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Have Changes in Policing Reduced Violent Crime? An Assessment of the Evidence

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The police do not prevent crime. This is one of the best kept secrets of modern life. Experts know it, the police know it, but the public does not know it. Yet the police pretend that they are society's best defense against crime and continually argue that if they are given more resources, especially personnel, they will be able to protect communities against crime. This is a myth.

David Bayley, *Police for the Future*

The connection of policing to risk factors is the most powerful conclusion reached from three decades of research. Hiring more police to provide rapid 911 response, unfocused random patrol, and reactive arrests does not prevent serious crime. Community policing without a clear focus on crime risk factors generally shows no effect on crime. But direct patrols, proactive arrests, and problem-solving at high-crime "hot spots" has shown substantial evidence of crime prevention. Police can prevent robbery, disorder, gun violence, drunk driving and domestic violence, but only by using certain methods under certain conditions.

Lawrence Sherman, "Policing for Crime Prevention"

THESE STATEMENTS SUMMARIZE two popular perspectives held by social scientists on the effect of police on crime. Some believe that the police do not and probably cannot have a significant effect on crime rates (Gottfredson and Hirschi 1990; Klockars 1983; Moran 1995). This viewpoint was forged from a sociological tradition in which theories provide no role for police in their explanations of crime. It also stems from more than two decades of evaluation research showing that, within reasonable

bounds, neither the level of police resources nor the core strategies of policing appear to have much effect on crime. Dramatic reductions in violent crime (particularly homicide) throughout the United States over the past seven years have led some social scientists to question this stance (DiIulio 1995; Kelling and Coles 1996). Sherman (1995, p. 330), for instance, suggests that "police presence can reduce or even increase the crime rate substantially in specific places at specific times, depending on what the police do." In this chapter, we examine the scientific evidence about the contributions of the police to recent reductions in violent crime in the United States.

American policing is in the midst of significant changes at multiple levels. Some changes are generic, implemented throughout the nation to improve the responses of police to general classes of problems such as crime, disorder, fear, and quality of life. Others are more specific, focusing instead on a particular geographic area, time, offense type, or some combination of these factors. In Part One, we examine three generic changes in American policing over the past decade that are frequently credited for recent reductions in violent crime. These include increases in the size of police agencies, a growing movement toward more aggressive order-maintenance policing strategies, and community policing. Part Two examines a number of more focused policing strategies, including those aimed at specific places, times, offenders, and offenses. In Part Three, we summarize our findings and describe their implications for future developments in policing and crime prevention.

Part One: Generic Changes in American Policing

Changing the Number of Police. Across time and place, one of the most common reactions to increases in crime is to hire more police officers. American police agencies have been increasing in size since their inception, and despite problems in estimating the number of police officers nationwide, it is fair to say that we now have more police officers per capita than ever (Maguire et al. 1998).¹ Recent research shows that both police executives and the public believe increasing the number of police to be an important and effective method for reducing crime (Maguire and Pastore 1995, p. 172; McEwen 1995; National Association of Police Organizations [NAPO] 1997, 1999). A key feature of President Clinton's 1992 presidential campaign was his promise to increase the number of police officers in the United States by 100,000. Once in office, Clinton successfully implemented plans to fulfill his campaign promise, enacting the Violent Crime

Control and Law Enforcement Act (the "Crime Act") on September 13, 1994 (U.S. Congress 1994). As of May 12, 1999, Crime Act funds had been awarded for hiring or redeploying 100,000 officers (though not all of them are trained and on the streets) (Office of Community Oriented Policing Services 1999). For one commentator, such increases are not nearly enough. In a 1995 *Atlantic Monthly* article, Adam Walinsky suggested that the United States needs at least 500,000 new police officers.

