New Perspectives in Policing

DECEMBER 2010

HARVARD Kennedy School
Program in Criminal Justice Policy and Management

NIJ National Institute of Justice

Making Policing More Affordable

Managing Costs and Measuring Value in Policing

George Gascón and Todd Foglesong

Executive Session on Policing and Public Safety

This is one in a series of papers that will be published as a result of the Executive Session on Policing and Public Safety.

Harvard's Executive Sessions are a convening of individuals of independent standing who take joint responsibility for rethinking and improving society's responses to an issue. Members are selected based on their experiences, their reputation for thoughtfulness and their potential for helping to disseminate the work of the Session.

In the early 1980s, an Executive Session on Policing helped resolve many law enforcement issues of the day. It produced a number of papers and concepts that revolutionized policing. Thirty years later, law enforcement has changed and NIJ and Harvard's Kennedy School of Government are again collaborating to help resolve law enforcement issues of the day.

Learn more about the Executive Session on Policing and Public Safety at:

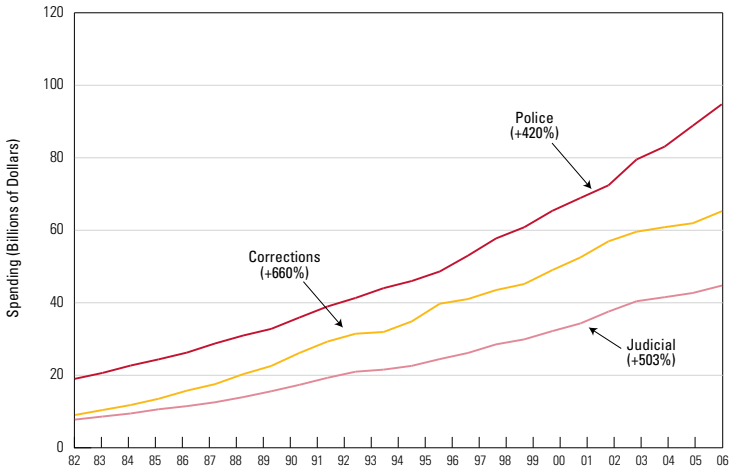
NIJ's website: http://www.ojp.usdoj.gov/nij/topics/law-enforcement/executive-sessions/welcome.htm

Harvard's website: http://www.hks.harvard.edu/criminaljustice/executive_sessions/policing.htm

City governments across the United States today are spending a lot more money on policing than they did 25 years ago. According to the U.S. Department of Justice's Bureau of Justice Statistics, public expenditure on policing in the United States more than quadrupled between 1982 and 2006.[1] As figure 1 shows (page 2), proportionally, spending on corrections and judicial functions (courts, prosecution and public defense) increased over this period more than spending on policing. But in the last 10 years, the rate of increase in spending on policing has exceeded the spending rate for corrections and judicial functions. Between 1996 and 2006, spending on the police increased an average of 8.6 percent each year. Controlling for inflation, expenditures in this period increased at an annual average rate of 3.8 percent.

Even before the onset of the financial crisis, rising expenditures on police departments stirred a debate among city managers, elected officials and police chiefs about how best to pay for policing.[2] But the severity of the financial crisis and the speed with which local governments make budgetary decisions have cut short these conversations. Few of the solutions being fashioned today for the high price of policing address the underlying reasons for the

Figure 1. Government Spending on Three Criminal Justice Functions, 1982-2006



Source: Bureau of Justice Statistics, "Justice Expenditure and Employment Extracts, 2006"; http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=1022.

accelerated growth in spending. Nor do they assess what this increased spending means for city governments, residents and the future of the profession.

In some cities, precipitous shortfalls in city budgets have caused city managers, unions and police chiefs to take drastic decisions, cutting costs in unsustainable ways. In San Diego, Calif., Phoenix, Tulsa, Okla. and Tampa, Fla., police departments have stopped hiring sworn officers, started shedding employees and eliminated civilian positions altogether. In Oakland, Calif., Kansas City, Mo., and Austin, Texas, sworn officers have accepted pay cuts and demotions to preserve staffing levels. In none of these cities has the federal subsidy for hiring new officers proved sufficient to meet local demands or otherwise offset the costs of policing.

In other cities, police executives have insisted on expanding the number of sworn personnel, arguing that more officers are needed either to forestall a crime wave or sustain reductions in crime, the costs and benefits of which, they believe, are undervalued. In Los Angeles, Washington, D.C., and Charlotte, N.C., police leaders have argued that expenditure on policing is a city's investment in its own well-being that will pay for itself in future economic growth.[3] Although these claims advance a business proposition for police departments that might well provoke a fresh round of research on the social costs of crime, they do not grapple directly with the *reasons* for rising expenditure.

This paper tries to create space for a careful conversation about the challenge of paying for policing. It starts by asking two questions. First, what is driving up police expenditures? Are police departments growing and providing more services to more people, are the costs of providing these same services simply going up, or are other factors responsible for the increase? Second, what have cities and their residents received in return for their investment in policing? Are there fewer crimes, a greater sense of safety and more satisfaction with police services? What has happened to the bottom line in policing? How have communities benefited from the new spending?

This paper tries to answer these questions by examining the costs of policing in one city, Mesa, Ariz. The authors could not collect information from enough departments across the United States to systematically compare costs in midsized cities, so this paper instead compares spending in Mesa over the last decade with the spending of neighboring cities in Arizona and with 10 similarly sized jurisdictions that shared their budget data with the authors. The paper also examines the impact of this new spending, using such conventional measures of police

value as the amount of recorded crime, citizens' sense of safety and call response times. Despite the limitations of these measures, which numerous academics, police chiefs and the Commission on the Accreditation of Law Enforcement Agencies (CALEA) have repeatedly pointed out, they remain the indicators that shape professional assessments of the value of policing. Because they are still the "measures that matter," this paper relies on them to evaluate the impact of new police spending on communities.[4]

Finally, the paper considers a series of tactics now being tested in a few cities and police departments for managing the rising costs of policing, including efforts to cut spending, raise productivity and re-engineer operations. Perhaps none of these tactics, by themselves or in combination, yields a sustainable strategy for paying for policing in the future. But their consideration here should support future conversations about restructuring police services, reorganizing departments, and building new measures of the value of policing that the present financial crisis demands.

