Trends in the Policing Industry

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Fairness and Effectiveness in Policing: The Evidence does a terrific job of discussing the limited research on trends in the policing industry, but what it does not include is perhaps as informative. Large gaps in the body of research limit our ability to make definitive inferences about how the policing industry is changing. These gaps result in part from a lack of systematic, standardized, longitudinal data collection and analysis on the nature and outputs of police organizations in the United States. As a result, we know little about basic descriptive features of policing and how these features are changing over time. Lacking the ability to track even the most basic descriptive trends, the police research industry is at even more of a loss in developing careful empirical explanations of these trends. This article discusses some of these trends, summarizes what we know and what we do not know about them, and provides some recommendations for how the police research industry can do a better job of describing and explaining trends in the police industry.

Keywords: police; transformation; longitudinal research; organizational change

The invitation to contribute an article on trends in the policing industry for this special issue of *The Annals* presented a challenge. No matter how hard we try to capture the major trends in the policing industry, we are bound to

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DOI: 10.1177/0002716204262960

miss candidates for inclusion on the list. In his poem "La Luna," Jorge Luis Borges wrote of a fictional writer who attempts to capture the entire universe in a single work. When the writer is finished, he looks up and realizes he has forgotten to include the moon. On reflection, we will doubtless come to a similar realization. We have chosen not to employ any rigorous scientific method to select the trends we discuss below. There are precedents for doing so within the policing field. For instance, Mark Moore and his colleagues at Harvard University explored three methods to come up with a list of the most important innovations in policing: interviews of experts, surveys of practitioners, and content analyses of professional journals (Moore, Sparrow, and Spelman 1996; Moore, Spelman, and Young 1992). Although such systematic methods can be very useful, they would demand more resources than were available for preparing this article.

Our interest here is in broad-ranging, large-scale, macro- or meta-level trends in policing that are likely to contribute to a *transformation* in the "landscape of policing in the United States," to use a phrase from *Fairness and Effectiveness in Policing: The Evidence* (Committee to Review Research 2003, p. 47). Thus, we are not interested in whether police now carry 9 mm instead of revolvers, though we are very interested in whether they use more force or are more militarized than before. Similarly, we are not interested in whether some agencies have a peripheral special unit for some new and emerging social problem, but we are interested in more generic organizational transformations such as an increase in structural complexity or internal accountability mechanisms.

Not all trends constitute transformations. We follow the lead of organizational theorist Howard Aldrich, who defines a transformation as "a major change occurring along three possible dimensions: changes in goals, boundaries, and activities" (Aldrich 1999, 163). A transformation entails change on at least one of these dimensions, not necessarily all three. Furthermore, an organizational transformation need not be consciously enacted by the organization or its members. It is possible for organizations to change accidentally, to drift into change, or to suffer profound shocks that jar the organization so dramatically as to transform it unwittingly. Finally, transformations must be substantial. Changes are small alterations; transformations are substantial (Aldrich 1999).

As *Fairness and Effectiveness* (hereafter referred to as the "committee's report") points out, it is difficult to speak of the American policing industry as a monolith. Nested within it are thousands of separate police organizations of various sizes and types (and nested within them are hundreds of thousands of employees). Policing in the United States occurs within an organizational context. When transformations occur within the policing industry, they must diffuse throughout the population of police organizations. Sometimes, transformations start at the

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cal examinations of police agencies and applying organizational theories to police organizations. He has written on structural inertia in policing, police civilianization, police innovation, organizational hierarchy, the disbanding of police agencies, and police-officer homicide. His current interests focus on describing and predicting long-term trends of change and continuity with large police agencies.

organization level and bubble up to the industry level. Other times, they are diffused down to the organization level from policy elites or government (Maguire and Mastrofski 2000). Any look at transformations in the American policing industry, therefore, should take into account transformations in police organizations.

Two questions arise when considering the extent to which some policy or practice has influenced or reshaped the policing industry: how deeply has the policy or practice been entrenched within individual police organizations, and how much has it spread across the landscape of these organizations? This distinction is not just academic—it is crucial. Some practices—like community policing, in our opinion—are implemented across the landscape of policing but so weakly, or in such a scattershot fashion, so as not to constitute a significant transformation at the industry level (we recognize that some readers will disagree with this controversial example). Others are implemented in earnest in some organizations, so they may constitute transformations of these individual organizations. But since they are not diffused across the landscape of police organizations, they cannot be considered transformations at the industry level. Finally, although many of the transformations we discuss are applicable to police around the world, this article focuses on trends in the American policing industry.

We begin by defining briefly the three dimensions of transformation—in goals, in boundaries, and in activity systems. We then examine the evidence for transformation in American policing within each of these dimensions. We close with some reflections on the committee's report. The report mirrors the research body on which it is based. Gaps in the report are not the result of blindness on the part of its authors; the gaps represent missing pieces in the body of research evidence. We assess the ability of the police research industry to adequately detect, measure, and monitor important trends in the police industry. As we point out, these reflections lend themselves to some clear policy implications for those agencies and organizations that conduct and fund police research. We make a series of recommendations that we believe will help make the police research industry more relevant to, and more knowledgeable about, the American police industry.

Three Dimensions of Transformation

Goals

The goals of complex organizations are often vague, particularly in those kinds of organizations, like police, in which the relationships between means and ends are poorly understood (Mastrofski and Ritti 2000). Nonetheless, even vague goals tend to succeed at some level, directing human activity within organizations toward some "purposive or solidary outcome," to use Aldrich's words (1999, 165; also see Simon 1964). Aldrich argues that major changes in an organization's purposes or goals constitute one important kind of transformation. Transforming an organization's goals entails either expanding or contracting its domain, or changing the breadth of its goals. Starting in the 1890s, for instance, many U.S. police agen-

cies shed their numerous social service tasks, such as finding lost children and housing migrant workers (Monkkonen 1981). Simultaneously, these agencies focused more intently on crime fighting as their primary goal (Fogelson 1977). Taken together, these two changes represented a significant transformation in goals. We examine a number of current movements that represent further transformations in the goals of police organizations.

