policing, the knowledge system for operationalizing international collaboration is provided by a professional interest in the control of international crime. Such information can be successfully developed when police bureaucracies have and share specialized knowledge about international crime, including official data about its nature and extent, as well as the technical expertise for its control.

Technology and Police Across National Borders

I analyze selected episodes in the history of international policing to defend the thesis that the bureaucratization process that facilitates the internationalization of policing is influenced by a number of important factors that relate to advances in technology. The theoretical perspective adopted in this analysis conceives of technology in a nondeterministic way as the methodical application of systematically gathered knowledge (most typically, applications based on the natural sciences). My definition of technology does not imply any of the normative characteristics that police scholars have often attributed to technologies in terms of the negative implications of their use relative to concerns of rights and justice. In much of the police literature, technology is often condemned as lacking a human touch on the basis of the notion of an efficiency-oriented purposive rationality gone adrift, resonating the familiar pessimistic theme of reason turned against itself (Julie, 2000; Manning, 1992a, 1992b; Marx, 1998). Such an outlook fails to adopt a conception of society that accounts for a plurality of rationalization processes in society, not all of which conform to the logic of purposive (ends-means) rationality (see Shields, 1997a). The increasing intrusion in society of technological developments has not prevented a continuance of societal rationalization of rights and norms (Marcuse, 1964). As much as our age is dominated by technology, modern society is also unprecedented in its attained level of legality

and democracy. Advanced democratic societies offer rich potentials to set limits to technically dominated accomplishments to bring technological ability in tune with practical needs and cultural requirements (Habermas, 1968, 1992).

Hence, a scholarly discussion of technology, *in casu* police technology, should proceed from the tension between efficiency and normativeness in societal rationalization that is couched in a demarcation between theoretical and practical questions, respectively. A sociological study of technology must always demarcate between the technical and normative components of technology as a force in social life. This article therefore concentrates primarily on theoretically relevant questions of the role played by technology in the internationalization of policing. Specifically, I show how technology influences the bureaucratization process that has historically enabled the internationalization of policing. The most critical factor of technologies shaping international policing is their capacity to transcend physical and other borders (Marx, 1997). In terms of international police strategies, these borders pertain primarily to geographic space and the related juridical limitations of jurisdictional competence. For this investigation, it is also important to delineate more carefully the function and impact of technology with respect to both the structural conditions and operational motives of international policing, the two components that I earlier identified as central to the internationalization of the police function.

A COMPARATIVE HISTORICAL ANALYSIS

Reviewing the role of technology in terms of the specified conditions of international policing, this analysis proceeds on the basis of a thematic logic, not necessarily a precise chronological order. The origins of modern forms of international policing are historically rooted in 19th-century efforts to establish cooperation for the control of political suspects, especially in Europe (Deflem, in press). Typically, these efforts involved limited and temporary (unilateral and bilateral) international operations, but sometimes more permanent organizations were formed. From 1851 to 1866, for instance, police from seven German-language states participated in the Police Union of German States, an organization that targeted the political opponents of established autocratic regimes. In 1898, a conference of governmental representatives was organized in Rome to foster international cooperation in the policing of anarchist movements. From the early part of the 20th century onward, international police cooperation gradually depoliticized to focus more explicitly on criminal enforcement duties. In 1914, for instance, the

First Congress of International Criminal Police was held in Monaco, around which time similar international police meetings were also held in Latin America and the United States. But most of these initiatives were not successful. The International Police Conference (IPC), for example, was formed in 1922 in New York City, but existed only for a few years and involved mostly local American police agencies. It was not until 1923 that a more permanent organization was formed, when the International Criminal Police Commission (ICPC)—the organization today known as Interpol—was founded in Vienna.

Technology and the Structural Condition of Institutional Independence

Throughout the 19th century, the earliest technologies that contributed to transformations in policing and international policing pertained to systems for exchanging information. The revolutionary period of the late 1840s in Europe intensified international police activities with political objectives oriented toward suppressing liberal-democratic movements. International political policing took place in the form of unilaterally planned intelligence work abroad and/or occurred by means of increased cooperation for shared purposes of political suppression (Deflem, 2000). International cooperation was accomplished by the establishment of personal contacts among police officials on an ad hoc basis or through a more structured distribution system of information on wanted suspects that was printed in search bulletins.