Rising Costs of Policing in Mesa

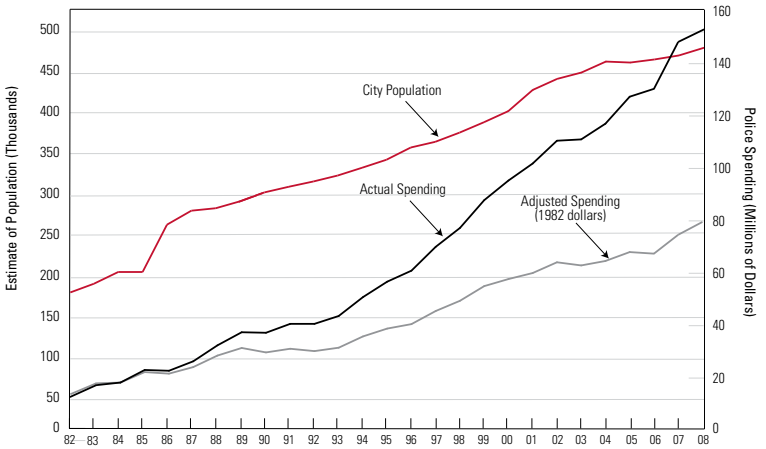
A quarter-century ago, the city of Mesa, Ariz., was a quiet suburb of Phoenix with a large number of winter residents and an estimated population of 165,000. In 2008, Mesa had an estimated population of 465,000 and was measured as the nation's 39th largest city. Between 1982 and 2008, as the city's population grew, so did the amount of land annexed for residential and commercial development. As a result, the Mesa Police Department now services twice the territory it covered in 1982.

Along with this growth, Mesa increased police expenditures: In 2008, the Mesa Police Department spent more than $152 million, more than 10 times the sum in 1982. As shown in figure 2, this increase in spending not only exceeded the rate of population growth, it also far outpaced inflation. Real spending on policing, as measured in 1982 dollars, increased by a factor of five, from $12.5 million in 1982 to $67.8 million in 2008. Although the *rate* of increase in real spending slowed over the last decade, the police department's budget actually grew by an average of 8 percent each year during this period.

Rising Personnel Costs as a Component of Policing Costs

One reason that Mesa's spending on policing increased so much between 1982 and 2008 is the city's expansion of its police force. In 1997, the Mesa Police Department employed 643 sworn officers and 354 civilian staff. By 2008, Mesa employed 855 sworn officers and 549 civilians — increases of 33 and 54 percent, respectively. However, the

Figure 2. Population Growth and Spending on Policing in Mesa, Ariz., 1982-2008



Sources: Bureau of Justice Statistics, "Law Enforcement Expenditure"; Mesa Police Department.

Table 1. Mesa Police Department Spending, 1999 Versus 2008

	Fiscal Year 1999 ($)	Fiscal Year 2008 ($)	Difference ($)	% of Total Increase
Personnel (total)	71,199,015	134,216,890	63,017,875	85.1%
Salaries	*55,905,316*	*105,882,868*	*49,977,552*	*67.5%*
Benefits	*15,293,699*	*28,334,022*	*13,040,323*	*17.6%*
Other Services*	9,158,233	16,365,248	7,207,015	9.7%
Commodities	2,265,550	5,643,573	3,378,023	4.6%
Capital	4,541,708	4,994,373	452,655	0.6%
Total	**$87,164,506**	**$161,220,084**	**$74,055,578**	**100%**

* Includes investigations and jail costs, fleet maintenance and a large number of service contracts.
Source: Mesa Police Department.

expansion of the police force in Mesa explains only a part of the increased spending. Another reason is that per-unit labor costs for both sworn officers and civilian employees are much higher than they were 10 years ago. As table 1 shows, between 1999 and 2008, Mesa's total spending on police personnel increased by $63 million and accounted for 85 percent of new expenditures.

Higher salaries for sworn officers are one reason for the increase in personnel costs.[5] Another reason is the escalating price of benefits. Benefits are the fastest growing component of the police budget in Mesa today. In 2007 alone, the cost of police pensions rose 33 percent.

Many police chiefs around the country see rising labor costs as a result of greater mobility among young officers and thus stiffer competition in the labor market. This may be a sign of greater uniformity and cohesion in the profession, but it inflates the price of policing. At a recent meeting of the NIJ Executive Sessions on Policing at the Kennedy School of Government, one police chief complained of a "bidding war" for labor between police departments. "As we fight to compete in the market," he explained, "we are driving our prices up. If you've got a $5,000 signing bonus, I've got to go to $10,000; otherwise I've got so many [empty] positions. And I'm thinking that we are going to have a market rate correction; it just cannot keep going this way."[6]

Increase in Demand for Police Labor

Even if higher labor costs explain a large portion of the increase in spending, it is not obvious why Mesa hired more police labor in the first place. In fact, the increase in the number of sworn officers might seem paradoxical in light of the nearly uninterrupted decline in reported crime over the last 10 years. Major recorded crime in Mesa fell steadily between 2000 and 2007, as it did in many other cities around the nation: for example, violent crime in Mesa fell 7 percent and property crime fell 14 percent. So, why is the demand for police labor increasing despite these reductions in crime?

When the authors asked police officers in Mesa this very question, the officers gave three types of answers. First, some officers say there has been a steady increase in public demand for police services.

Patrol officers in particular believe there has been an incessant increase in the number of calls for service (although the data contradict this impression), and they believe many calls to which they respond are unwarranted. Responding to false burglar alarms, loose dogs, neighborhood disturbances and other inconveniences make many officers feel like they are running "from call to call to call" without solving underlying problems or producing a lot of additional safety.

A second answer was that police work in general has become more complex over time. Senior officers in particular say that changes in the regulatory regime of policing, including more detailed rules governing the response to domestic violence and juvenile delinquency, have made routine police work more complex and time-consuming. In addition, the proliferation of gang crimes, and the growth of identity theft and new types of cybercrime, along with new demands from the federal government, have compounded the complexity of police work. As a result, officers said, each individual officer today responds to fewer calls for service and requires more time to do so.

A third answer, heard more from supervisors and senior management than line officers, is that there are considerable inefficiencies in police work today. "Many basic operations have been untouched by the technological revolution," said one lieutenant. Where new technologies such as laptops, video cameras and computer-aided dispatch have been installed, they are not always being used efficiently, said others. One officer even suspected that, because of the suboptimal use of new technology, police departments today might actually be doing "less with more."

Police executives from other parts of the country share many of these impressions, particularly concerns about efficiency in police work. "Wasteful practices have their constituencies," one chief likes to say, and many chiefs rue the surplus of officers at crime scenes, unnecessary attendance at calls to which the fire department responds first or better, and a lot of idle time after incidents doing follow-up work. Many police executives also see an uncontrolled expansion in the demand for services, and with it a subtle and important shift in the mission and role of police officers. "We have become the social agency of first resort for the poor," said one chief. Added another, "We need to reexamine police processes to determine just what requires the armed authority of the state in your living room."[7]

Detailed empirical research into the changing roles of officers, their contact with citizens and the use of technology at work might help police departments and researchers assess these and other hypotheses about complexity and inefficiency in police work, although such an investigation has yet to begin. The authors tried to investigate these claims about changes in the character and volume of calls for service, but in 2008 the Mesa Police Department's data system did not code repeat calls and the identity of the caller in ways that would permit a textured analysis of the evolution of demand for police services. Still, the fact that most of these beliefs are shared by line officers, supervisors and chiefs across

many cities suggests that, in addition to rising costs of labor, structural changes in the nature of policing may be driving up police expenditures.