Boundaries

An organization's boundaries are what separate it from its environment, distinguishing the internal from the external, members from nonmembers. These boundaries are typically not static; they expand and contract in a number of important ways. Organizations can undergo boundary transformations by expanding or contracting their membership, in either nature or number. They can restrict their membership, for instance, by refusing to hire certain types or classes of people. Or they can open up their membership to people who were formerly not eligible. For example, American policing has undergone two waves of gender integration. The first wave, during the early 1900s, was fairly short lived; the second wave, which started during the 1960s, has been more permanent and far-reaching (Owings 1925; Walker 1977). The hiring of females for a variety of sworn and nonsworn positions represents an important boundary transformation in the American policing industry.

Another form of boundary transformation occurs when one organization merges or consolidates with another, or when it adds or divests organizational units. An example of the former type of transformation occurred in 1995 when the New York City Housing Police and Transit Police merged with the New York Police Department. An example of the latter type of transformation occurred in the 1970s and 1980s when police departments around the nation eliminated their domestic intelligence collection units (Donner 1990). In both cases, the boundaries of the police organization shifted, either eliminating or taking on more responsibilities or personnel. We examine the extent to which boundary transformations have occurred in the American policing industry.

Activity systems

According to Aldrich (1999, 166), "Activity systems in organizations are the means by which members accomplish work, which can include processing raw materials, information, or people." We explore three potential kinds of transformations in activity systems: in their administrative apparatuses, in their adoption of technological innovations, and in their organizational behaviors. All organizations experience subtle changes in activity systems over days, weeks, and years. New policies, new leaders, and new environmental stimuli all lead organizations to adapt their activity systems in small (though perhaps important) ways. Transformations constitute more significant shifts in activity systems. We examine the extent to

which the American policing industry is experiencing transformations in its activity systems.

Overlap in the three dimensions

Many of the transformations we identify do not fit neatly into one of these three dimensions. Some, for instance, might be considered transformations in more than one dimension. In the 1970s, in the wake of the Watergate scandal, many police agencies dismantled their domestic intelligence collection units or transferred personnel performing those functions to other assignments (Donner 1990). After September 11, 2001, many of these same police agencies scrambled to bolster their intelligence capacities. Research evidence on changes in policing after September 11 is still slim, but anecdotal evidence suggests that recent efforts to reembrace the

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Police play a crucial risk-management role in defining who is criminal, who is a bad driver, who is mentally ill, and who is dangerous.

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domestic intelligence function in policing might constitute a new transformation on all three dimensions (Murphy and Plotkin 2003; Rashbaum 2002; U.S. Conference of Mayors 2002). Some police organizations are now expanding their goals to include the timely collection and analysis of terrorist intelligence. Some are creating new positions for intelligence analysts, thereby expanding their occupational boundaries. Some are creating new units and technologies to deal with terrorism, or trying to encourage new competencies among personnel, thereby establishing a potential transformation in activity systems. As the committee's report accurately concludes, the research base is currently not sufficient to determine whether these trends constitute transformations at the industry level.

The trends in domestic intelligence collection illustrate that some transformations cannot easily be forced into just one of the three conceptual dimensions we use here. It may be useful to picture these dimensions as a series of overlapping Venn diagrams. Any individual transformation might fit within just one of the dimensions or in the intersection between either two or three of them. Perhaps the most compelling transformations, those that have the greatest likelihood of reshaping policing, are the ones that have implications for goals, boundaries, and activity systems.

Goals

Several transformations in goals have reshaped the policing industry in recent years and promise to continue doing so in the coming years. According to Aldrich (1999), goal transformations expand or contract an organization's domain and/or change the "breadth of products or services." We explore six areas of potential transformation in goals: the reduction in the domain of public police due to the provision of security by nongovernmental organizations; the changing role of police in preventing, planning for, and responding to domestic and international terrorism; an increasing trend toward militarization among police; an expansion of the police role as information brokers in the risk-management industry; the continuing expansion of policing into the surveillance, security, and socialization of children; and an expansion of the police role in working with communities to solve or mitigate problems. Some of these trends are tangible and readily observable, while others are more subtle or abstract and more difficult to document and track. After exploring six potential goal transformations, we close this section by assessing the extent to which the police research industry is capable of detecting and measuring each one.

Governance of security

While early forms of policing were often delivered by a hodgepodge of public and private entities, public police have dominated the "market" for delivering public safety in the modern era. However, several observers have noted in recent years that public police are losing market share to the rapidly expanding private security industry (Johnston 1992). Bayley and Shearing (1996, 2001) argue that privatization is only the tip of the iceberg—that policing throughout the world is undergoing a substantial restructuring in which a variety of nongovernmental organizations are becoming increasingly responsible for performing policing functions. Bayley and Shearing (2001) conclude that "policing has entered a new era, an era characterized by a transformation in the governance of security." This transformation blurs the lines between public and private policing and constitutes a reduction in the domain of public policing. Jones and Newburn (2002) reject portions of Bayley and Shearing's argument and question the extent of actual transformation. Research evidence, both in the United States and abroad, is insufficient to sort between these two competing claims.

Policing terrorism

A handful of police departments in the United States (most notably, New York's) have had extensive experience in preparing for and investigating terrorism. Until September 11, 2001, however, most agencies viewed the likelihood of a terrorist incident within their jurisdictions as unlikely (Riley and Hoffman 1995). Since

September 11, police agencies have devoted massive effort to preparing for terrorism. Little empirical evidence exists on the nature of the changes they are undergoing, with most of what is known derived from anecdotal evidence and journalistic accounts.

Recent surveys conducted by the U.S. Conference of Mayors (2002) and the Massachusetts Statistical Analysis Center (2002) confirm that a variety of changes are taking place in goals, boundaries, and activity systems. In the Massachusetts survey, only 6.6 percent of police agencies reported making no changes as a result of the September 11 terrorist incidents. From a goals perspective, the changes in policing resulting from September 11 represent an expansion in domain and an increase in the breadth of services and responsibilities. For instance, police are now devoting substantially more attention to disaster planning in concert with other agencies and organizations, a trend that runs counter to their tendency to plan in isolation (Wenger, Quarantelli, and Dynes 1989). They are revamping their domestic and international intelligence-collection efforts (Rashbaum 2002). Furthermore, they are developing new areas of investigative expertise, cooperating much more with federal law enforcement and intelligence agencies, working more closely with the military, increasing their levels of surveillance over their communities, paying more attention to the safety and security of critical infrastructure, and a host of other changes that are likely to have a profound influence on the American policing industry (Murphy and Plotkin 2003).