An attempt to structure international police practices more formally took place when police officials from seven German-language states, including Prussia and Austria, formed the Police Union of German States in 1851 (Deflem, 1996). Operative until 1866, the Police Union was, much like other similar bilateral initiatives, concerned primarily with establishing swifter modes of exchanging information. These new systems included regularly held meetings (at least one meeting was held every year from 1851 until 1866) and the distribution of regularly printed magazines with information on political opponents. Aimed at enhancing the exchange of information across national borders, the union's organizational structure implied that the participating police organizations had already established or would create adequate intelligence systems. Particularly the Prussian and Austrian police institutions that participated in the Police Union could rely on technically advanced intelligence systems. The Austrian political police, for instance, transmitted weekly reports among various police offices throughout

the Austrian territory from the first half of the 19th century onward. During the late 19th century, the criminal police bureaus of Vienna and Berlin distributed regularly appearing printed bulletins of information on wanted suspects and separately mentioned information on extradited foreigners. These police systems of intelligence gathering and information exchange had immediate consequences for international cooperation, since bulletins were exchanged among police from different nations (Liang, 1992). Copies of Austrian police bulletins, for example, were, from the 1860s onward, regularly sent to police in Prussia, and by the 1880s, the bulletins were distributed across Europe. Similar exchange strategies were developed by German police agencies. The police of Frankfurt, for example, published English, German, and French versions of the *International Criminal Record,* with information on the whereabouts of criminals reported by various police across Europe (Deflem, 1997).

From the late 19th century onward, the objectives of international police cooperation were depoliticized because national sovereignty concerns and differences in the political-legal ideologies of nations prevented collaboration in political matters. However, agreements among police could sometimes still be reached in politically sensitive matters as long as they concerned efficient police techniques that were conceived in politically neutral terms. For example, in December 1898, when Italian authorities brought together representatives of 21 nations at a conference in Rome to coordinate the fight against anarchism, the resolutions that were passed at the meeting failed to influence legislation in the participating nation-states (Jensen, 1981). But in matters of practical cooperation among police institutions, the meeting was successful. Specifically, all attendees, except the English and French delegates, agreed to introduce in their countries the *portrait parlé* method of criminal identification. The *portrait parlé* (spoken picture) was a refined version of the Bertillonage system, which classified identifications of criminals on the basis of certain measurements of parts of their heads and bodies and the color of their eyes, hair, and skin. Measurements based on the Bertillonage system were numerically expressed and transmitted from one country to another by telephone or telegraph, a practice that the Rome conference stressed should be further developed.

Among the communications technologies that were relevant for the internationalization of policing were not only various forms of printed information, but photographs and other means of identification of wanted suspects and criminals. After the first picture of a convict had been taken in a prison in Brussels in 1843, the police of

Paris were the first to set up a picture collection of criminals in 1874. By the end of the 19th century, photographic identification services were established among all the major police institutions in Europe and the United States. In the 1880s, the New York City police department established a picture collection of international rogues and exchanged information with police institutions in Europe (Nadelmann, 1993).

Perhaps the most important technological means of criminal identification that influenced the internationalization of the police function were the Bertillonage and fingerprint systems (Browne & Brock, 1953; Cole, 2001; Nadelmann, 1993; Sullivan, 1977). The Bertillonage or anthropometry system was developed by the anthropologist Alphonse Bertillon in 1870 and adopted by the French government in the 1880s. In 1890, the police department of Chicago was the first to implement the system in the United States. In the same year, it was suggested at a meeting of the International Prison Society in Bern, Switzerland, that the method could be used to track down criminals who were fleeing abroad. When the World's Fair was held in Chicago in 1893, the local police department showed its Bertillonage system to visiting foreign police. The fair itself also proved to be a testing ground for the new method because "the temporary influx of strangers from every quarter of the globe" on occasion of the exhibition was expected to present a "problem of international significance" (Bonfield, 1893, p. 714; see also, McClaughry, 1893).

The application of fingerprint or dactyloscopy techniques for criminal investigations was first suggested in the 1880s by Francis Galton, who argued in his book *Finger Prints* (Galton, 1892) for the individuality and permanence of fingerprints. In the 1890s, police officials Juan Vucetich of Argentina and Edward Henry of Scotland Yard were the first to introduce fingerprint classification systems to identify criminals in their respective police agencies. In 1891, the Argentinean police adopted a criminal identification system that was based on Galton's classification, and the system was revised and introduced at Scotland Yard in London in 1901. To ease cross-border exchange, fingerprints were numerically expressed on the basis of certain characteristics and then telegraphically transmitted (Borgerhoff, 1922; Jörgensen, 1922). Although there was considerable conflict between the proponents of the Bertillonage system and the advocates of fingerprinting for several decades (Cole, 2001), the fingerprint system would soon be internationalized and remains among the most popular methods of criminal identification today. In 1902, Henry P. DeForest introduced the dactyloscopy system in the New York Civil Service Commission. A year later, the

New York state prison adopted the system, and in 1904, the St. Louis Police Department organized its fingerprint bureau with the help of a Scotland Yard sergeant. In the same year, a detective of the New York Police Department traveled to London to inspect the application of the method by Scotland Yard. By the early 1900s, the system was also introduced in Germany, although in France, the Bertillonage system remained in force for some time after that (Schneickert, 1904, 1911).