Paying for Policing

The additional spending on the police department in Mesa, in particular the expansion in the number of sworn officers, was funded largely through a special quality-of-life tax introduced in 1997. This levy expired in 2008. Since then, Mesa city officials and residents have begun to ask sharp questions about how to pay for policing in the future.

Among Mesa's budgetary concerns was whether the growing price tag for policing was crowding out spending on other important social services. Research from a decade ago found mixed evidence for this proposition, and the evidence from Mesa today is likewise mixed.[8] Between fiscal year 2003-4, the earliest year for which data were available, and fiscal year 2007-8, city expenditure on law enforcement increased 44.7 percent. Spending on streets, wastewater, and fire and gas increased at a considerably faster pace, as the data in table 2 show. But spending on arts and culture and other neighborhood services fell 66 percent and spending on mass transit fell 57 percent in the intervening four years. Spending on other types of social investments and city services such as parks and recreation, schools and economic development also declined, though less dramatically. Law enforcement expenditure comprises such a large share of total city spending, however, that the relatively modest increase

Table 2. Mesa City Government Expenditures by Major Category, 2004 Versus 2008

City Program	Fiscal Year 2004	Fiscal Year 2008	Difference	% Change
Arts and Cultural	36,232,000	12,139,700	-24,092,300	(-66.5%)
Building Safety	8,517,000	11,182,807	2,665,807	31.3%
Community Development	9,358,000	8,678,592	-679,408	(-7.3%)
Electric	22,905,000	29,039,994	6,134,994	26.8%
Fire	47,104,000	77,299,162	30,195,162	64.1%
Gas	22,452,000	42,982,001	20,530,001	91.4%
Housing Services	12,453,000	12,312,000	-141,000	(-1.1%)
Judicial	8,132,000	11,268,000	3,136,000	38.6%
Law Enforcement	**121,277,000**	**175,449,600**	**54,172,600**	**44.7%**
Library Services	13,026,000	13,707,280	681,280	5.2%
Mass Transit	22,112,000	9,434,905	-12,677,095	(-57.3%)
Parks and Recreation	27,482,000	26,761,000	-721,000	(-2.6%)
Solid Waste Management	21,819,000	33,376,000	11,557,000	53.0%
Streets	30,209,000	55,800,585	25,591,585	84.7%
Wastewater	29,659,000	48,521,000	18,862,000	63.6%
Water	53,484,000	65,732,237	12,248,237	22.9%
ALL	$486,221,000	$633,684,863	$147,463,863	30.3%

Source: Mesa Police Department.

may have a disproportionate effect on overall fiscal welfare. For these reasons, the scale of the increase in police spending remains a "substantial concern" for the city manager.[9]

The reduction of other social investment spending is a concern for the Mesa Police Department, too. Senior officers believe that when youth summer programs are gone and the park system is not funded to take care of them, children get in trouble more frequently. One officer warned of the consequences of disinvestment in these programs: "residential burglaries go up, as do daytime car thefts and gang activity as a whole." The data on recorded crime from Mesa in this period do not corroborate these beliefs, but residents, civic leaders and police officers share a concern that these programs are important components of policing and public safety.

Expenditure on policing in Mesa is likely to continue to grow and perhaps accelerate in the future. Mesa in 2008 had 1.9 police officers for every 1,000 residents, a ratio below the average for most cities of comparable size. A budget increase of 3 percent each year over the next decade — just enough to keep pace with projected population growth and inflation — would raise expenditures by more than $80 million. If the city hires an additional 50 sworn officers and 10 civilians in each of the next 10 years, as was initially planned, spending on policing will double by 2017. These considerations prompt reflections not only on whether the department is producing the right volume, distribution and array of services, but also on whether the current business plan for public safety is sound and sustainable into the future.

Return on Investment

What has the Mesa Police Department accomplished with the additional money and staff? Is there less crime today, less fear of crime and a greater sense of public safety in Mesa? Are officers more accessible to residents? Are victims more satisfied with their treatment? Is there greater public confidence in policing and better community collaboration in crime prevention? These are the types of goals to which most police departments across the country try to make a contribution. So what has the additional spending bought? What was the return on the investment in policing?

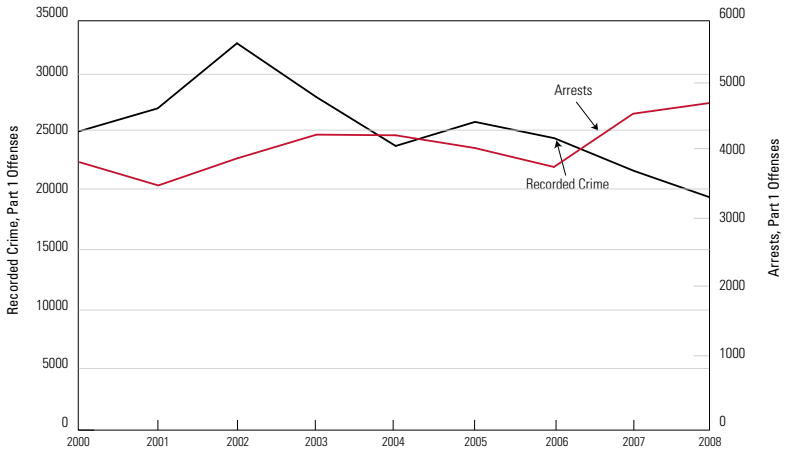
If we treat the number of recorded crimes as the bottom line in policing, then the return on the investment in Mesa appears considerable.[10] In 2008, there were 22 percent fewer recorded Uniform Crime Reports (UCR) Part 1 crimes than in 2000, despite a 20-percent increase in the number of residents. Since 2002, when there was a spike in recorded crime, there has been a 40-percent reduction. The total decline may have been even greater, since the department today records violent crimes according to the number of victims, not the number of incidents as required by the UCR.

Was the police department responsible for these changes, or did other factors, working independently or in concert with policing, cause the decline in recorded crime?[11] Information on arrest activity in Mesa suggests the police department was largely responsible for the decline in recorded crime, although there is some ambiguity in the

data and it is not clear that arrests alone explain the change. Figure 3, which depicts the number of recorded crimes and UCR Part 1 arrests in Mesa from 2000 to 2008, shows that, in most recent periods, the number of arrests and recorded crimes moved in opposite directions.[12] For example, recorded crime declined when arrests increased in 2000-2001 and 2002-3, and crime went up when arrests declined in 2001-2 and 2003-4. Since 2006, levels of recorded crime and arrests for UCR Part 1 offenses have moved in sharply different directions.

The relationship between arrests and recorded crime is unlikely to be so direct, and it may be that only some kinds of arrests have an impact on recorded crime. Recent research on deterrence suggests that arrests that both raise the risk of detection and communicate this effect to offenders can deter crime, especially among repeat offenders.[13] The Mesa Police Department has explored a compatible but different hypothesis since 2006, prioritizing arrests for serious offenses committed by young and prolific offenders, which are more frequently followed by prosecution today than before, and emphasizing crime prevention work with victims and greater subsequent attention to the neighborhoods where there is serious and recurrent offending. The department believes these kinds of arrests have a greater impact on recorded crime than arrests made before 2006 and arrests for less serious crime, because they serve as a gateway for greater intervention and services by the police department and other city agencies.