Militarization

Militarism has always been present to some degree in policing, but some observers note that it is expanding, in both the United States and abroad (Kopel and Blackman 1997; Kraska 1996; McCulloch 2001; Weber 1999). First, police continue to adopt many of the trappings of military organizations, including formal ranks, insignias, uniforms, codes of discipline, organizational structures, equipment, doctrine, and culture.[1] Second, federal law restricting the military from participating in domestic law enforcement functions has become considerably less restrictive over the last two decades. Congress has chipped away at the Posse Comitatus Act of 1878 (18 USC 1385), enabling increased military involvement in civilian law enforcement efforts. Other federal statutes are also beginning to blur the line between police and military. Third, researchers have detected an increase in the number of agencies with police paramilitary units, from 59 percent in 1982, to 78 percent in 1990, to 89 percent in 1995 (Kraska and Cubellis 1997; Kraska and Kappeler 1997). Finally, police are also beginning to rely on a host of nonlethal military technologies intended to augment their communication and surveillance capacities (Haggerty and Ericson 1999). Taken together, these four themes point to an overall increase in militarization among police agencies. Research findings from Australia, together with anecdotal evidence from the United States, suggest that the war on terrorism is likely to enhance this ongoing trend (McCulloch 2001).

Policing risk

Ericson and Haggerty (1997) observe that police agencies have become an increasingly crucial node in the network of institutions responsible for risk management. Their traditional roles are expanding to include collection and dissemination of information. As Maguire and Wells (2002, p. 33) point out, police "are like an army of information soldiers; taken together they contain vast pools of untapped information about the organization and its clients." The important distinction for Ericson and Haggerty is that the police information-processing role is increasingly being shaped by external institutions, including insurance companies, health and welfare organizations, schools, and private firms. Police play a crucial risk-management role in defining who is criminal, who is a bad driver, who is mentally ill, and who is dangerous. While Ericson and Haggerty pose some intriguing ideas, evidence for their assertions is still rather limited, emerging mostly from ethnographic research conducted within police departments and not from the other institutions within the risk-management industry. Katz (2003, p. 485), for instance, examined the processes involved in producing and disseminating data on gang members in a Midwestern police agency. He found serious data errors that are likely to lead to misjudgments about individuals' gang affiliations. These errors were the "product of inadequate communication within the gang unit and between the gang unit and its operating environment." Much more research is needed in this area before we can conclude with any confidence that Ericson and Haggerty have detected an emerging transformation in policing, but their thesis is compelling enough to warrant further investment in carefully designed research.

Socializing children

Police agencies are also expanding their role in securing and socializing our children. Police have always played a role in the lives of children. Police Athletic Leagues, for instance, whose motto is "Filling Playgrounds, Not Prisons," date back to the early 1900s.[2] Police programming in schools has increased with the widespread adoption of Drug Abuse Resistance Education (DARE), Gang Resistance Education and Training (GREAT), and other similar programs that bring police into classrooms. More than 90 percent of police agencies now provide drug-use-prevention programming in schools (Maguire and Mastrofski 2000). There has also been a rapid proliferation in the number of school resource officers. The National Association of School Resource Officers, first established in 1990, now has more than 10,000 members.[3] According to Ericson and Haggerty (1997, p. 8):

> The police help to secure the social boundaries of youth by working in the interstices of institutions that deal more directly with young people. An analysis of police programs in schools reveals that police officers function simultaneously as security officers, risk educators, informant-system operators, and counselors, and that they mobilize students and staff to play these roles as well.

Taken together, these trends imply a systematic broadening of the services that police provide to their communities and therefore constitute another kind of important goal transformation.

Community policing and problem solving

According to some commentators, the community policing and problem-solving movements represent the most significant transformations in the policing industry in the latter half of the twentieth century. One could easily fill a book-length manuscript addressing the evidence on whether this assertion is true; we do not have that luxury here. Because *community policing* is a catchphrase that has been used to describe a potpourri of different strategies, one complication in determining the extent to which it has transformed policing is determining exactly

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Administrative rules regulating deadly force have reduced its use by police.

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what it is. Maguire and his colleagues have argued elsewhere that community policing has three primary components: organizational adaptation, community interaction and engagement, and problem solving (Eck and Maguire 2000; Maguire and Uchida 2000). We examine the evidence for organizational adaptation later in a subsection on changes in the administrative apparatuses of police agencies. A large body of research has examined the extent to which community interaction and engagement practices occur in policing, but most of this research was cross-sectional and therefore unable to address change. An equally large body of research has examined the extent to which police organizations have embraced the precepts of problem-oriented policing as outlined by Herman Goldstein (1990), but most of this research was cross-sectional as well.[4]

A handful of multiwave establishment surveys have examined changes in the implementation of community policing during the 1990s (for a review, see Maguire 2002a). In general, these studies report increases nationwide in the number of employees assigned to perform community policing functions and the number of agencies that have implemented various community policing programs. Methodological concerns about these kinds of studies loom large since they are unable to reach valid inferences about the dosage of community policing activities

and the depth of philosophical change in agencies claiming to perform these activities (Maguire and Mastrofski 2000). At Harvard University, Mark Moore et al. (1999) conducted intensive case studies of community policing implementation in ten police agencies, eight "high performers" and two "typical" agencies. They found that "while all departments seemed to move pretty far in the direction of increasing the quantity and quality of problem solving efforts, they did less well in developing their capacity for establishing and maintaining community partnerships" (p. 30). These findings are consistent with survey evidence showing that community involvement often lags behind other elements of the community policing movement (Maguire and Katz 2002). Comparative ethnographies of community policing implementation in a cross-section of American police agencies would go a long way toward helping to establish the extent of transformation being inculcated in these agencies as a result of community policing.

Boundaries

Changes in boundaries involve substantial expansions or contractions involving either (1) organizational members or employees (but not "clients") or (2) other organizations. We begin by exploring five potential transformations in the membership boundaries of the American policing industry: overall growth, civilianization, and increasing diversity in the race, gender, and education of the policing workforce. After that, we explore a series of trends influencing the organizational boundaries of the policing industry.