Has increasing the number of police officers affected rates of violent crime? As mentioned, some police and government officials have been quick to answer "yes" to this question. To date, however, we are not aware of a single empirical study that supports the claim that increases in the number of police officers are responsible for recent decreases in violent crime. Some of the cities experiencing the greatest reductions in crime did so without increasing the number of officers. For example, among the twenty-five largest cities in the United States, San Diego and New York experienced the greatest decreases in crime from 1990 to 1996 (more than 40 percent). During that same time, however, the number of police officers per capita grew by 18 percent in New York, but only one percent in San Diego (Cordner 1998; Independent Budget Office 1998, p. 5). Furthermore, Dallas's crime rate plummeted by 39 percent, while the number of officers per capita declined by almost 3 percent (Independent Budget Office 1998, p. 6). Seattle's crime rate dropped by 18 percent, despite a decrease of 6 percent in the number of officers per capita (Independent Budget Office 1998, p. 6). At this point, there is little evidence that changes in the number of police officers are responsible for recent changes (in either direction) in violent crime.

Although there is no reliable evidence to support the link between *recent* increases in the number of police officers and the drop in violent crime, there is a large body of existing research on the relationship between police strength and crime rates.² The most difficult problem facing researchers attempting to unravel the relationship between police and crime is to determine if more police reduce crime or if more crime increases police hiring. If deterrence theorists are correct, then increasing the number of police officers should produce decreases in crime. On the other hand, society's first reaction in the face of increasing crime rates is usually to hire more police officers. Like the fabled chicken and egg, it is extremely difficult to determine which came first (or which causes which). Social scientists describe relationships in which two variables are suspected to cause each other as simultaneous or reciprocal. The statistical methods used by social scientists to unravel simultaneous causal relationships are

complex. Consequently, the literature on the relationship between police strength and crime is often difficult to understand. Further, the results of this research are thoroughly mixed, with studies confirming all possible relationships – that police strength increases crime, decreases crime, and has no effect on crime.

In this section, we review this body of research to determine if it is possible to distill any generalizations about the effect of police strength on violent crime. Table 7.1 lists twenty-seven studies that examined the effects of police strength on violent crimes.³ Violent crimes include the four crimes classified by the FBI as violent: murder, rape, robbery, and aggravated assault.⁴ Studies estimating bivariate or partial correlations between police and violent crime are excluded unless the authors interpret the findings as the effect of police on crime (and not crime on police).

Because a single study can use multiple samples, several different independent variables, different dependent variables, and very different analytical strategies, these twenty-seven studies contain forty-one separate sets of analysis, with eighty-nine separate estimates of the effect of police on violent crime (each with a different dependent variable). There is tremendous variation in the nature and quality of these studies. Of the forty-one analyses, twenty-three are cross-sectional, examining differences across cities, states, or other geographic areas at a single point in time. Ten are longitudinal, examining changes in police strength and violent crime in a single cross-section (such as a city, state, or nation) over time. The remaining eight combine these two approaches, analyzing data from multiple cross-sections at multiple times. Some are based on tiny samples (as small as 15), while others are based on very large samples of more than 1,000. The independent variables used to measure police strength vary, including the number of police officers (seven analyses), the number of police employees (fourteen), and police expenditures (twelve). An additional eight studies did not provide sufficient detail to know which measure of police strength was used. In nearly every instance, the measure of police strength was expressed as a rate per capita, though a small number of studies used either raw numbers or police strength per unit of territory (either per acre or per square mile). The crime types – the dependent variable – included aggregate violent crimes (usually the sum of murders, rapes, robberies, and aggravated assaults), individual violent-crime categories, and various combinations. All studies relied on crimes reported to police, with the exception of one that used victimization data (Humphries and Wallace 1980). Finally, the crime measures were nearly always expressed as rates per capita, though a small number of studies used either raw numbers of