Figure 3. Recorded Crime and Arrests for UCR Part 1 Offenses, 2000-2008



Source: Mesa Police Department, Crime Analysis Unit.

The interactive effects of arrests have yet to be modeled and measured, and other hypotheses for the reduction in recorded crime have not been examined. Police department activities in support of community crime prevention and citywide collaborations on business improvement districts may have had an important impact on falling levels of recorded crime in this same period. Greater attention to victims, especially assistance in avoiding future victimizations, more sustained work with at-risk youth, and helping migrant populations prevent burglaries, might individually have had independent crime-reducing effects or perhaps together multiplied the positive effects of arrests. In short, it seems unlikely that, by themselves, additional arrests and additional police officers produced the changes. But it also seems unlikely that the same amount of decline in recorded crime would have occurred without the additional officers and spending on policing in Mesa.

Perceptions of Safety

What about public perceptions and feelings of safety? Have these improved, too? A study by West

Table 3. Perceptions of Neighborhood Safety at Night in Mesa, 2002 Versus 2006

	Mesa Citywide		Central		Dobson		Falcon/ Red Mountain		Superstition	
Responses	2002	2006	2002	2006	2002	2006	2002	2006	2002	2006
Very safe	38%	42%	29%	36%	29%	32%	40%	37%	49%	53%
Somewhat safe	41%	41%	44%	43%	41%	45%	42%	47%	39%	33%
Neither safe nor unsafe	7%	6%	5%	5%	7%	11%	7%	6%	6%	5%
Not too safe	11%	8%	17%	11%	18%	9%	9%	7%	5%	6%
Not safe at all	3%	3%	5%	5%	5%	3%	2%	3%	1%	3%

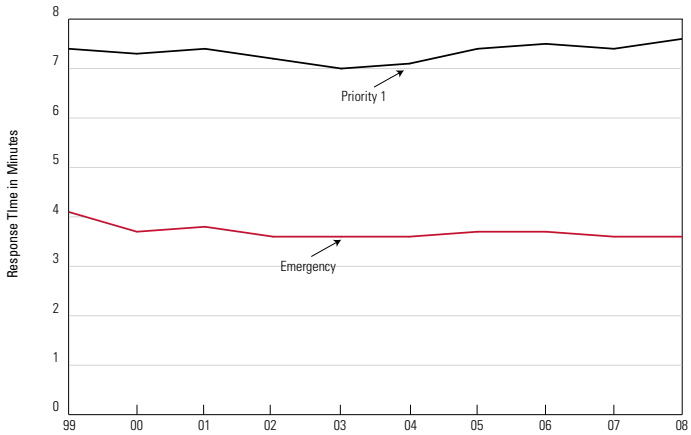
Source: Mesa Police Department Survey Conducted by West Group Research, June 2002 and June 2006.

Group Research commissioned by the Mesa Police Department showed that the proportion of residents in Mesa who felt "very safe" during the day was identical in 2002 and 2006, despite a 20-percent increase in police personnel in these years and a one-third reduction in the number of Part 1 recorded crimes. The proportion of residents who reported that they felt "very safe" at night was marginally higher in 2006, as table 3 shows, although it is not clear whether the difference is statistically significant.[14] More research would be required to understand the links between these perceptions, police practices and recorded crime, but it would appear from these data that residents' sense of safety is shaped less by the visibility of police and levels of crime than by other factors.

Response Times

The final commonly measured indicator of police value examined is the amount of time it takes the department to respond to calls for service. Response times, which measure the duration of time between the dispatch of an officer and arrival on scene, are an imperfect proxy for customer satisfaction and police efficiency, but nearly all police departments in the United States treat this measure as an indicator of performance and service. In Mesa, the number of calls requiring an emergency response increased 26 percent between 1999 and 2008. Nevertheless, as figure 4 below shows, response times for these calls were slightly shorter in 2008. Response times for other calls, including the most urgent (Priority 1) and

Figure 4. Response Times for Calls for Service, 1999-2008



Source: Mesa Police Department, Crime Analysis Unit.

less urgent calls (Priority 2 and 3) were only marginally higher in 2008. In short, despite growing demand and a higher priority attached to many calls, the department was able to provide prompt attention to needs considered urgent.

Evaluating the Results

How can a price be put on these results? Are they adequate, a sufficient return on the investment? Should response times have changed even more than they did? What about arrests and the reductions in reported crime? Should arrests have increased and reported crimes decreased even more? After all, in addition to hiring more staff, the department acquired new technology, improved training, and introduced more advanced and effective management systems such as Compstat, all of which are force multipliers and should have raised overall productive capacity. Did the results fall short of, meet or exceed the increase in the department's capacity? Could the same results have been achieved by other means or at less expense? To answer these questions, a means is needed of weighing the accomplishments against the initial investment, a way of assessing the relative costs of policing as well as the opportunity costs.

A standard is also needed by which to assign a value to the results, a means of creating a social price for the effects of policing. Does the public consider more rapid response times and a greater sense of safety at night sufficient to justify the additional investment in policing? Was the reduction in crime worth it to some, but not others? In some communities, after all, even modest reductions in crime may have exceptional value to residents and positive side effects, whereas in others the improvements might not matter much at all. To properly evaluate and judge these results, more needs to be known about the impacts of victimization and insecurity among particularly vulnerable groups in society, the experiences of policing among minorities, and many other qualitative dimensions of crime and justice that give meaning to the term "public safety." In short, even if it were certain that the reduction of crime and improved sense of security in Mesa was directly attributable to the work of the police department, citizen feedback about the value of policing and a new system of metrics for gauging the results would still be needed. Measuring the bottom line in policing by reference to levels of recorded crime turns out to be only one step toward assigning a value to police performance.[15]

The Price of Policing in Other Cities

Mesa is not the only city in which the price of policing has risen substantially over the last decade. Most cities in the surrounding Phoenix valley spend a lot more money on policing today. As figure 5 shows, the neighboring cities of Chandler, Scottsdale, Tempe, and Phoenix all spend considerably more per resident on policing today than Mesa. These cities also have experienced faster rates of growth in spending per resident over the past decade.