Organizational members

Overall growth. The policing industry is growing not only in the United States but also worldwide. Due to data-quality issues in counting cops, no reliable national data exist that can be used to track changes in police size in the United States over time (Maguire et al. 1998). However, ratios of sworn officers to population can be computed at the agency level. Among agencies for which an accurate ratio can be computed, the median ratio rose from 1.77 sworn officers per 1,000 population in 1975 to 1.98 in 1998.[5] This trend is not unique to the United States. Maguire and Schulte-Murray (2001) found that the ratio of police to population is increasing in nations throughout the world. Just as corporate downsizing represents a contraction of corporate America's boundaries, the growth of the policing industry signals an expansion in the membership boundaries of police organizations. The growth of police relative to population should be considered a basic social indicator representing an expansion of formal social control and is clearly worthy of further investigation.[6]

Civilianization. During the first hundred years of formal, vocational American policing, most police agencies did not employ civilians. For example, among 350

municipal police agencies surveyed by the FBI in 1937, the median percentage civilian was only 2.6 percent. Over time, civilianization in policing has increased steadily. Recent data indicate that about 25 percent of police employees in agencies with a hundred or more employees are civilians.[7] One recent study reported that after years of steady growth, civilianization in large municipal agencies began to level off in the early 1990s but is now inching up again, perhaps due to the availability of federal funding to hire civilians (Maguire et al. 2003).

Civilianization is not just a matter of numbers, however. Traditionally, civilians have been used in two roles. The first role involved relatively unskilled tasks, such as record keeping, maintenance, call taking and dispatch, and clerical duties (King forthcoming). The second traditional role involved skilled "behind the scenes" tasks such as crime mapping and analysis and computer programming and maintenance (King forthcoming). New roles continue to emerge, however (Forst 2000). Some police agencies now employ civilians in high-level leadership positions from which they were formerly excluded as applicants. Civilians are also employed as community liaisons, creating a stable linkage to specific community groups that are ordinarily isolated from police (such as ethnic groups that do not speak English and that are tightly knit and insular, the fundamentally religious, gays and lesbians, and labor groups). A number of agencies also now employ civilians to serve as Public Information Officers (Surette 2001). The future of civilianization may also involve using civilians to process crime scenes, to investigate computer crimes, to respond to particularly dangerous crime scenes (such as covert drug labs or chemical/biological/radiological attacks), and if recent trends in domestic intelligence collection continue to take shape, to spy on us.

Racial diversity. Police officers have become a considerably more diverse lot in recent years, with great strides being made in hiring more minorities. For early police agencies, ethnic diversity involved hiring Italian or Irish officers to police ethnic enclaves (sometimes their own and sometimes not) (Harring 1983). Few agencies employed African Americans as officers, and those that did often chose not to grant them full arrest powers. Overall, the first major wave of racial integration in American policing began in the late 1960s when many police agencies hired African Americans as sworn officers (Alex 1969). According to one study, the percentage of black police officers in the United States rose from about 4 percent in 1973 to 11.3 percent in 1993 (Zhao and Lovrich 1998). According to another study, the percentage of blacks in large police agencies, which are typically located in more diverse communities and therefore have greater proportions of minority officers, rose from 18.4 percent in 1990 to just over 20 percent in 2000. Hispanics in these same agencies increased from 9.2 percent in 1990 to 14.1 percent in 2000 (Reaves and Hickman 2002). Research has shown that these increases in minority employment are often due to court-ordered hiring quotas (Lott 2000; McCrary 2003). While the proportions of minorities employed within police departments still often fail to reach their proportions in the population, there have been significant strides in minority employment in policing.

Gender diversity. Police agencies have also made major strides in enhancing their gender diversity. Except for a handful of notable exceptions, women have entered policing as sworn officers since only the late 1960s. Women had already made considerable inroads into policing as civilians, but police agencies were resistant to hiring them as sworn officers. That picture has changed considerably, though as some critics point out, there is still much room for improvement, particularly with regard to the proportion of women in supervisory or leadership positions (National Center for Women and Policing 2002). The percentage of female sworn officers in large agencies with a hundred or more officers has increased from 2.0 percent in 1972 to 12.7 percent in 2001 (National Center for Women and Policing 2002). Our analysis of a larger sample of agencies from the FBI's Police Employment data shows that the mean percentage of females in sworn positions rose from 3.6 percent in 1975 to 9.7 percent in 2001. A more telling perspective from the same data set is that 25.8 percent of these agencies employed no female sworn officers in 1975; by 2001, this figure was less than 1 percent.[8] Clearly, the number of female police officers is increasing. As the committee's report accurately concludes, however, the effects of these increases on police practice are unknown.

Education. Data on the education levels of American police officers are neither current nor conclusive, but a patchwork of evidence suggests that the policing workforce is becoming increasingly educated (Carter, Sapp, and Stephens 1989). Police agencies have also increased their minimum education requirements. The percentage of officers working in agencies with some college requirements increased from about 10 percent in 1990 to 32 percent in 2000 (Bureau of Justice Statistics 2003b). By 2000, 83 percent of agencies required a high school diploma, 14 percent required some college or a two-year degree, and only 1 percent required a four-year degree (Bureau of Justice Statistics 2003b).[9] In spite of significant progress, the policing field has still fallen well short of meeting a recommendation made twenty-five years ago by the National Advisory Commission on Higher Education for Police Officers: "All police departments should move now to require new recruits to have earned a baccalaureate degree and no police department should require two years of college as the minimum qualifications for police recruits" (Sherman et. al 1978, 14). The policing workforce is likely to become increasingly educated. As the committee's report points out, however, the effects of education on policing practice are still not well understood.

Other organizations

Boundary transformations occur not only within the membership of a police agency but also when the agency's organizational boundaries, or those of other organizations with which it transacts, expand or contract. We explore three classes of organizational boundary transformations.