Already in 1905, Police Chief Richard Sylvester, president of the International Association of Chiefs of Police, argued that the transmission of fingerprints had brought about a considerable degree of international police cooperation, when he remarked, "We find the finger print of England and the finger print of the United States filed within the police cabinets of the principal cities of these two great countries. The photographs and measurements of the criminals of Paris may be found in the galleries of the department in Washington, and vice versa" (quoted in Nadelmann, 1993, p. 86). Technologies of identification were accompanied by the development of other police techniques that were held to respond efficiently to the threat of the internationalization of crime, especially in the areas of transportation and communication. Among these new technological means were the telephone and telegraph (Jörgensen, 1923; Schneickert, 1917), radio ("An International Police Radio Network," 1937), cars (Hanna, 1927), and pigeons and airplanes (Polke, 1941).

At the beginning of the 20th century, technologies of communication and transportation further expanded and were increasingly applied in police institutions, with more and more consequential results for the internationalization of the police. In 1914, an important initiative was taken to set up a permanent organization of police, when the First Congress of International Criminal Police was organized in Monaco (Deflem, 2000). The congress attracted delegates from 24 countries and focused primarily on various technical means of exchanging information. At the meeting, systems of police information exchange were suggested that could be conducted directly from police to police, aided by postal, telegraphic, and telephonic means of communication. Also proposed were a universal system of identification of fingerprints and photographs, the distribution of an international publication containing search warrants, and the creation of a central clearing house. Eventually, the Monaco congress adopted resolutions that specified that direct police communications should be developed and improved and that national governments should allow the police the free use of postal, telegraphic, and telephonic communications for matters pertaining to international criminals (Roux, 1914/1926).

However, despite its emphasis on technical means of policing, the Monaco congress failed to found an international police organization (Deflem, 2000). The main reason for this failure is that the meeting was primarily a French initiative undertaken by jurists and political diplomats, not a more broadly appealing effort by police bureaucrats. Betraying the French dominance of the Monaco congress, a large majority of the attendants were French nationals and spoke in favor of instituting French systems of criminal identification and investigation (such as the Bertillonage system) at the international level. Among the congress's resolutions, also, was the recommendation that the Paris criminal identification service would serve as a central international bureau and that French was to be used in international police communications. However, these suggestions faced severe criticisms (most notably from the German participants), among other reasons because the Bertillonage system could not be harmonized with the dactyloscopic systems that were used in other countries of Europe (Heindl, 1914).

Systems of criminal identification also propelled a series of plans to foster international police cooperation in Latin America (Deflem, in press; Marabuto, 1935). These efforts, worked out at meetings held in Buenos Aires (1905, 1920) and Sao Paolo (1912), were largely unsuccessful in establishing international cooperation, but they were a direct result of the promotion of methods of criminal identification. Under the direction of Argentinean police official Juan Vucetich, methods of modern police operations, especially techniques of criminal identification, were particularly well advanced in Argentina and other Latin American countries. Vucetich had introduced a fingerprint classification system in the Argentinean police in 1891. Because he was also at the forefront of efforts to foster international police cooperation in Latin America, it is likely that these plans for cooperation were inspired by his ambition to advance and spread the use of sophisticated techniques of policing and enhance the standards of professionalism among police in South and Latin America. Vucetich's role was that of a moral crusader instituting new policies of crime control. Also, because the dactyloscopic system (and other technological developments) served as a useful basis for establishing systems of information exchange among police across national borders, the Latin American plans to organize international police cooperation may indeed have contributed to the introduction of scientific methods in, and thus enhancement of the professionalism of, participating police. In any case, what is remarkable is that international police cooperation in Latin

America was planned without much, if any, reference to the internationalization of crime.

Perhaps the role of technology in the development of international policing was manifested no better than in the ICPC, the police organization founded in Vienna in 1923 that is now known as Interpol (Anderson, 1989; Deflem, 2000). The commission's headquarters were established in Vienna, and its facilities and instituted means of exchanging information gradually expanded. By 1934, the Vienna headquarters included specialized divisions on fingerprints and photographs, the falsification of currencies and other valuable documents, and various kinds of information on international criminals and suspects. In addition to the headquarters, the commission thus established systems of technologically advanced means of international communication, specifically a telegraphic code, a system of radio communications, and printed publications, which, along with the meetings, were efficient means of direct international cooperation among police, unhindered by legal procedures and diplomatic formalities. Other international police initiatives in the early decades of the 20th century likewise placed a premium on technology. An international meeting in Karlsruhe, Germany, in 1925 was devoted to the promotion of new police technologies ("Die Internationale Polizeitechnische Ausstellung," 1925). About the same time, representatives of the Police Reform Movement in the United States traveled to Europe, primarily to learn about new methods of scientific policing (Nadelmann, 1993).

The Role of Technology in the Creation of International Crime

The origins of a professional police system of knowledge about the internationalization of crime date back at least to the 19th-century efforts to control the political opponents of Europe's autocratic regimes (Deflem, 1996). Police officials thought that enhanced international cooperation was needed not only so that each country could deal with its internal sources of dissent, but because the liberal-democratic, communist, and anarchist political movements were perceived to be organizing an internationally concerted overthrow of established political regimes. Toward this end, political dissenters were believed to hold secret meetings and exchange information to strengthen their political efforts. In addition, it was widely assumed among police and governmental authorities that the internationalization of political protest was especially aided by new technological developments in communication and transportation.