Table 7.1. Empirical Studies on the Effect of Police Strength on Violent Crime

Study	Method ^a	Cross-Section	Time ^b	I.V.	Simultaneity ^d	Findings ^e
Morris & Tweeten (1971)	CS	754 Cities	1967 & 1968	Police Employees	2SLS	Violent Crime (+)
Greenwood & Wadycski (1973)	CS	199 SMSAs	1960	Police Employees	3SLS	Violent Crime (+)
Swimmer (1974a)	CS	119 Cities	1960	Police Expenditures	2SLS	Murder (-), Rape (-) Robbery (-), Assault (0)
Swimmer (1974b)	CS	119 Cities	1960	Police Expenditures	2SLS	Violent Crime (-)
Wellford (1974)	(a) CS (b) CS	21 Cities 21 Cities	1960 & 1970	Police Expenditures	None	Violent Crime (0)
Levine (1975)	(a) CS (b) Panel	26 Cities 26 Cities	1960 & 1970 1961 1961 & 1971	Police Employees Police Employees Change in Police Employees	None None	Murder (+), Robbery (+) Change in Murder (0), Change in Robbery (0)
Pogue (1975)	(a) CS (b) CS (c) CS	163 SMSAs 163 SMSAs 66 SMSAs	1962 1967 1968	Police Expenditures Police Expenditures Police Expenditures	2SLS 2SLS 2SLS	Murder (0), Rape (0), Robbery (0), Assault (0) Robbery (+), Assault (+) Murder (0), Rape (0), Robbery (0), Assault (0)
Land & Felson (1976)	TS	U.S. Aggregate	1947-1972	Police Expenditures	None	Violent Crime (-)
Mathieson & Passell (1976)	CS	65 NYPD Precincts	1971	Uniformed Patrolmen	2SLS	Robbery (-)
Hakim, Ovadia, & Weinblatt (1978)	CS	61 Philadelphia Suburbs	1970	Police Expenditures	None	Robberies per Acre (+)
Fujii & Mak (1980)	(a) CS (b) TS	25 Districts in Oahu State of Hawaii	1975 1961-1975	Police per Acre Police	2SLS None	Murder (0), Rape (+), Robbery (+), Assault (+) Murder (0), Rape (+), Robbery (0), Assault (0)

Table 7.1 (continued)

Study	Method ^a	Cross-Section	Time ^b	I.V.	Simultaneity ^d	Findings ^e
Huff & Stahura (1980)	CS	252 Suburbs	1971	Police Employees	2SLS	Violent Crime (+)
Humphries & Wallace (1980)	(a) Panel	23 Cities	1950 & 1971	Change in Police, 1950-1970	None	Change in Homicide (+), Change in Robbery (0)
Jacob & Rich (1980-81)	(b) CS	23 Cities	1971	1970 Police	Difference Score	1971 Robberies (0)
Greenberg & Kessler (1982)	TS	9 Cities	1948-1978	Police Expenditures	Lag	Robbery (+)
Loflin & McDowall (1982)	TS	130 Cities	1960 & 1962	Police Expenditures	Lag	Violent Crime (+)
Greenberg, Kessler, & Loflin (1983)	(a) Panel	Detroit 252 Suburbs	1926-1977 1960 & 1970	Police Employees	Granger	Violent Crime (0)
				Police Employees	Lag	Violent Crime (0)
Belknap (1986)	(b) Panel	269 Cities	1960 & 1970	Police Employees	Lag	Violent Crime (+)
Howsen & Jarrell (1987)	CS	260 SMSAs	1980	Police Expenditures	2SLS	Violent Crime (0)
	CS	120 Kentucky Counties	1981	Police per Square Mile	2SLS	Robbery (-)
Corman & Joyce (1990)	TS	New York City	195 months	Police Officers (1970-1986)	Granger	Murder (0), Rape (0), Robbery (-), Assault (-)
van Tulder (1992)	(a) CS	40 large Dutch areas	1979 & 1980	Police Strength	None	Violent Crime (0)
	(b) CS	80 small Dutch areas	1979 & 1980	Police Strength	None	Violent Crime (+)
	(c) CS	805 Dutch municipalities	1979 & 1980	Police Strength	None	Violent Crime (+)
Niskanen (1994)	CS	50 States + Washington DC	1991	Police Employees	2SLS	Violent Crime (0)
Chamlin & Langworthy (1996)	TS	Milwaukee	1980-1987	(a) Police Employees	Granger	Personal Crime (0), Robbery (0)
				(b) Patrol Employees		Personal Crime (0), Robbery (0)
				(c) Detective Employees		Personal Crime (0), Robbery (+)
Corman and Mocan (1996)	TS	New York City (1970-1990)	252 months,	Police Officers	Granger	Murder (0), Rape (-), Robbery (-)
Marvell & Moody (1996)	(a) TSCS	49 States	1973-1993	Police Employees	Granger	Homicide (-), Robbery (-), Rape (0), Assault (0)
	(b) TSCS	56 Cities	1973-1993	Police Employees	Granger	Homicide (-), Robbery (-), Rape (0), Assault (0)
Levit (1997)	TSCS	59 Cities	1970-1992	Police Officers	2SLS	Violent Crime (-), Murder (-), Robbery (0), Rape (0), Assault (0)
Lau Lman (1997)	(a) CS	50 Cities	1991	Police Officers	Lag	Murder (+), Robbery (+), Rape (-), Assault (0)
	(b) CS	50 States	1991	Police Officers	Lag	Murder (+), Robbery (+), Assault (+), Rape (0)
	(c) TS	United States	1960-1994	Police Officers	Lag	Murder (0), Rape (0), Robbery (+), Assault (+)