Organizational deaths, consolidations, and births. Despite the common notion that police organizations are immortal, we now know otherwise. Police agencies have been disbanded with surprising regularity since at least the late 1950s (and likely before). Between 1970 and 1999, at least 105 Ohio police agencies disbanded (King 1999). Even large police agencies such as the Compton Police Department in California (an agency with 103 sworn officers) and New York City's transit, school, and housing police agencies (respectively, the eighth, eighteenth, and twenty-first largest police agencies in terms of full-time sworn employees in 1993) were disbanded during the 1990s (Bureau of Justice Statistics 1996). The

Police have long been infatuated with multiple types of technical innovations as far back as the 1800s, with the adoption of uniforms, patrol wagons, and call boxes.

demise of a police organization often alters the boundaries for the other police organizations in that particular environmental niche. In most instances, a preexisting agency (usually the county sheriff or the state police) must assume policing duties for the disbanded agency's community. In many instances, surviving agencies hire employees from the disbanded agency and receive some of the disbanded agency's equipment. In this way, new members with considerably different experiences and agency cultures are introduced into existing agencies.

Other times, multiple agencies disband and consolidate into a new agency, or one agency disbands and consolidates within an existing agency. Some consolidations merge two or more police agencies into one, while others form public safety departments by merging police with other emergency services like fire and emergency medical services (Crank 1990). Consolidation has been a topic of scholarly debate since at least the early 1970s (Ostrom, Parks, and Whitaker 1973; Finney 1997), although examples of mergers of police agencies can be found throughout the history of modern policing. While there is a growing body of anecdotal and historical evidence on consolidation, there is no systematic data that would enable us to predict how this phenomenon will affect the landscape of the policing industry.

New police agencies are also sometimes founded. Although many are quite small, the sizes of new agencies vary widely.[10] A recent survey in three states indicates that between 1970 and 1999, fifteen new police agencies were created in

Ohio, while nine were created in Arizona and Nevada (King 1999). New agencies alter the boundaries of preexisting agencies within their niches. They must attract new members, either as new recruits or by attracting current police employees from other agencies. The formation of a new organization presents an opportunity to create an organization unhindered by past arrangements, such as structure and culture (Downs 1967; Stinchcombe 1965). The attitudes and experiences brought by new members, especially new leaders, also shape new organizations (Boeker 1988; Hannan, Baron, and Burton 1999; Tucker, Singh, and Meinhard 1990).

There have been no national studies of organizational births, deaths, and consolidations. Early evidence from pilot studies in three states suggests that deaths far outnumber births. If this trend is similar in other states, and if it continues, the future landscape of American policing might someday look very different, much like the face of corporate America changed after years and years of mergers and acquisitions.

Networks and partnerships. Perhaps now more than ever, police agencies form partnerships with individuals, businesses, government agencies, and other law enforcement agencies as a means of working together toward some common interest. These partnerships are sometimes very loose and informal, based on little more than a handshake and goodwill (Ostrom, Parks, and Whitaker 1978). Other times, they are more formalized and may resemble what David Thacher (forthcoming) calls an "inchoate hierarchy," a developing organization with its own rules, policies, and hierarchy.

Perhaps the best examples in policing of an inchoate hierarchy are multiagency task forces: temporary or semipermanent organizations staffed by members who are also members of other police organizations. Task forces are usually created to deal with some pressing problem that transcends traditional agency jurisdictions (e.g., high-profile criminals, such as serial killers, as well as drug trafficking and terrorist threats). Task forces may be either short lived or long lived. Regardless of their life spans, task forces entail a newly founded organization composed of members from other agencies. Thus, task forces are conglomerations of people who are often trained in different ways, have different perspectives on the problem, and come from different organizational cultures. In 1999, 53 percent of American police agencies reported participating in a multijurisdictional, drug task force (Bureau of Justice Statistics 2003a). After September 11, 2001, the FBI increased the number of Joint Terrorism Task Forces (in which it partners with state and local police agencies) from thirty-five to sixty-six. The U.S. Department of Justice (2003) also recently established ninety-three Anti-Terrorism Advisory Councils to coordinate information sharing among more than 5,000 state and local law enforcement agencies.

Other partnerships do not involve the creation of a new hierarchy or pseudo-organization, but they still cross organizational boundaries. For instance, Hassell (2000) describes a partnership in one city where juvenile probation officers were physically located within the local police department to enhance their collabora-

tion with juvenile detectives. Some partnerships pair police with individuals or organizations located outside the criminal justice system. Under the rubric of problem-oriented policing, for instance, a number of agencies have developed formal or informal interagency partnerships designed to reduce crime, fear, or disorder. These teams often involve housing, zoning, fire, public works, and other local agencies.

Some partnerships occur even less formally, triggered when a police officer attempts to solicit, leverage, or coerce a third party in supervising people or places thought to be criminal or potentially criminal. Buerger and Green Mazerolle (1998) refer to this phenomenon as "third-party policing." It blurs the boundaries between formal social control as performed by paid police officers and other less formal means of social control. Traditionally, informal social control is distributed by a wide range of authorities who are not police, such as parents, teachers, priests, or employers. Third-party policing blurs the distinction between these two forms by enlisting third parties (who traditionally are not paid to exert formal social control) and by convincing them or compelling them (e.g., through threat of civil action) to exercise social control over people (such as tenants and bar patrons) and/or areas (such as rental properties). At present, we know very little about how many police agencies are using some form of third-party policing. Anecdotally, we know that a number of agencies have used civil suits and the threat of civil suits to deal with troublesome properties such as bars, social clubs, and rental properties, but there are no national data on the extent of these practices.

Together, the development of these various forms of networks and partnerships signals a potential transformation in which police organizations appear more open, more transparent, and more cooperative. At the same time, some of these partnerships appear to represent a conscious effort by the police to increase surveillance and control over the citizenry, by expanding their domain or by encouraging others to perform functions that police are not permitted to perform. Unfortunately, national data on the extent to which police organizations are involved in these various networks and partnerships are not available.

Federalization and globalization. Local policing in America is also becoming heavily influenced by federalization and globalization. A task force from the American Bar Association (1998) recently documented the tremendous rise in the federalization of the criminal law. For example, both Project Exile and Project Safe Neighborhoods bring the weight of federal prosecutors to bear on local gun-related crime. Local police agencies work closely with U.S. Drug Enforcement Administration agents so they can take advantage of federal prosecutions that carry longer sentences typically served in out-of-state prisons. Police departments around the country are being investigated for civil rights violations and are entering into consent decrees with the Justice Department to enhance their hiring and promotion practices for women and minorities. The past decade has also seen a massive infusion of federal funding for local law enforcement through a variety of funding programs. Federalization also plays a role in the militarization of the police,

discussed earlier, with the Defense Department providing a variety of military equipment and training to state and local police. All of these factors point to an overall increase in federal involvement in local policing (Richman 2000).