The press. The relevance of technologies of communication for international policing is well reflected in the fact that many European political police institutions focused special attention on the press. At a time when weekly magazines and daily journals constituted the primary source of information, the relevance of the press as a forum for distributing ideas was explicitly recognized by the police. Because the press, and printed writings more generally, could be oriented to affect public opinion across national boundaries, the police would likewise have to operate beyond the confines of national jurisdictions. The police and press were closely related institutions during the early development of capitalism inasmuch as policing activities were conceived as being concerned with controlling the public market, whereas the press was concerned with influencing public opinion, neither of which was spatially bound to confined regions (Habermas, 1962). An indication of the enormous power attributed to the written word is the fact that the press formed one of the Police Union's specifically defined fields of inquiry and that the clandestine opening of letters was a favored method of political policing across Europe (Deflem, 1996).

Transportation. Developments in the means of transportation likewise influenced international police activities. The development of the railways was considered particularly troublesome from the 19th century onward. The total number of railway lines increased exponentially from the middle to the late 19th century, with a total of some 4,000 kilometers of railway lines across Europe in 1840 and nearly 50,000 kilometers in 1860 (Pounds, 1985). As early as 1893, a German scholar devoted an entire book to the criminal, legal, and police implications of the railways (Loock, 1893). As with the internationalization of political protest, the opportunities to mobilize that were enabled by the expansion of the railroads were relevant for international police cooperation because they were recognized by police institutions that initiated international practices as being consequential for the development of crime. As early as 1855, for example, a police official participating in the Police Union referred to the expansion of traffic, which "accelerated through the railways has, for about 10 years, particularly benefited the overthrow parties of the different states in their common organization and dangerous cooperation" (quoted in Siemann, 1983, p. 28). From the early 20th century onward, cars and planes were added to the list of means of transportation that were used by criminals who were seeking refuge abroad and, consequently, by police in their pursuit (Hanna, 1927; Weiss, 1919). These technological developments were considered to enhance the general mobility of the society and particularly to expand opportunities for criminal wrongdoers to seek refuge in

foreign countries beyond the jurisdiction and competence of national police.

Theoretical developments. The idea of an increasingly international character of crime was also aided by new theoretical developments in criminology that became more and more influential from the middle of the 19th century onward. Particularly important was the growing popularity of the positivist perspective of criminology, which located the causes of crime in a society of living beings, not in formal and nationally variable systems of law (see Deflem, 1997; Pasquino, 1991). According to positivist criminology, crimes were committed by people who were causally determined to act criminally for various reasons related to their bodies, psyches, or social environments. Findings from the science of criminal statistics had demonstrated the empirical reality of these correlations and causalities. With the discovery of the statistical regularities of crime across national states, the focus of attention shifted from the national jurisdictions of legality to a borderless society of dangerous criminals. Indeed, as one important element of the new sciences of crime, the notion was defended that international crime was on the rise as a consequence of the general modernization of social life. In the late 19th century, the French social-psychologist Gabriel Tarde claimed that criminals used "more intelligently than the police the resources of our civilization" (quoted in Marabuto, 1935, p. 30). In 1893, the German criminologist Franz von Liszt expressed the similar idea that criminals specializing in monetary crimes had begun to roam the world and that the police response against them should be internationally coordinated (Marabuto, 1935, p. 15). Hence, as the society of criminals knew no boundaries, the criminal sciences and the criminal justice agencies that implemented their insights should know no boundaries either (Deflem, 1997).

Police institutions mostly lagged behind modernization trends, but the depoliticized conception of international crime was consequential for the development of international policing inasmuch as perspectives on the nature and development of crime could be shared among police of different nations to plan international cooperation with a relatively broad base of representation and irrespective of the political relations among nations. Under such circumstances of a developing commonality in police culture with respect to the objectives of control, it would become possible for police authorities to organize international cooperation on a broad international basis.

Implications for international policing. The increasing attention to international criminals since the second half of the 19th century became more and more consequential in organizational

respects during the first half of the 20th century. Though doomed to fail because of its French national character, the Monaco congress is, in this sense, an important indicator of international police developments because the meeting focused explicitly and exclusively on international crimes that were not political. The same emphasis on the internationalization of nonpolitical crime was found among the founders of the IPC in New York in 1922 and the ICPC in Vienna in 1923. But these two organizations did not make their similar claims with the same level of success.

The IPC was organized to promote and facilitate international cooperation among police (Deflem, 2000; Enright, 1925). The publicly stated motives of its organizers related to the internationalization of crime that was thought to have increased after World War I. However, such an internationalization of crime with sufficient implications to justify the creation of an international police organization was still missing in the United States. Technological means of communication and transportation were, until the mid-20th century, simply not sufficiently developed for there to be any real concern about international criminality between the United States and Europe. Police tasks that related to the increasing mobility in social life were either handled locally (e.g., the policing of immigrant groups) or remained restricted to interstate matters (e.g., white slavery), which were the responsibility of U.S. federal police agencies.