^a CS = cross-sectional model, TS = time series model, Panel = two- or three-wave panel model, TSCS = pooled time series-cross-sectional model.

^b All longitudinal data are yearly unless otherwise noted.

^c Unless otherwise indicated, all police-strength measures are per capita except Mathieson and Passell (1976), Corman and Mocan (1996), and some estimates by Chamlin and Langworthy (1996).

^d Procedures used for dealing with the simultaneity between police and crime: None = no attempt to deal with simultaneity, Lag = lag value of police strength, is included in the violent-crime equation, 2SLS/3SLS = two- or three-stage least squares regression, Granger = Granger causality test (Granger 1968).

^e Unless otherwise indicated, all violent-crime variables are expressed as rates except Corman and Mocan (1996) and some estimates by Chamlin and Langworthy (1996) and Wellford (1974).

crimes or crimes per unit of territory. This brief review illustrates that the methods used to assess the effects of police strength on violent crime vary tremendously across studies.

Overall, of the eighty-nine dependent variables listed in Table 7.1, forty-four (49.4 percent) found no effect of police on crime, twenty-seven equations (30.3 percent) found a positive effect of police strength on violent crime (i.e., more police results in more crime), and eighteen (20.2 percent) found a negative effect (i.e., more police results in less crime). Thus, after nearly three decades of research on the relationship between police strength and violent crime, there is not a consistent body of evidence supporting the assertion that hiring more police is an effective method for reducing violent crime. However, many of these studies suffer from flaws in design, analysis, or both, so aggregating the results in this fashion may be misleading. To examine this possibility, we briefly explore the quality of the studies in Table 7.1. The goal is to determine whether the same ambiguous pattern of results persists after eliminating some of the more problematic studies.

Model Identification Issues. More than twenty years ago, Fisher and Nagin (1978; Nagin 1978, 1998) found that one of the most serious problems in previous research on the deterrent effects of criminal sanctions was inadequate model identification. As mentioned earlier, there are good reasons to suspect that police (*P*) and crime (*C*) have a simultaneous causal effect on the other. Model identification is a technical matter beyond the scope of this chapter, but the following example illustrates the general concept. Suppose we were to collect data from fifty cities on the number of police and the number of violent crimes per capita. Given the results of previous research, we would most likely find that these two variables are highly (and positively) correlated. The problem is that, when using cross-sectional data (data collected from a single period in time), we would not know whether the correlation was due to the effect of *P* on *C*, *C* on *P*, the influence of a third variable on *P* and *C*, or the simultaneous effect of each one on the other. Thus, given only these two variables, we would not be able to estimate the effect of *P* on *C* because there is insufficient information to determine which of these alternative explanations is the most plausible.

Econometric methods have been devised to deal with the problem of simultaneous causal relationships. One frequently used solution is to add an outside variable to the model (known as an instrumental variable) that is a known cause of one variable (in this case *P*), but has no causal effect on the other (*C*). By providing this kind of "identification restriction," we provide sufficient information in the system of equations to obtain unique esti-

mates of the effect of *P* on *C*. Fisher and Nagin (1978) and others have argued convincingly that most researchers have paid too little attention to these identification restrictions, choosing instrumental variables that are based on unrealistic assumptions. Nagin (1978, p. 118) showed that when the assumptions regarding identification restrictions are incorrect, the resulting analysis "can be completely misleading."⁵ Unfortunately, many researchers have failed to heed Fisher and Nagin's advice. As a result, the findings of most cross-sectional studies in Table 7.1 are suspect. Others have ignored the simultaneity issue altogether: findings from those studies are even more suspect.