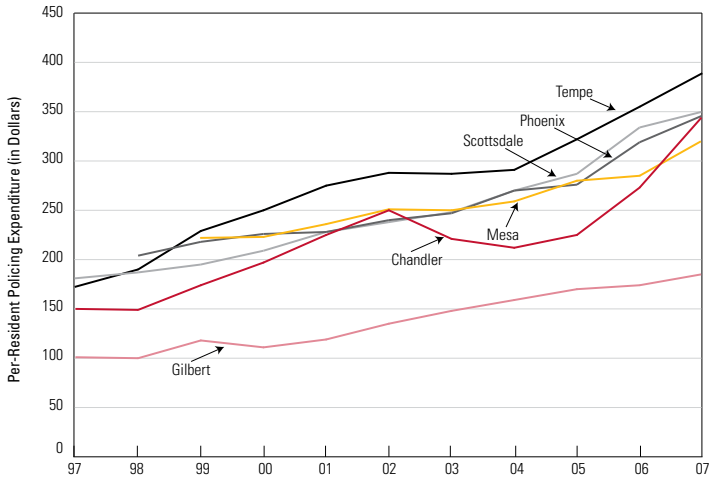
Not all midsized cities in the United States have increased police spending at these rates, however. Indeed, figure 6 shows substantial variation in spending patterns across 10 cities that provided police budget figures. Charlotte, N.C., for example, spends only a few dollars more per resident today than it did in 1997: the increase of 7 percent in

per-resident policing costs in that city is lower than the rate of inflation. In Columbus, Ohio, Sacramento, Calif., and Virginia Beach, Va., spending increased by 45, 47, and 54 percent respectively over this period, marginally exceeding inflation. Long Beach, Calif., also experienced only modest growth in spending, although in 2007 it spent more on policing per resident than many other midsized cities. Only in Austin, Texas, Kansas City, Mo., and Mesa has the increase in per-resident spending on policing far surpassed the rate of the inflation over the past decade.

Why Worry About the Price of Policing?

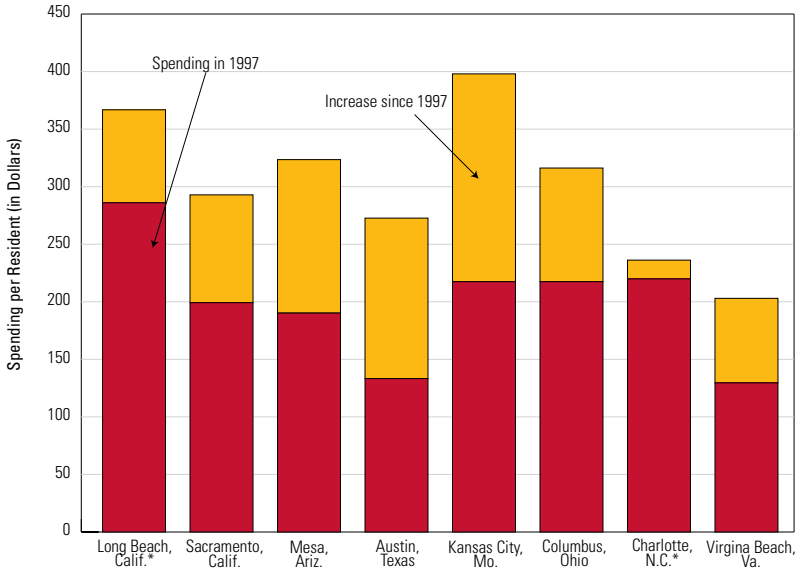
Because spending is not going up in all cities, there might be no reason to worry about the price of policing. After all, if some cities and departments can control costs, perhaps the forces driving up spending are not universal. For this reason, some observers insist that the rising price of policing is primarily a result of local politics, particularly the willingness of mayors and other elected officials to pay for it. An anonymous reviewer of an early draft of this paper suggested that "the real reason" labor costs are going up in Mesa is that "the city council voted to raise salaries." True enough, but expenditure on policing has risen in the United States as a whole, and many police executives see signs of shifts in the industry of policing that implicate greater future increases in its cost. "The entire knowledge structure of policing is changing," says one chief. "So officers today have to have a wider array of skills and knowledge than before, and it costs more to train and retain them."

Figure 5. Per-Resident Expenditure on Policing, Six Cities in the Phoenix Area, 1998-2007



Source: Police Departments, Gilbert, Chandler, Phoenix, Mesa, Scottsdale, and Tempe, Ariz.

Figure 6. Police Spending per Resident in Eight Cities, 1997-2007



* Baseline year is 1998.
Source note: Responsible officials in each police department shared expenditure information with research staff at the Program in Criminal Justice, Kennedy School of Government, Harvard University.

Making Policing More Affordable

Concern about the costs of law enforcement is not new. More than a decade ago, several senior scholars warned that "the era of adding more police, answering more calls in less time, and buying new gadgetry is coming to an end."[16] The current fiscal crisis and its related serious budget cuts lend fresh importance to this concern, as do the changes in the nature of police work and the structure of communities. So how might police departments respond to this challenge? What is a responsible way to manage police spending and still provide quality services?

Reducing Costs

One obvious response to escalating police expenditure is to cut costs. Many police departments have become quite skilled at detecting and eliminating unwarranted or unnecessary expenses. The Los Angeles Police Department, for example, reduced overtime expenditure over the last three years without any increase in the number of reported crimes.[17] Other departments have cut *relative* costs, too, by automating key operations and using billboard warnings and cameras and other surrogates for human labor that, at least in some cases, have been shown to produce equal or equivalent feelings of safety. Since 2007, when the Mesa Police Department partnered with Motorola to develop a Digital Six Sigma process-improvement team, several cost-cutting initiatives have been implemented, including ones that yielded a 40-percent reduction in booking cycle times, enhanced dispatching protocols for many low-priority calls, and introduced new property disposition procedures. In fiscal year 2008-9, overtime hours fell 48.8 percent. These and other initiatives will save the city of Mesa several million dollars in the years to come.

Although current cost-saving steps may be important in their own right, it is unlikely these reductions will be enough. An independent review of the Austin, Texas, Police Department in 2007, for example, estimated that, even if nearly 100 recommendations to help streamline business processes were fully implemented, the cost savings would amount to 4 percent of the current annual budget, most of which would be wiped out by inflation.

One way to reduce the relative costs of policing is to boost productivity. Although the central component in police production today remains the individual officer, whose skill sets and capacity are not infinitely expandable, productivity gains are both necessary and possible. As has been the case with the telecommunications industry and postal services, the evolution of technology, combined with demands for new types of services and tight budgetary constraints, will force the profession to evolve. It would be facile to assume that policing will somehow escape the economic and consumer-driven pressures that have forced other professions to recreate themselves.

Since incremental improvements in productivity are unlikely to eliminate the cost pressures, police professionals must become more creative in reengineering the profession. One way to break away from the limitations imposed by the current business model of policing, in which the individual officer remains the most important unit of production, is to conceive of public safety rather than crime

control as the central goal of police departments. By shifting the emphasis from crime control to public safety, professional re-engineering efforts can begin to explore alternative business models, new forms of organization and new components in the production process. Another way is to start eliminating redundancies in the criminal justice system, promoting the integration of policing with victim services, parole and probation in ways that might give birth to new and more broad-based problem-solving models in public safety.

The central question for police leadership then should not be whether major changes will occur, but rather whether those changes will be prompted thoughtfully by police professionals or forced on the profession by external forces and driven by agendas less concerned with public safety and professional development. The former can lead to a professional renaissance where new, invigorating business models are developed, leading to major improvements in public safety.