In the case of the ICPC, a motivational basis for operationalizing international police activities could be created with reference to the cross-national rise and internationalization of crime that police officials argued had taken place after World War I (Deflem, 2000). First, there was the widespread idea among police that the level of crime had increased dramatically after World War I. The reports of participating nations provided at the commission's meetings confirmed the need for an adequate police response and the commonality of the task among European police. Second, an epidemic of a new class of criminals who abused the modern opportunities of society and the increase in mobility after the war was believed to have spread. With the latest technologies of communication and transportation at their disposal, these criminals—among them, hotel and railway thieves, white slave traders, and drug traffickers— had a special capacity to transcend spatial boundaries in disregard of the national jurisdictions that police institutions were traditionally subject to. In sum, what police officials organizing the ICPC argued to justify collaboration across national borders was that there was a new class of criminals in all countries that were undergoing rapid

social change and technological progress, including mobile criminals who transcended nation-state borders.

THE RELATIVE AUTONOMY OF TECHNOLOGY

My analysis has shown, first, that the structural condition of institutional independence of the police from the political center of the state was primarily assured by steadily growing professional expertise in the means of policing. Conditions favorable for international police cooperation were based on the mutual recognition of professionalization and achieved standards of policing, especially in technical respects. Central among these technical accomplishments were both organizational innovations (a division of labor, a structured chain of command, and other elements of formal rationalization) and enhanced skills and means in police activities (scientific methods of crime detection and new technologies of communication and transportation). What these technologically driven accomplishments had in common is that they enhanced the opportunities to cooperate across national borders to realize the potential of technology in diminishing the constraints of dependence on physical space (Marx, 1997).

Second, with respect to the motivational basis for police cooperation, the evidence shows that police expertise in means (technical know-how) had developed before police institutions acquired knowledge (official information) about international crime. When the methods of responding to international crime were already in place, the incidence and nature of international crime was known as a possibility that police bureaucracies would increasingly have to deal with. Then international police practices responded to this problem with a technical apparatus that was already developed, leading to a dialectical reinforcement of the notion of the internationalization of crime. Technologies in the means of policing were already developed before similar technological developments were seen to contribute to the creation of certain risks of international crime. In other words, police systems of knowledge about international crime took on an actuarial form when international crime was presented as a greater risk to be reckoned with.

Resonating the relevance of risk recently discussed by police scholars (Ericson & Haggerty, 1997; Simon, 1988), international crime functioned as a professionally defined construct whose consequences for expanding international police organizations and facilities were real. The risk (international crime), as well as the response (international police), were conceived of in terms of technological progress. This perspective manifests a more general theme of modernization in which a changing society is conceived as

presenting specific problems that need innovative solutions in the same terms that define the new conditions. The ambivalence of modernity, then, is not just a sociological curiosity described by the founders of the discipline (e.g., Weber, 1922/1980), but finds concrete expression and practical recognition in the development of the bureaucratic institutions of society.

The accomplishments of police technology were primarily perceived, developed, and implemented in terms of the means of policing. As the application of knowledge, technology is inherently always more instrumental. The emphasis on means indicates that the origins of international police activities revolved mainly around technical know-how and policing methods, especially with respect to the exchange of information and direct police communications. These technical accomplishments could, at times, even transcend strong political divisiveness. In the case of the 19th-century efforts to organize the fight against anarchism, for example, political-ideological sentiments could not prevent the successful implementation of administrative matters that were enabled because of advances in police techniques. From a theoretical viewpoint, this primacy of means in the development of police technology offers support for the Weberian notion that technology is the embodiment of a means-oriented instrumental rationality (Weber, 1922/1980; see also Shields, 1997b).

The instrumental emphasis placed on the technologies of international policing also explains the relative lack of effectiveness of instituted international police organizations. It was precisely with respect to sheer technical capacity that those police forces that had acquired a leading position within a national state typically remained much more powerful than any international organization. Prototypical in this respect is the position of the Federal Bureau of Investigation (FBI) since the first half of the 20th century. The FBI had a virtual monopoly in the United States over technologically advanced means of policing since it had assumed responsibility for the Uniform Crime Reports in 1930. Perhaps most important among the means aiding the FBI's international efforts was its huge collection of fingerprints, allowing FBI agents to maintain an elaborate network of contacts with foreign police. Also relevant in this respect was the role of FBI director J. Edgar Hoover, who—much like Vucetich in Latin America—exerted considerable influence because of his professional charisma in instituting many of the bureau's novel and spectacular tools of scientific policing (see, e.g., Hoover, 1934).