Measurement Error. Although nearly every study of the relationship between police strength and violent crime has acknowledged the well-known problems with Uniform Crime Reports (UCR) crime figures, none have acknowledged the problems of accurately measuring police strength. A recent study showed that much of the data used for "counting cops" in the United States has been egregiously inaccurate (Maguire et al. 1998). Only three decades ago, police scholars and government agencies were still estimating that there were approximately forty thousand separate police agencies in the nation. We now know that the true figure is about one-half that number.

Current data on police strength are probably the best yet, but there are still problems. To illustrate this, Table 7.2 shows the results of the last two censuses of state and local law enforcement agencies, conducted by the Bureau of Justice Statistics (BJS) in 1992 and 1996 (Reaves 1993; Reaves and Goldberg 1998). The total number of agencies listed grew by 1,411 over this four-year period although there is no other evidence that the number of police agencies in the nation is actually growing.⁶ In fact, King (personal communication to Edward Maguire, March 30, 1999; King, Travis, and Langworthy 1997), applying a biological framework to the study of police organizations in three states, has found the number of agencies that have "died" is much greater than the number that have been born.⁷ The increase in the number of agencies recorded in the 1996 census is due in large part to efforts by BJS to locate additional law enforcement agencies missing from the previous census. Yet, for some reason, BJS did not take these newly discovered agencies into account when reporting that "nationwide, the number of state and local full-time sworn personnel in June 1996 was 9 percent greater than in June 1992" (Reaves and Goldberg 1998, p. 1). Thus, even today, estimates of increases in police strength contain some (unknown) degree of measurement error.

Table 7.2. *Estimates of the Number of U.S. Police Agencies, 1992 & 1996*

Agency Type	1992	1996
Local	12,502	13,578
State	49	49
Sheriff	3,086	3,088
Special	1,721	2,054
Total Agencies	17,358	18,769

The size of police agencies in the United States is undoubtedly growing, however. Unfortunately, historically inaccurate methods of counting police make it difficult to know by how much.⁸ We suggest the following set of strategies for assessing the degree of error in measures of police strength and evaluating the research presented in Table 7.1. First, the larger the aggregate, the greater the error. Because there is controversy about what counts as a police agency or officer (consider the numerous types of specialized police agencies), larger aggregates such as counties, states, and nations probably have much more measurement error than cities or precincts (Maguire et al. 1998). Second, there is less measurement error associated with counting police in city police departments than in specialized police and in county sheriffs' agencies. Because county sheriffs are responsible for a multitude of functions, the proportion of employees in these agencies with responsibility for law enforcement functions is much lower than in other agency types. Yet some measures of police strength include deputy sheriffs who work exclusively as jail guards, court guards, and process servers. In fact, there are several states in which sheriffs' agencies have no generalized law enforcement responsibilities. Including these measures in county, state, or national estimates of police strength (which was done in many of the studies in Table 7.1) introduces severe measurement error. Finally, some longitudinal data series change definitions and recording practices over time, so it is difficult to know whether apparent changes in police strength are real changes or simply the product of changes in recording. All of this points to the need to consider issues of measurement error in estimates of police strength.

Other Issues. There is tremendous inconsistency across studies in the methods and measures used. For instance, Chamlin and Langworthy (1996) were the only researchers to systematically examine the effect of expressing the police and crime measures as either raw numbers or rates per capita, and they found that it made a difference. They were also the

only researchers to systematically examine the effect of disaggregating employment measures by assignment (patrol officers and detectives). Some of the studies had very low sample sizes (as few as fifteen), and probably should not be trusted. Many failed to identify their measures of police strength, while others proceed as if police expenditures, police employees, and police officers are interchangeable variables. Though these three variables are highly correlated, they are very different, and the failure of previous research to consider the implications of different measures of police strength is another probable reason for the mixed findings. Finally, it is time to systematically explore the differential effect of police strength on individual types of violent crime rather than overall rates of crime and violent crime.