American police are also being affected by broader societal trends in globalization (Ward 2000). International terrorism is the most obvious example of how globalization touches home, but numerous others include immigration patterns and transnational investigations. During a recent study, one of us spoke with a small-town New Jersey police officer who was working on an international credit-card fraud case with Turkish police. The globalization of crime has opened up the world for American police. At the same time, the American law enforcement industry is also projecting itself on the world stage (Deflem 2002). Since 1995, for instance, the United States has opened five International Law Enforcement Academies around the world, designed to improve training of local authorities and enhance international cooperation. These academies represent only one of several avenues through which the United States provides training and support to the world's police.

Activity Systems

We could easily write a book on trends in the activity systems of police agencies. Here, we focus briefly on trends within three substantive areas: the administrative apparatuses of police organizations, technological innovation, and organizational behavior.

Administrative apparatus

Police administration has always been influenced by broader trends in management thought. Modern police chiefs are conversant about a variety of management-reform prescriptions in business and government (e.g., Webber 1991). Law enforcement trade journals are filled with exhortations to implement the latest and greatest management fads. No systematic, ongoing, national data sources in policing track the extent to which these changes have taken root. Based on longitudinal data sets assembled from a variety of sources, one study found that during the 1990s, police agencies experienced significant decreases in centralization and administrative intensity, changes encouraged by community policing reformers. At the same time, they did not "flatten" their hierarchies or reduce their levels of specialization, two changes featured prominently in the reform prescriptions (Maguire et al. 2003).

Another recent national study examined the implementation of "Compstat," a popular package of administrative reforms first implemented in New York City in 1994 (Weisburd, Mastrofski, et al. 2001). According to data from a national survey of police agencies, Weisburd, Mastrofski, et al. (2001) found that agencies implementing Compstat differed from those who had not implemented it on three dimensions: they clarified their mission, created or enhanced mechanisms for

internal accountability, and instituted data-driven decision making. Other elements of Compstat, such as geographic organization of command and organizational flexibility, did not differ across the two groups of departments. The fieldwork conducted by Weisburd et al. suggests that while Compstat induced some innovations in management, it was not successful in displacing traditional, core policing practices.

The police research industry has produced other scattered findings on changes in the administrative apparatuses of police organizations. Most such findings result from ad hoc research efforts using cross-sectional designs rather than a systematic research agenda implemented longitudinally. Research on both community policing and Compstat has shown that even agencies claiming that they do not do it, still engage in its activities (Maguire and Katz 2002; Weisburd, Mastrofski, et al. 2001). Thus, we cannot assume from cross-sectional data that some policing practice that is thought to be new has been implemented recently. Longitudinal data are necessary to assess change. As a result of a long-term lack of investment in longitudinal research, evidence on changes in the structure and management of police organizations tends to be weak and scattered.

Technological innovation

Technological innovations refer to a range of technology products that are considered state of the art to the police. King (2000) reported that technical innovations bifurcate into those employed predominantly by police managers, such as computer-aided dispatch, and those employed by line officers, such as new firearms or new ways to dispense force. Manning (2003) employs a different classification system, listing five kinds of technological innovations: mobility, training, transformative, analytic, and communicative. Police have long been infatuated with multiple types of technical innovations as far back as the 1800s, with the adoption of uniforms (Monkkonen 1981), patrol wagons, and call boxes (Harring 1983).

At first blush, it appears that new police innovations are merely tools that officers use to perform their usual tasks, and therefore, innovations do not change their core activities. In fact, however, new technologies sometimes change what officers do and can thus alter the activity systems of police organizations. For example, before the adoption of mobile data terminals (MDTs), officers required some visible display of probable cause before stopping a motor vehicle. The installation of MDTs in patrol cars, however, allowed officers to unobtrusively "run" motor vehicles in fishing expeditions for warrants and probable cause (Meehan and Ponder 2002). Access to such information increases the number of people with which the police will have contact, and it also defines the conditions of their interactions. Advances in identification technologies for fingerprints and DNA have also influenced investigative practices.

While acknowledging that MDTs increase the scope of police surveillance activity, Manning (2003, 125) argues that information technology tends to be grafted on "to the extant structure and traditional processes of the police organization, and these organizations have little changed." He concludes more generally that "there

is little evidence that thirty years of funding technological innovations has produced much change in police practice or effectiveness" (Manning 2003, 136). While a scattered body of research evidence lends plausibility to Manning's sweeping conclusion, data on the extent of, and especially the consequences of, technological innovation in American police organizations is currently inadequate to confirm or refute it with any empirical precision.

Organizational behavior

Organizational behavior is a catchall phrase that refers to the many behaviors in which an organization and its members engage. In the few pages that remain, we are unable to exhaustively catalog potential transformations in the organizational behavior of American police agencies. Instead, we comment briefly on a handful of behavioral domains and assess the capacity of the police research industry to detect or monitor transformations in these domains.

Egon Bittner noted in 1970 that the key distinction between police and other occupations is that "police are institutions or individuals given the general right to use coercive force by the state within the state's domestic territory" (Klockars 1985, 12). The use of force and other coercive behaviors are core components of police behavior. We explore three specific forms of coercion: use of lethal force, use of nonlethal force, and arrest. Police also engage in an array of other noncoercive behaviors, and we briefly explore some of those as well.

A healthy body of research on the use of deadly force by police has emerged over the past two decades. We now know, for instance, as the committee points out in its report, that administrative rules regulating deadly force have reduced its use by police. The best research on deadly force, however, has taken place within agencies or within communities; therefore, it is not very useful for examining transformations at the industry level. National data on police use of deadly force are collected by two different agencies: the FBI and the National Center for Health Statistics. James Fyfe (2002), as well as several other observers, have argued that both data sources are beset with measurement error and cannot be trusted for comparing agencies. Fyfe (2002) goes so far as to argue that the best data on deadly force are not collected by government agencies or social scientists but by newspapers that collected the data through Freedom of Information Act requests or litigation. Using these various data sources, police researchers can make some limited inferences about trends in deadly force. Fyfe (2002) points out, however, that there are no national data on how often police shoot and miss or wound citizens. It is not unreasonable in a democracy to expect our police agencies to be willing and able to report accurate data on how often they shoot at, wound, or kill people. We endorse the committee's finding that this is a serious deficiency in existing research.