Public police agencies in other nations, working beyond the confines of their national jurisdictions or participating in international cooperative efforts, were likewise driven by technological concerns. Of course, not all police institutions could achieve these ambitions with the same level of success. There were important differences between local and national or federal police systems, as well as between the police of different countries participating in international practices and organizations, in the levels of technological sophistication they attained. This differential development of police technology is related not only to sheer technical accomplishments, but to the tradition of police culture and the influence of nationally variable contexts in political and economic respects. Most critical in terms of international policing is the relatively high degree of centralization and standardization of police institutions in the traditionally strong national states of Europe, on the one hand, and the pluralistic system of local, state, and federal policing in the United States, on the other. Such differences can pose critical barriers to cooperation among police. As a consequence, police institutions of different national states do not meet one another on the international plane in egalitarian terms, but are instead more powerful or less powerful, contribute more actively or less actively in international cooperation, and function as buyers or sellers in the global market of the transfer of intelligence and police technology. Yet, although the extent to which police institutions of different nations can choose to work independently or not from international organizations is variable, evidence suggests that they are all motivated primarily by practical needs and technical capacity, rather than by any collectively shared interests in a common unitary cause.

CONCLUSION

I have empirically grounded the role of technology in international policing on the basis of a theoretical model that attributes the internationalization of the police function to structural conditions of institutional independence and operational motives in the internationalization of crime. In this evolution, technology has the dual role of providing public police institutions with the means necessary to claim independence from their respective political centers on the basis of professional expertise, as well as of enhancing the opportunities for a newly constructed class of criminals to transcend the borders of national jurisdictions. Both developments contribute to the internationalization of policing to establish structures

of cooperation beyond the formal jurisdictional competence of police, based on an efficiency of police techniques and a depoliticized understanding of policing objectives.

The emphasis on efficiency in the means of policing has serious implications for the legality and morality of the police. Because police agencies and international police organizations employ a technical apparatus of crime investigation and information exchange, normative questions of rights and often even legal matters of due process and constitutionally guaranteed protections are typically not or, at least, not primarily, taken into account. In fact, police technologies were historically developed and implemented expressly to bypass legal arrangements. Extradition procedures, in particular, were seen by police officials as time-consuming and unnecessarily restrictive arrangements that had to be replaced by ways of establishing direct police communications across national borders (Deflem, 2000). The systems of information exchange instituted by international police organizations were similarly intended to bypass the restrictions of legal provisions, anticipating the relevance of the international exchange of expert knowledge and technical know-how among police today (Sheptycki, 1998).

As an emphasis on efficiency and speed replaced concerns for legality and rights, police institutions of different nations could cooperate with one another irrespective of the various political, legal, and cultural differences among them. Of course, this does not mean that police power is rendered neutral in the idealized sense presented by the agencies and officials involved. The very reliance of the police on an overriding principle of efficiency is itself a strategy of domination (Weber, 1922/1980). Also, other factors besides technology, especially political conditions, may impede or facilitate international police efforts. For example, political conditions pertaining to Europe's fragile order of national states hindered international police cooperation on a broad international scale during most of the 19th century. International antagonisms in international political affairs then proved to be too strong a dividing force, positioning even police with similar objectives and expertise against one another.

As the 20th century unfolded, however, political antagonisms would gradually be overcome to foster cooperation among police across many nations. The expansion of the membership of the ICPC (Interpol) and the proliferation of other, bilateral and multilateral, forms of international cooperation among police testify to this fact. At the same time, political conditions throughout the world would continue to affect international police conditions, especially in those

parts of the world where police institutions could not maintain institutional independence because of their respective governments' nationalist ideological commitments (Deflem, in press). The role of police agencies in the Soviet Union and the former Communist regimes of Eastern Europe are prototypical in this respect. Thus, international policing remains closely related to political conditions that can hinder cooperation in matters of crime control. Conversely, under conditions of a high degree of institutional independence, the fact that police bureaucracies participate in international cooperative efforts poses new challenges in terms of legislative control, due process, and human rights, for without effective principles of democratic oversight in place, the requirements of due process will not primarily be considered in international police operations. Revelations of police agencies of a democratic nation cooperating with the police institutions of dictatorial regimes, for instance, will provoke much debate and antagonism. In terms of the transfer of police technology, it is problematic that technologies that are designed for a particular, legitimate purpose can be used for other, more troublesome objectives, as instruments of legitimate police power can become part of an apparatus of political control ("The Globalization of Repression," 2002).

Briefly turning to the current situation, in the post-September 11, 2001, context the war on terrorism is making high-tech systems of surveillance more acceptable than ever. Even civil libertarians have conceded that there is widespread sentiment that a proliferation of technologically sophisticated police methods, internationally as well as domestically, may contribute to making the society safe from terrorist attacks (Wood, 2001). But at the same time, legal and constitutional safeguards are brought into play to curb an excessive use of technology in policing (e.g., *Kyllo v. United States*, 2001; see also Colbridge, 2001). Instead of attributing intrinsic liberating qualities to technology or, conversely, condemning technological applications because of a presumed inherent lack of accountability, a more ambiguous role should be attributed to technology in terms of technical realizations and normative concerns alike. In the modern era of highly technologically oriented police institutions, policing is a delicate balancing act, caught between demands for effectiveness in matters of crime control, on the one hand, and concerns of due process, on the other.