Managing Demand

Another strategy is to better manage the demands for police services. Only a small and in some cities declining portion of police work is related to serious crime and the customary role of police agencies. In Austin, Texas, for example, despite declining reports of crime, there was an unexplained 10-percent increase in calls for service between 2004 and 2006.[18] In Pittsburgh, the police department reported that fewer than 1,000 of 324,000 calls for service in 2007 required the responding officer "to use some type of force to insure the safety of the public or of the officer," suggesting that other agencies might more efficiently and effectively respond to many police calls.[19] The installation of centralized systems for routing calls and alternative hotlines such as 311 numbers is another sign that departments around the country today are pressed to manage public demand for services. One of the chief ways of doing so is to channel calls away from police officers and toward more appropriate city services.

In Mesa, the total number of calls for service declined by about 18 percent in the past three years. New dispatching protocols that require the dispatch center to call back and confirm the need for police response with the reporting parties are now in place. Also, telephone problem-solving for calls unrelated to crime or traffic often eliminates the need for police response. Additionally, parties to low-level noninjury traffic collisions are directed to exchange insurance information telephonically, eliminating the need to dispatch a patrol unit. These and other strategies reduced calls without sacrificing public safety.

Today, as the data in table 4 (page 14) show, only half of all calls in Mesa are handled by sworn police officers. Sworn officers respond to situations in which there is some potential for violence as well as considerable uncertainty about the behavior under suspicion. A third of the calls were handled by civilians, including reports of vehicle burglaries, unsecured buildings, accidents, loose dogs, stolen vehicles, traffic hazards, and residential burglaries no longer in progress. Another one-sixth of all calls were handled by a civilian and sworn officer together.

Table 4. Calls for Service by Response Type, 2006-2008

	2006		2007		2008	
	N	%	*N*	%	*N*	%
Calls attended by sworn officers	137,220	48.7%	130,334	48.8%	116,128	50.0%
Calls attended by civilians only	97,553	34.6%	91,670	34.3%	77,170	33.2%
Calls attended by both	47,032	16.7%	45,148	16.9%	39,025	16.8%
Total Calls*	**281,805**	**100%**	**267,142**	**100%**	**232,323**	**100%**

* Excludes officer-initiated traffic stops.
Source: Mesa Police Department, Crime Analysis Unit.

A closer review of the calls for service handled by sworn officers suggests there may be ways to further reduce the demand for "armed authority in living rooms." About 11 percent of calls in Mesa required a response to a burglary alarm, an estimated 99 percent of which turned out to be false. Another 6 percent of calls involved complaints of "juveniles disturbing" the peace, a large portion of which, according to officer testimony, did not require an armed officer to resolve. A more sophisticated system for classifying calls currently labeled "suspicious activity" and "subjects disturbing" (which comprise, respectively, 9 and 15 percent of all calls responded to by sworn officers) might also help free up scarce resources and otherwise generate savings.

Sharing and Shifting the Costs of Public Safety

Yet another strategy is to shift, spread and share the costs of policing.[20] Some police departments in large suburban areas might be able to shift some of the price of policing back onto the private sector. For example, police departments can reduce or eliminate the invisible subsidy some commercial enterprises receive when cheap business security and poor risk-management systems force police to respond to chronic employee theft. There may also be opportunities for redistributing the costs of policing among government agencies — for example, by inviting other law enforcement institutions to take over key operations, consolidating fire and other safety services, or getting other city departments such as parks, schools and hospitals to take direct responsibility for some aspects of security and crime prevention. In the case of some narcotics offenses or crimes shaped by addiction, more effective deployment of public health professionals and medical services might preempt the involvement of more police work.

Revaluing Policing

Another response to the problem of rising costs of policing is to assign values to aspects of police work that are poorly measured or not quantified as benefits. Attributes like quality of service, customer satisfaction, the professional competence and ethics of officers, and relative resource efficiency are important aspects of public service but currently are not assigned value in many measurement systems. Dignity in the treatment of offenders, discretion in the use of authority and circumspection in the use of force are also important public goods that

contribute to justice and the welfare of society, although they do not commonly figure in the cost-benefit ledger for policing.

There may be other public benefits to good policing that current performance measurement systems do not capture or consider. For example, some of the most important benefits of good policing, such as diffusing social tension and preventing the escalation of interracial conflicts, are never measured. These and other virtues are what police executives speak about in academy graduation speeches and what some residents say constitute the most prized and powerful aspects of policing in large, multiethnic cities.[21] But rarely are these aspects of policing part of the cost-benefit equation in the evaluation of police performance.

Another strategy is to reappraise the known benefits of policing. Research on the diverse impacts of victimization, and especially revictimization, indicates that the value of preventing repeat crime may be greater to victims and society than previously recognized. Efforts to quantify the downstream and life-cycle impacts of crime on families, communities and economic development also suggest that police departments that reduce crime in the most vulnerable sectors of society may have hidden values.[22]

A reappraisal of the values and benefits of policing along these lines is long overdue. Conventional measures of the main outputs and outcomes of policing, such as the Uniform Crime Reports, do not capture what police executives today think matters most. Nor do they always capture what citizens hope or expect of their police departments. More careful analyses of how police departments help reduce crime and a fuller assessment of the relative costs and benefits of policing to communities are needed to measure the value of policing to society and determine whether or not it is worth the investment.

Re-engineering Policing

An even more ambitious response to the rising costs of policing is to re-engineer the profession. In the United Kingdom, where total spending on the police has increased 21 percent in real terms since 1998 and the cost of pensions doubled, senior officials appear to have concluded that the profession must be remade.[23] In 2008, the Chief Inspector of Her Majesty's Constabulary concluded that the current size of the police force was "not sustainable." Since 2006, the U.K.'s National Police Improvement Agency (NPIA) has sponsored a series of experiments in 10 police areas to "modernize the workforce." Some pilot projects involved reorganizing business operations, diversifying the labor pool involved in policing, and dispatching civilians to safe and suspectless crime scenes.[24] Initial reports from the NPIA suggest that some experiments have not only cut costs but also boosted performance (higher clearance rates) and increased public satisfaction with and confidence in the police.[25]

In the United States, discussions about involving a more diverse labor force in policing have rarely moved beyond a debate about "civilianization," which for the most part has been fiercely resisted by unions, chiefs and mayors. In 2007, for example, the city controller in Los Angeles ordered the

police department to re-examine plans to expand the ranks of sworn officers and consider instead hiring civilians to perform many police duties.[26] The proposal ran aground in the mayor's office, which insisted on an increase in sworn officers and the subsidy of this growth through an increase in trash collection fees. "Uniforms have become political currency," say some chiefs, and replacing sworn staff with civilian employees, say some mayors, has proved politically "impossible," even amidst extreme fiscal crises.