Our understanding of when and why officers use less-than-lethal force has improved considerably over the past several decades, thanks to systematic social observation research and a range of other study methods (McEwen 1996). Although within-agency research on use of force by police has made considerable progress, we still know very little about interagency variation in uses of force. The

International Association of Chiefs of Police (IACP) implemented a voluntary use of force reporting system in 1996. Participating agencies reported their data anonymously to a central archive at IACP. As the committee persuasively argues, this effort suffered from a number of pitfalls and was discontinued in 2001. Because national data on less-than-lethal force do not exist, the policing industry could slowly be increasing (or decreasing) its use of force each year and police researchers would be unable to detect this important trend using existing data systems.

Our overarching recommendation is that the police research industry needs to improve its ability to detect, measure, and monitor trends in the policing industry.

Two alternative research methods could provide promising data on changes in the use of force at the industry level if they were conducted over time. The first would be a regular national survey of a random sample of police officers. The groundwork for such a study has already been laid by the Police Foundation, which recently conducted a telephone survey of a random sample of more than 900 American police officers on abuse of authority (Weisburd, Greenspan, et al. 2001). Longitudinal data from such a study could shed valuable light on changes in their (or their colleagues') propensity to use force. The second would be a regular national survey of a random sample of citizens. Once again, the groundwork for such a study has already been laid by the Bureau of Justice Statistics. In 1999, the bureau conducted a telephone survey titled the Police Public Contact Survey with a random sample of more than 80,000 persons regarding their contacts with police (Langan et al. 2001). This study, if repeated systematically over time, could also provide valuable insights about changes in citizens' experiences with police use of force.

Like the use of force, making an arrest is a concrete expression of the coercive authority of police. The FBI routinely collects arrest data from American police agencies. An audit of these data conducted two decades ago revealed serious measurement problems. The study concluded that using arrest data to compare police agencies is unwise (Sherman and Glick 1984). We are unaware of any factors that might have changed this conclusion since the audit was completed, and therefore, we cannot attach much faith to national arrest statistics.

These traditional measures of police behavior have two problems: first, they conceive of the use of authority as a binary phenomenon rather than a continuous

one. Recent research shows that police authority can be conceived of on an ordinal scale that ranges from less to more. For instance, both Klinger (1996) and Brown (2003) have developed formal authority scales used to measure the extent of formal authority exercised by police with an individual suspect or during an encounter. While neither study used police organizations as the unit of analysis, it is not difficult to imagine that the exercise of formal authority might vary significantly across police organizations. Scientific methods for measuring the quantity of formal authority used by police with individuals or during encounters are still developing. As these methods mature, the use of formal authority could conceivably be measured at the organization or the industry level.

Second, traditional measures of police behavior capture only the coercive side of police work. Yet decades of research show that police spend much of their time performing other tasks. Should not we measure these as well? In a section titled "Neglected Dimensions of Police Behavior," the committee makes a useful contribution to discourse on police performance measurement with its argument that current data systems ignore major domains of police behavior. We do not know, for instance, how often the police rely on informal applications of their authority, provide assistance to citizens, mobilize and work with the community, solve community problems, or serve as information brokers to other institutions. Existing aggregate measures of police behavior are beset with measurement problems and neglect major elements of police behavior. The committee makes a persuasive argument that important domains of police behavior are still not being measured systematically. As a result, the capacity of the police research community to detect and monitor industry trends in police behavior is limited.

Discussion and Conclusion

The committee's coverage of the trends we have outlined is inconsistent. Some receive considerable coverage in the report, while others are discussed only briefly or not at all. The committee's review, however, is consistent with the availability of research evidence. Gaps in the report represent gaps in the research. As we have demonstrated, these gaps in the research base are substantial. Filling them represents a challenge for the police research industry, including not only those who carry out the research but those who organize and fund it.

Our major conclusion is that the police research industry is not currently organized or equipped to systematically detect and monitor change in policing. The major modes of research consist of case studies, cross-sectional studies, and studies conducted at the individual level. There is a lack of focus by those who carry out and fund police research on the development of a systematic, cohesive, empirically defensible, longitudinal data-collection strategy at the organization or the industry level. As a result, we are unable to measure, detect, or explain major changes (or continuities) in policing with any scientific confidence. As Lynch (2002, 64) points out, "Some changes in the police industry have taken place in what might be called

'geological' time. Unless you have a reasonably long and constant time series, you will not detect these changes."

What are some of the reasons that the police research community is limited in its capacity to systematically detect and measure trends in the policing industry? First, as we have argued above, many of these trends are mediated through the organizational level; their emergence as an industry-level phenomenon occurs when they diffuse throughout the population of police organizations. As Maguire (2002b) has noted, the volume of research on police organizations is minuscule compared with research on police officers, police work, and police effectiveness. Second, some of these long-term trends are so abstract or subtle that they defy most of our present techniques for seeing or detecting them. For example, testing a hypothesis that police are relying on increasingly more invasive modes of surveillance and control would be very challenging using existing data sources or traditional modes of research. Third, the nature of organizational (and industry) change confounds our ability to detect it. It tends to occur either glacially or as punctuated equilibrium, where long periods of constancy are interrupted by short periods of rapid change. Both of these patterns are almost invisible to short-term investigations of change or cross-sectional research designs.

Our overarching recommendation is that the police research industry needs to improve its ability to detect, measure, and monitor trends in the policing industry. Accomplishing this goal will make police research more relevant to the policing industry. The only way to accomplish it is to collect data that enable such research to take place and analyze it more systematically. We recommend that police researchers, police think tanks, and those who organize and fund police research implement changes designed to ensure the systematic collection and analysis of longitudinal data useful for understanding long-term trends in policing (Maguire 2002a).