REFERENCES

Ackroyd S., Harper R. H. R., Hughes J. A., Shapiro, D., & Soothill, K. (1992). New technology and practical police work. London: Open University Press.

Anderson, M. (1989). *Policing the world: Interpol and the politics of international police cooperation*. Oxford, England: Clarendon Press.

Bonfield, J. (1893). Police protection at the World's Fair, II. *The North American Review, 156,* 713-716.

Borgerhoff, T. (1922). Die Fernidentifizierung nach dem System Hakon Jörgensen. *Archiv für Kriminologie, 74,* 81-84.

Browne, D. G., & Brock, A. (1953). *Fingerprints: Fifty years of scientific development*. London: George C. Harrap.

Colbridge, T. D. (2001). Kyllo v. United States: Technology versus individual privacy. *FBI Law Enforcement Bulletin, 70,* 25-31.

Cole, S. A. (2001). *Suspect identities: A history of fingerprinting and criminal identification*. Cambridge, MA: Harvard University Press.

Deflem, M. (1996). International policing in nineteenth-century Europe: The Police Union of German States, 1851-1866. *International Criminal Justice Review, 6,* 36-57.

Deflem, M. (1997). Surveillance and criminal statistics. *Studies in Law, Politics and Society, 17,* 149-184.

Deflem, M. (2000). Bureaucratization and social control: Historical foundations of international policing. *Law & Society Review, 34,* 601-640.

Deflem, M. (in press). *Policing world society: Historical foundations of international police cooperation*. Oxford: Oxford University Press.

Die Internationale Polizeitechnische Ausstellung zu Karlsruhe. (1925). *Archiv für Kriminologie, 77,* 226.

Durkheim, E. (1974). The determination of moral facts. In E. Durkheim, *Sociology and philosophy* (pp. 35-62), translated by D. F. Pocock. New York: Free Press. (Original work published 1906)

Enright, R. E. (1925). The significance of the international police conference. *Police Magazine, 3,* 21-22, 88-89.

Ericson, R. V., & Haggerty, K. D. (1997). *Policing the risk society*. Oxford, England: Clarendon Press.

Galton, F. (1892). *Finger prints*. London: Macmillan.

The globalization of repression: Censored stories. (2002). *Earth Island Journal, 16,* 32-35.

Habermas, J. (1962). *Strukturwandel der Öffentlichkeit*. Frankfurt: Suhrkamp.

Habermas, J. (1968). Technology and science as "ideology." In J. Habermas, *Toward a rational society* (pp. 81-122). Boston: Beacon Press.

Habermas, J. (1992). *Faktizität und Geltung*. Frankfurt: Suhrkamp.

Haggerty, K. D, & Ericson, R. V. (1999). The militarization of policing in the information age. *Journal of Political & Military Sociology, 27,* 233-255.

Hanna, F. D. (1927). Automobiles as a factor in crime. *Journal of the American Institute of Criminal Law and Criminology, 18,* 116-120.

Heindl, R. (1914). Bericht über den I. Internationalen Kriminalpolizeikongreßs in Monaco. *Archiv für Kriminal-Anthropologie und Kriminalistik, 58,* 333-348.

Hoover, J. E. (1934). International exchange of fingerprints. *Journal of Criminal Law and Criminology, 24,* 664-668.

An international police radio network. (1937). *Police Chiefs' News Letter,* 4, 3.

Jensen, R. B. (1981). The International Anti-Anarchist Conference of 1898 and the origins of Interpol. *Journal of Contemporary History, 16,* 323-347.

Jörgensen, H. (1922). Berlinographie und Fernidentifizierung. *Archiv für Kriminologie, 74,* 255-261.

Jörgensen, H. (1923). Das drahtlose Telephone im Dienste der Kriminalpolizei. *Archiv für Kriminologie, 75,* 156-158.

Julie, R. S. (2000). High-tech surveillance tools and the fourth amendment. *American Criminal Law Review, 37,* 127-143.

Kyllo v. United States, 121 S. Ct. 2038 (2001).

Leo, R. A., & Ofshe, R. J. (1998). The consequences of false confessions: Deprivations of liberty and miscarriages of justice in the age of psychological interrogation. *Journal of Criminal Law & Criminology, 88,* 429-496.