One reason civilianization has made little headway in the United States so far is that its principal justifications have been costs and efficiency. But what if the recruitment of more civilian employees and a more rational balance between civilian and sworn officers were driven by ambitions for more effective and responsive policing, not just savings? Might a more nimble and diverse labor force, full of crime-scene specialists, social workers, victim advocates and crime-reduction experts be more effective at reducing crime than a conventional department? Could a more modern array of public safety experts compete favorably with a conventionally staffed police department? If so, in what kinds of surroundings would it work best?

In the search for more effective models for delivering police services, one might consider how other professions have dealt with the pressures to lower costs *and* enhance services. In medicine, for instance, a combination of newly created paraprofessionals (physician assistants), and a focus on prevention and wellness have been added to the arsenal of conventional medicine that is now keeping populations healthier and increasing longevity. In the legal profession, reducing liability by managing risk has become the norm. Increasingly, private and government entities under the direction of attorneys and paraprofessional risk managers create mechanisms to modify behavior or redesign products to avoid liability. These efforts reduce organizational exposure to lawsuits and protect the general well-being.[27]

In the field of fire services, substantial re-engineering efforts during the last 50 years have resulted in the development of new fire-retardant building materials. Communities have enacted stricter building codes that are vigorously guarded by fire officials to prevent structural fires. These strategies have almost completely revolutionized the battle against structural fires from one of firefighting to one of fire-preventing, saving untold numbers of lives and millions of dollars in averted losses.

In policing, real-time crime centers, enhanced crime-mapping solutions and other innovative tools are reducing the amount of time it takes police to react to emerging crime problems. They have even incited speculation about "predictive policing," an idea that could be particularly powerful if it is combined with or conceived of as crime prevention. After all, good policing should mostly be measured by the absence of crime and not by the effectiveness in suppressing it. Predictability tools, moreover, can be most valuable when they are attached to robust crime prevention models and used to help shepherd the social and environmental changes necessary to prevent criminal activity in the first place.

Of course, it may seem rash to talk about the re-engineering of police departments in the United States. Spending on policing, after all, has not risen dramatically everywhere, and it has not risen as rapidly as health care costs. Police chiefs and academic researchers are only beginning, moreover, to measure what matters most to the health of communities. Scholars also are in the early stages of understanding the unequal distribution of crime and victimization in society and the kinds of safety such vulnerability demands. To develop greater value in policing, the changing nature of people's needs for safety and justice must be studied.

Policing is unlikely to become more affordable solely through more cost-effective delivery of the same set of services departments currently provide. Police departments today have to develop a new and different kind of bottom line, one that resonates with the communities most in need of safety and justice. The steps outlined here for managing that process — reducing costs, managing demand, revaluing policing and re-engineering operations — may not solve all of the emerging problems of affordability in policing. Surely there is no blueprint or universal formula for the re-engineering of police departments in a country with such a decentralized system for policing and public safety. But these four steps provide a framework for more deliberate experimentation within individual departments. They also create a framework around which researchers can help police executives study and learn more from their innovations in a time of tight budgets.

Endnotes

1. See Reaves, Brian A., and Matthew J. Hickman, *Police Departments in Large Cities, 1990-2000,* Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, May 2002. NCJRS, NCJ 175703, http://bjs.ojp.usdoj.gov/content/pub/pdf/pdlc00.pdf.

2. For a report of the discussion of rising police costs at the National Academy of Public Administration, see Peirce, Neil, "In Epic Fiscal Storm, New Strategies Arise," *Denver Post,* November 9, 2008. See also the report of the Center for Policy Initiatives in San Diego, Calif., "Revenues and Officer Retention," Issue Brief, July 17, 2006, available at http://www.onlinecpi.org/articlephp?list=type&type=77.

3. For Washington, D.C., see Klein, Alison, "Budget Cut Would Imperil Staffing, Police Chief Says," *Washington Post,* May 8, 2008. For Los Angeles, see Kahn, Gabriel, "Top Cop in Los Angeles Says Cutting Crime Pays," *Wall Street Journal,* November 29, 2008.

4. See, for example, Maguire, Edward, "Measuring the Performance of Law Enforcement Agencies," *CALEA Update* 83/84 (September 2003/February 2004), available at http://www.calea.org/online/newsletter/no83/measurement.htm. For an earlier discussion of what results police departments should track, see Brady, Thomas V., *Measuring What Matters: Part Two: Developing Measures of What the Police Do,* NIJ Research in Action, Washington, DC: U.S. Department of Justice, National Institute of Justice, November 1997. NCJRS, NCJ 167255.

5. Spending on police overtime in Mesa rose 48 percent between 2004 and 2008, from $4.6 million to $6.9 million.

6. Comments made at the Executive Sessions on Policing, Kennedy School of Government, Harvard University, June 2008.

7. *Ibid.*

8. See, for example, Marlow, Michael L., and Alden F. Shiers, "Do Law Enforcement Expenditures Crowd-Out Public Education Expenditures?" *Applied Economics* 31 (2) (February 1999): 255-266.

9. Interview with Mesa City Manager, February 18, 2009. See also "Proposed Adjustments to the FY 08/09 Budget," memorandum from the City Manager to the Mayor of Mesa, March 20, 2008.

10. For a discussion of the challenge of measuring value in policing and attempts to generate equivalents of a "bottom line," see Moore, Mark H., David Thacher, Andrea Dodge, and Tobias Moore, *Recognizing Value in Policing: The Challenge of Measuring Police Performance,* Washington, DC: Police Executive Research Forum, 2002.

11. Researchers and government officials in the United Kingdom concluded that it is impossible to attribute public safety improvements to police activity alone. In 2006, an internal report of the Prime Minister's Strategy Unit concluded that up to 80 percent of the reduction in recorded crime in England and Wales since 1997 was related to "other" factors, including new jobs and economic development. Prime Minister's Strategy Unit, *Policy Review: Crime, Justice, and Social Cohesion,* London, Cabinet Office, 2006, p. 13. See also Solomon, Enver, Chris Eades, Richard Garside, and Max Rutherford, *Ten Years of Criminal Justice Under Labour: An Independent Audit,* London: Kings College, Centre for Crime and Justice Studies, 2007, http://www.crimeandjustice.org.uk.

12. UCR Part 1 offenses include homicide, rape, robbery, aggravated assault, larceny, burglary and motor vehicle theft. For definitions and counting rules, see the FBI's Uniform Crime Reports at: http://www.fbi.gov/ucr/ucr.htm.

13. See, for example, Taylor, Ralph B., Philip W. Harris, Peter R. Jones, Doris Weiland, R. Marie Garcia, and Eric S. McCord, "Short Term Changes in Adult Arrest Rates Influence Later Short-Term Changes in Serious Male Delinquency Prevalence: A Time-Dependent Relationship," *Criminology* 47 (3) (August 2009): 657-697.

14. This rate varied considerably by district — a low of 49 percent in Dobson and a high of 74 percent in Superstition. A spatial analysis of reported crime rates and patrol patterns might help explain this variation.