Given these various issues in the research, is it possible to exclude some of the studies from consideration to get a "purer" picture of the effect of police strength on violent crime? We began by excluding all of the cross-sectional studies on the basis of inadequate identification restrictions. Next, among the remaining longitudinal studies, we excluded all of those based on an aggregate larger than a city. Finally, we excluded all studies that made no attempt to deal with the simultaneity between police and crime. After excluding all of these, we were left with nine studies containing twenty-seven separate dependent variables. Police strength has no effect on crime in fifteen equations (55 percent), a positive effect in four equations (15 percent), and a negative effect in eight equations (30 percent). Thus, even when we examined only the most rigorous studies, we could not find consistent evidence that increases in police strength produce decreases in violent crime. Overall, the research suggests that hiring more police officers did not play an independent or consistent role in reducing violent crime in the United States.

Community Policing. At least since the early 1980s, police agencies in the United States have been undergoing a host of reform efforts generally known as community policing. These reforms were undertaken to address a number of concerns including conflicts between racial minorities and the police, research suggesting that traditional police practices were ineffective at controlling crime, and to improve handling of noncriminal matters the public brings to police attention. There are no commonly accepted definitions of community policing (Eck and Rosenbaum 1994), but most serious efforts in this direction include changes in organizational structures to decentralize decision making and programs to stimulate and foster police-community partnerships (Kennedy and Moore 1995; Maguire

and Uchida 1998). In this section we will examine whether these reform efforts could have reduced violent crime in the United States.

National surveys of police agencies continue to show that community-policing strategies are being implemented throughout the United States (Maguire et al. 1997; Wycoff 1994). Many advocates and other observers claim that community policing deserves much of the credit for recent reductions in violent crime. Others are skeptical or even doubt that the contributions of community policing can be assessed. Bayley (1994a, p. 278), for example, argues that "the success of community policing will never be evaluated ... [because it] means too many things to different people." Because community policing involves a wide array of fairly heterogeneous changes in policing, we find it necessary for organizational and analytical purposes to break it into smaller components. Following Maguire and Uchida (1998) and Maguire et al. (2000), we divide community policing into three dimensions: internal organizational changes, community partnerships, and problem solving. Because the first two of these strategies are more generic, we examine them here. Problem-solving strategies tend to be more focused, therefore we discuss them and related efforts in Part Two.

Organizational Change. Reformers suggest that in order to implement community policing, there must be fundamental changes in the management, structure, and culture of police organizations. Many of these recommendations entail changes that are similar to popular organizational-change strategies found in the private and public sectors (Das 1985; Mastrofski 1998; Moore and Stephens 1992; Moore and Trojanowicz 1988). Reformers give two very different reasons these changes are necessary: first, to stimulate and encourage officers to perform community-policing functions (Weisel and Eck 1994); second, to make the organization more flexible and amenable to developing community partnerships and creative problem-solving strategies (Bayley 1994b; Community Policing Consortium 1994; Mastrofski 1998; Moore 1994; Skolnick and Bayley 1986, 1988). The community-policing literature has clearly established the need for police agencies to respond to both of these organizational and managerial challenges. The effect of this one element of community policing on violent crime is presumably indirect, operating through community partnerships and problem solving. Nevertheless, given popular claims about the effectiveness of community policing, it is important to address the effectiveness of *each* of its dimensions. In this section, we discuss whether these diverse changes in organization and management might be responsible for recent drops in violent crime. Before exploring that causal link

explicitly, we first examine the evidence that such changes are even taking place in American police agencies.