Liang, H. H. (1992). *The rise of the modern police and the European state system from Metternich to the Second World War*. New York: Cambridge University Press.
Loock, W. (1893). *Der strafrechtliche Schutz der Eisenbahnen im Deutschen Reiche*. Berlin: J. Gutentag.
Manning, P. K. (1992a). Information technologies and the police. In M. Tonry & N. Morris (Eds.), *Modern policing* (pp. 349-398). Chicago: University of Chicago Press.
Manning, P. K. (1992b). Technological dramas and the police: Statement and counterstatement in organizational analysis. *Criminology, 30,* 327-346.
Manning, P. K. (1996). Information technology in the police context: The "sailor" phone. *Information Systems Research, 7,* 52-62.
Marabuto, P. (1935). *La collaboration policière internationale en vue de la prévention et de la répression de la criminalité*. Nice, France: École Professionnelle Don-Bosco.
Marcuse, H. (1964). *One-dimensional man*. Boston: Beacon Press.
Marx, G. T. (1988). *Undercover: Police surveillance in America*. Berkeley: University of California Press.
Marx, G. T. (1995). The engineering of social control: The search for the silver bullet. In J. Hagan & R. Peterson (Eds.), *Crime and inequality* (pp. 225-246). Stanford, CA: Stanford University Press.
Marx, G. T. (1997). The declining significance of traditional borders (and the appearance of new borders) in an age of high technology. In P. Drogue (Ed.), *Intelligent environments* (pp. 484-494). New York: Elsevier Science.
Marx, G. T. (1998). An ethics for the new surveillance. *The Information Society, 14,* 171-186.
Marx, G. T. (2001). Technology and social control: The search for the illusive silver bullet. In P. B. Baltes & N. J. Smelser (Eds.), *International encyclopedia of the social and behavioral sciences* (Vol. 23, pp. 15506-15512). New York: Elsevier.
McClaughry, R. W. (1893). Police protection at the World's Fair, I. *North American Review, 156,* 711-713.
Meehan, A. J. (2000). Transformation of the oral tradition of the police subculture through the introduction of information technology. *Sociology of Crime, Law, & Deviance, 2,* 107-132.
Miller, W. (2000). The good, the bad, and the ugly. *History Today, 50,* 29-35.
Nadelmann, E. (1993). *Cops across borders: The internationalization of U.S. criminal law enforcement*. University Park, PA: Pennsylvania State University Press.
Pasquino, P. (1991). Criminology: The birth of a special knowledge. In G. Burchell, C. Gordon, & P. Miller, (Eds.), *The Foucault effect* (pp. 235-250). Chicago: University of Chicago Press.
Polke, J. (1941). Die Brieftaube im Dienst des Verbrechers, das Flugzeug im Dienst der Kriminalpolizei. *Archiv für Kriminologie, 109,* 59-62.
Pounds, N. (1985). *An historical geography of Europe, 1800-1914*. Cambridge, England: Cambridge University Press.
Rosenberg, A. L. (1998). Passive millimeter wave imaging: A new weapon in the fight against crime or a fourth amendment violation? *Albany Law Journal of Science & Technology, 9,* 135-159.
Roux, J. A. (Ed.). (1926). *Premier Congress de Police Judiciare Internationale, Monaco (Avril 1914). Actes du Congrès*. Paris: G. Godde. (Original work published 1914)
Schneickert, H. (1904). Fernschrift und Fernphotographie; Geheime Verständigung durch telephonische Lichttelegrahie. *Archiv für Kriminal-Anthropologie und Kriminalistik, 16,* 188-190.
Schneickert, H. (1911). Kinematographische Steckbriefe. *Archiv für Kriminal-Anthropologie und Kriminalistik, 41,* 147.
Schneickert, H. (1917). Das elektrische Auge: Ein neuer Sicherheitsschutz gegen Einbruch und Feuersgefahr. *Archiv für Kriminologie, 68,* 255-259.
Sheptycki, J. W. E. (1998). Policing, postmodernism, and transnationalization. *British Journal of Criminology, 38,* 485-503.
Shields, M. A. (1997a). *The invisible presence: Revealing a theory of technology in Habermas's later work*. Paper presented at the annual meeting of the American Sociological Association, Toronto, Canada.
Shields, M. A. (1997b). Reinventing technology in social theory. *Current Perspectives in Social Theory, 17,* 187-216.

Siemann, W. (Ed.). (1983). *Der "Polizeiverein" deutscher Staaten: Eine Dokumentation zur Ueberwachung der Oeffentlichkeit nach der Revolution von 1848/49*. Tuebingen: Niemeyer Verlag.
Simon, J. (1988). The ideological effects of actuarial practices. *Law & Society Review, 22,* 771-800.
Sullivan, J. L. (1977). *Introduction to police science*. New York: McGraw-Hill.
Walker, S. (1977). *A critical history of police reform: The emergence of professionalism*. Lexington, MA: Lexington Books.
Weber, M. (1980). *Wirtschaft und Gesellschaft: Grundriss der verstehenden Soziologie*. Tübingen, Germany: J. C. B. Mohr (Paul Siebeck). (Original work published 1922)
Weiss, B. (1919). Die kriminelle Bedeutung des Luftverkehrs. *Deutsche Strafrechts-Zeitung, 6,* 181-182.
Wood, C. (2001, November 19). The electronic eye view. *Maclean's*, pp. 94-97.