In some instances, good data have already been collected but are not frequently assembled and analyzed. For example, the FBI's Police Employees data (Uchida and King 2002) provide information on changes in organizational size and civilianization since the 1930s and on the gender and racial composition of police agencies since the 1960s. These data are available for free through the Inter-university Consortium for Political and Social Research (ICPSR), but they are maintained in separate cross-sections and must be processed separately and then combined to conduct longitudinal analyses. Data collected by the International City/County Management Association (ICMA) also report counts of police employees as well as racial composition, education, and equipment for select years since the 1950s. The ICMA data sets have some of the lowest response rates among establishment surveys of police organizations, and many of them must be purchased (Maguire 2002a). In both cases, these valuable data sets are not used very often to study trends in policing. Perhaps if they were made more readily available or in a more analyzable format, they would be used more frequently.

The major source of organization-level data on American police agencies is the Law Enforcement Management and Administrative Statistics (LEMAS) data

series collected by the Bureau of Justice Statistics since 1987. We heartily support the committee's recommendation that the LEMAS series be continued and broadened. Several scholars in recent years have made similar recommendations. For instance, Langworthy (2002) has suggested that the LEMAS "long form" data-collection instrument should be extended to the sample of smaller police agencies surveyed by LEMAS. Maguire and Uchida (2000) recommended treating the existing LEMAS architecture as a platform from which to launch other periodic studies on current issues of interest to scholars and practitioners (such as racial profiling and terrorism).

These existing data collections can also be supplemented and improved, as well as periodically collecting data concerning new issues. Those who manage them should also engage in careful data integrity analyses to ensure the validity and reliability of the data. Several researchers have pointed out flaws or inconsistencies in these data sources that suggest the need for more careful quality-control measures (e.g., Maguire and Uchida 2000; Uchida and King 2002; Walker and Katz 1995).

While it is helpful to look forward, the study of change can also benefit from looking back. Therefore, we also advocate for the collection of historical data from select police agencies. Collecting data on key variables (such as gender integration or the adoption of innovations) over the lives of a sample of police agencies will create small "pooled" cross-sectional and longitudinal data sets. These data will further our understanding of how police agencies change (and resist change) over their life courses. We cannot go back in time to administer surveys, but we can attempt to collect historical data on a limited set of variables from some agencies.

Most of the data that we have discussed so far are collected at the organization level. Yet repeated national surveys of random samples of police officers and citizens can also enhance our ability to detect industry-level trends. Both the Police Foundation's abuse of authority study (Weisburd, Greenspan, et al. 2001) and the Bureau of Justice Statistics' (BJS) police-public contact survey (Langan et al. 2001) are ideal platforms on which to build valuable longitudinal data-collection initiatives. Implementing these studies over time can reveal trends that are otherwise difficult to detect.

Four agencies are well positioned to implement solutions to the problems we have outlined: the FBI, the BJS, the National Institute of Justice (NIJ), and the ICPSR. First, the BJS and the NIJ could provide funding incentives to encourage researchers to pool together multiwave surveys of police agencies as a method for studying change. These could take the form of targeted solicitations for the analysis of existing data. The pooled data could then be made available through the ICPSR to other researchers, thus reducing the transaction costs for analyzing such data. Second, the BJS and the NIJ could also provide incentive programs for scholars to create or assemble historical/longitudinal data sets of police agencies. Once again, the resulting data sets could then be archived at the ICPSR for use by other researchers. Third, the ICPSR could host a summer session on using longitudinal data to draw inferences about trends in the policing industry. Fourth, the FBI and the BJS could both institute fellowships for scholars who specialize in policing data to work alongside agency data-collection staff and statisticians for short periods.

These fellowships would help make the data collections more responsive to scholarly needs, as well as enhance the use of the data for producing new scholarship. Finally, since LEMAS is the principle platform for collecting data on police organizations, we recommend the creation of an advisory board to make recommendations to the BJS staff on revisions to the instrument, sampling procedures, and other basic research decisions.

All of these recommendations are designed to improve the capacity for police research to detect, measure, and monitor trends in the policing industry. We envision a well-rounded police research industry in the future, one that engages in many modes of research at multiple levels. Some researchers will continue to focus on studying individual officers and citizens, police-citizen encounters, and police effectiveness. Some will continue to use case studies, cross-sectional research methods, and surveys of individuals. There is a need for all of these approaches. Yet, in our vision, a sizable segment of the police research community will also focus on measuring and explaining trends in policing at the organization and the industry levels. This investment in larger scale longitudinal research will pay many scholarly dividends, while making police research more relevant to the policing industry.

Notes

1. Critics view the appearance of military styles, symbols, cultures, and structures in policing as a profound shift in the wrong direction (Kopel and Blackman 1997; Kraska 1996; McCulloch 2001; Weber 1999). Others suggest that paramilitary policing styles can be more effective than traditional methods when used correctly (e.g., Waddington 1993) or that some of the threats facing civilian law enforcement agencies today warrant an increased level of cooperation between the military and the police (Brinkerhoff 2002; Klinger and Grossman 2002).

2. http://www.nationalpal.org.

3. http://www.nasro.org/membership.asp.

4. Some purists might object to our use of the terms *problem-solving policing* and *problem-oriented policing* as interchangeable. We acknowledge that there are some differences between these terms, but we do not have the space in this article to address these differences.

5. This analysis used the FBI's Police Employees data and includes agencies serving populations of at least a thousand and employing at least fifty full-time employees in both 1975 and 1998. This left 1,258 agencies with data for both years.

6. Several researchers have pointed out that changes in policing appear linked to an increasing societal tendency to rely on formal social control (e.g., Jones and Newburn 2002; Maguire and Schulte-Murray 2001).

7. We report civilianization ratios for agencies in this size range because computing these ratios for smaller agencies often produces outliers that can be misleading. Data from the 2000 Census of Law Enforcement Agencies (Bureau of Justice Statistics 2003a) reveal that the 1,546 police agencies in the nation with a hundred or more full-time employees had a mean percentage civilian of 24.9 percent (median = 23.2 percent).

8. This analysis relies on 1,108 agencies with 50 or more officers that provided data to the FBI's Police Employees database in 1975 and 2001.

9. In 1959, San Jose, CA, was the only local police agency requiring more than a high school education. San Jose required two years of college education. See the *Municipal Year Book* (1959, vol. 26, p. 434).

10. For instance, the Federal Way Department of Public Safety in Washington was created in 1996 and currently has 116 sworn officers. The Lauderhill Police Department in Florida was created in 1994 and currently employs 103 sworn officers.

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