15. See Moore et al., *Recognizing Value in Policing* (see note 10).

16. See Brady, *Measuring What Matters, Part Two* (see note 4).

17. In 2008, the Valley Bureau of the Los Angeles Police Department reported a greater reduction in the number of UCR Part 1 crimes than the other three bureaus and at the same time achieved the greatest reduction in overtime hours.

18. In 2007, there were 1,100 calls for service for each 1,000 residents in Austin, roughly twice the rate in Mesa and nearly three times the rate in Seattle. Audit Report, "Public Safety Assessment: Police Operations," Austin City Council, June 2008.

19. See Pittsburgh Bureau of Police, "Annual Report, 2007," available at http://www.city.pittsburgh.pa.us/police/assets/07_Police_Annual_Report.pdf.

20. Van Reenen, P., "The 'Unpayable' Police," *Policing* 22 (2) (1999): 133-152, pp. 146-148, provides good examples of cost spreading, fee shifting and redistribution of expenditures on public safety in The Netherlands.

21. In Los Angeles, Chief William Bratton frequently calls for closer attention to the "immeasurable" benefits of policing in divided communities. For an example of one such value, see Sullivan, Jerry, "A Twice-Told Tale of Black, Brown, and LAPD Blue," *Los Angeles Garment and Citizen,* October 18, 2008.

22. For an example of research on the impact of crime on housing markets, see Tita, George E., Tricia L. Petras, and Robert T. Greenbaum, "Crime and Residential Choice: A Neighborhood Level Analysis of the Impact of Crime on Housing Prices," *Journal of Quantitative Criminology* 22 (4) (December 2006): 299-317. For an example of recent efforts in the United Kingdom to quantify the costs of crime, see "The Economic and Social Costs of Crime Against Individuals and Households 2003/04," Home Office Online Report 30/05.

23. For a comprehensive analysis of spending on policing in the United Kingdom, see Mills, Helen, Arianna Silvestri, and Roger Grimshaw, *Police Expenditure, 1999-2009,* London: Kings College, Centre for Crime and Justice Studies, May 2010, available at http://www.crimeandjustice.org.uk/prpolicespendingbriefing.html.

24. See Flanagan, Sir Ronnie, "The Review of Policing: Final Report," February 2008, available at http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/07-02-08flanagan-final-report.pdf. For early news coverage of the report, see Ford, Richard, "Thin Blue Line Is About to Get Even Thinner as Numbers Are Cut," *The Times* (London), February 8, 2008. See also Loveday, Barry, and Jonathan McCrory (authors) and Gavin Lockhart (ed.), *Footing the Bill: Reforming the Police Service,* London, Policy Exchange, 2007, p. 15, available at http://www.policyexchange.org.uk.

25. "Workforce modernization" is a response to not only problems of cost but also the increasing volume of low-level crime (to which police officers may not be the right response), the increasing complexity of crime (ditto), and growing public concerns about the preservation and limitation of the use of force and surveillance to solve social problems.

26. See the report by Arroyo Associates, "Review of Increased Civilianization of the Police Department," March 19, 2008.

27. See, for example, Sparrow, Malcolm, *The Nature of Harms,* Cambridge, MA: Harvard University Press, 2008.

About the Authors

George Gascón is Chief of the San Francisco City Police Department. From December 2002 to August 2006 he was Assistant Chief of Police in Los Angeles, and from August 2006 to August 2009 he was Chief of Police for the city of Mesa, Ariz.

Todd Foglesong is a Senior Research Associate at the Program in Criminal Justice Policy and Management at the Harvard Kennedy School of Government.

Acknowledgments

The authors would like to thank Darrel Stephens, Chris Burbank, an anonymous reviewer and many members of the Executive Session on Policing at the Harvard Kennedy School for thoughtful comments on an earlier draft of this paper and for permission to share some of their insights. The authors would also like to thank the city manager of Mesa, Ariz., Chris Brady; the city manager of West Valley, Utah, Wayne Pile; and Austin, Texas, Police Chief Art Acevedo for their help compiling information about police expenditures. The authors are grateful to Pete Garza and Baillie Aaron for research assistance.

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

Washington, DC 20531

Official Business
Penalty for Private Use $300

PRESORTED STANDARD
POSTAGE & FEES PAID
DOJ/NIJ
PERMIT NO. G–91

Members of the Executive Session on Policing and Public Safety

Chief Anthony Batts, Oakland Police Department

Professor David Bayley, Distinguished Professor, School of Criminal Justice, State University of New York at Albany

Dr. Anthony Braga, Senior Research Associate, Lecturer in Public Policy, Program in Criminal Justice Policy and Management, Kennedy School of Government, Harvard University

Chief William J. Bratton, Los Angeles Police Department

Chief Ella Bully-Cummings, Detroit Police Department (retired)

Ms. Christine Cole (Facilitator), Executive Director, Program in Criminal Justice Policy and Management, Kennedy School of Government, Harvard University

Commissioner Edward Davis, Boston Police Department

Chief Ronald Davis, East Palo Alto Police Department

Chief Edward Flynn, Milwaukee Police Department

Colonel Rick Fuentes, Superintendent, New Jersey State Police

Chief George Gascón, San Francisco Police Department

Mr. Gil Kerlikowske, Director, Office of National Drug Control Policy

Chief Cathy Lanier, Washington D.C. Metropolitan Police Department

Ms. Adrian Nicole LeBlanc, Visiting Scholar, New York University

Professor Tracey Meares, Walton Hale Hamilton Professor of Law, Yale Law School

Chief Constable Peter Neyroud, Chief Executive, National Policing Improvement Agency (UK)

Christine Nixon, Chair, Victorian Bushfire Reconstruction & Recovery Authority (Australia)

Chief Richard Pennington, Atlanta Police Department

Mayor Jerry Sanders, City of San Diego

Professor David Sklansky, Professor of Law, Faculty Co-Chair of the Berkeley Center for Criminal Justice, University of California, Berkeley, School of Law

Mr. Sean Smoot, Director and Chief Legal Counsel, Police Benevolent & Protective Association of Illinois

Professor Malcolm Sparrow, Professor of Practice of Public Management, Kennedy School of Government, Harvard University

Chief Darrel Stephens, Charlotte-Mecklenburg Police Department (retired)

Professor Christopher Stone, Guggenheim Professor of the Practice of Criminal Justice, Kennedy School of Government, Harvard University

Mr. Jeremy Travis, President, John Jay College of Criminal Justice

Mr. Rick VanHouten, President, Fort Worth Police Association

Professor David Weisburd, Walter E. Meyer Professor of Law and Criminal Justice, Director, Institute of Criminology, Faculty of Law, The Hebrew University and Distinguished Professor, Department of Criminology, Law, and Society, George Mason University

Dr. Chuck Wexler, Executive Director, Police Executive Research Forum

Learn more about the Executive Session at:

NIJ's website: http://www.ojp.usdoj.gov/nij/topics/law-enforcement/executive-sessions/welcome.htm
Harvard's website: http://www.hks.harvard.edu/criminaljustice/executive_sessions/policing.htm

NCJ 231096