When community-policing reformers discuss organizational change, three elements appear over and over again: organizational structure, organizational culture, and managerial and leadership styles. Evidence of change in these three arenas is far from convincing, though relevant empirical research is sparse.⁹ Maguire (1997) found that from 1987 to 1993, large police agencies had not significantly altered their structures in the directions urged by community-policing reformers. In fact, on one structural dimension (specialization), police agencies changed in the opposite direction. The most recent national data suggest that police agencies may just now be starting to alter some structural elements by flattening hierarchies, decentralizing, and adopting geographic command authority (Hassell et al. 1999). However, the magnitudes of these changes were small, and most occurred after the national decline in violent crime. Similarly, a recent study of Florida police agencies found that the "organizational impacts of community policing have been minimal" (Gianakis and Davis 1998, p. 496).

While the reform literature is full of prescriptions about the need to change organizational culture, empirical studies of such changes are rare. Zhao, He, and Lovrich (1998) argued that individual values and culture are inextricably linked, with each affecting the other. Their research suggested that the value orientations of American police officers have remained stable over the past twenty years. In a later study, Zhao, He, and Lovrich (1999) surveyed police officers from a department with a national reputation for community policing. Researchers found that from 1993 to 1996, officers' value orientations changed significantly. Priority ratings for values reflecting individual happiness, comfort, and security increased over the three-year period, while ratings for more social or collective values decreased. Alarming, the social value experiencing the greatest decline in importance among the officers was "equality." These findings were stable across all levels of education and experience. Zhao et al. (1999) conclude that the value-changes evident in this sample of officers are antithetical to the basic shifts in culture expected under community policing.

Research on police officers' attitudes might also be useful for drawing inferences about recent changes in organizational and occupational culture. For instance, studies examining attitudes about community policing have found a lack of understanding, acceptance, or both among police officers (Kratcoski and Noonan 1995; Lurigio and Skogan 1994; Sadd and Grinc 1994). Greene and Decker (1989) found that a classroom program

in Philadelphia designed to improve relations between police officers and residents actually resulted in poorer officer attitudes toward the community. Wood's (1998) study of community policing in Albuquerque finds that changes in organizational culture are difficult to achieve in the face of the traditional police culture. Despite these frequent negative findings, some research has found that police agencies can change officers' attitudes. For instance, a longitudinal study in Joliet, Illinois, found that although "the absence of change was the norm rather than the exception," many officers showed favorable changes in attitudes toward and knowledge of community policing (Rosenbaum, Yeh, and Wilkinson 1994, p. 349). Other studies have also found evidence of positive changes in police officers' attitudes (McElroy, Cosgrove, and Sadd 1993; Wycoff and Skogan 1994). Overall, these studies of police attitudes and values generally suggest that the culture of a police organization can change, but such shifts are not likely to occur often or quickly.

Evidence of changes in styles of leadership and management is also sparse. Hoover and Mader (1990) found that Texas police chiefs generally supported the principles of excellence found in the private sector managerial-reform literature, though data were not available about whether the chiefs actually followed these principles. Witte, Travis, and Langworthy (1990) found that employees in fourteen Ohio police agencies generally agreed about the value of participatory management. Few, however, reported that such a management style existed within their own agency. Compelling evidence of changes in management style tends to come in the form of case studies, though it is impossible to draw general conclusions from this kind of design. The best-known recent case study of managerial change in policing occurred in Madison, Wisconsin. Wycoff and Skogan (1994) found that the Madison Police Department successfully implemented a participatory management style. Their evaluation showed that these organizational changes had significant effects inside and outside the department. Strangely, though residents perceived robberies and attacks to be less of a problem there was no significant change in actual robbery victimization rates. Though case studies can be valuable for understanding how organizational changes are implemented and some of their short-term consequences, they are not very useful for drawing broader conclusions about violent-crime trends.

Although some police organizations have undoubtedly changed their structures, cultures, and management styles, evidence suggests that overall, such shifts are occurring glacially. Changes in structure are just now starting to occur nationally. Evidence suggests that changes in culture, if they

are occurring at all, are probably not widespread. There are no national data on changes in management styles, though the limited research suggests that they are probably no more prevalent than changes in structure and culture. Even if it could be demonstrated that organizational and managerial changes are occurring widely, there is little or no empirical evidence to support a claim that changing the management and organization of a police agency can lower crime. Overall, the causal connection between these internal reforms and violent crime is the weakest (and most indirect) of all those considered in this chapter. Given that police agencies nationwide have not experienced dramatic shifts in formal and informal organization, it is difficult to attribute recent declines in violent crime throughout the nation to such changes.

Community Partnerships. A core feature of the community-policing movement is forging better relationships between police and communities. Nearly every prescriptive discussion of community policing cites the need for the police and community to form coalitions or partnerships with one another. Reformers disagree about the extent of involvement that citizens should have in policing, with opinions ranging from no involvement or simply serving as the "eyes and ears" of the police to playing a direct role in the formulation of police policy (Bayley 1994b). Because the scope and depth of police-community partnerships is so broad, this is probably the hardest generic policing strategy to evaluate. The task is made more difficult because in many studies, community partnerships are implemented simultaneously with other strategies, such as increases in patrol strength, problem solving, and internal innovations. In this section, with these (and other) significant limitations in mind, we attempt to synthesize the findings from numerous evaluations of police-community partnerships in the United States.

Although community policing has swept through the nation over the past decade, there is surprisingly little evidence about its effect on violent crime. There are at least four reasons for this. First, most evaluations focus on the process, rather than the impact, of implementing community policing. Second, even when evaluations do study impact, they sometimes focus on fear of crime or police and citizen attitudes, rather than on levels of crime and victimization. Third, some impact evaluations focus on nonviolent crimes such as burglary or "soft" crimes (Reiss 1985). Finally, some impact evaluations include violent crimes in their measures of total crime, but they do not disaggregate these composite measures (e.g., Lasley, Vernon, and Dery 1995; Trojanowicz 1986). Despite these limitations, there are patches of evidence on the effectiveness of various

efforts by the police to improve relationships and form partnerships with communities.

One body of evaluation research has examined the impact of community-policing strategies on *perceptions* (i.e., do people believe crime is going up or down, regardless of its actual trend) of violent crime and other community conditions. We review just a handful of these studies here. Brown and Wycoff (1987) found that of five community-partnership strategies implemented in Houston, only storefront police stations and community contact patrols reduced perceptions of personal crime in the area. Williams and Pate (1987) found that none of the three community-partnership strategies implemented in Newark to reduce fear of crime had an effect on perceptions of personal crime. In the most recent study, Skogan and Hartnett (1997) examined the impact of Chicago's Alternative Policing Strategy (CAPS) on perceptions of the four most serious problems in each of five Chicago neighborhoods (as nominated by residents in each neighborhood). Of six problems involving violent crime (robbery, assault, or gang violence), residents of these neighborhoods thought that two of the problems decreased relative to resident perceptions in comparison neighborhoods. For two other problems, residents of comparison neighborhoods perceived significant decreases while residents in the experimental areas did not think their problems had declined. Unfortunately, as very little is known about the relationship between perceptions of violent crime and actual violent crime, we cannot be certain about the difference between the two measures. An earlier report from CAPS's evaluation found that although perceptions of crime had decreased significantly in all five prototype districts, official reports and victimization surveys showed that robberies had decreased in only three of the five districts (Skogan, 1995). It is difficult to know how much faith to place in the findings that community partnerships reduce *perceptions* of violent crime.¹⁰ If people routinely overestimate the volume of violent crime, it might be easier to influence these perceptions of violence than the violence itself.

Several studies have examined the impact of community-partnership strategies on reported violent-crime rates or victimizations. For purposes of organization, we divide these evaluations into three groups according to the partnership strategies evaluated. We begin by reviewing the evidence on foot patrols. Next, we review evaluations of Neighborhood Watch and similar community crime-prevention strategies. Finally, we examine a host of other studies evaluating miscellaneous community-partnership strategies.

To some advocates, foot patrols are one of the cornerstones of community policing: a back-to-the-basics way to recharge the relationship between the police and the community.¹¹ Evaluations of foot-patrol strategies in Boston (Bowers and Hirsch 1987), Newark (Pate 1986), and an unidentified southeastern city (Esbensen 1987) have found no effect on rates of total or violent crime. Cordner and Jones (1995) found that after part-time foot patrols were instituted in a public housing project, "personal crime" victimization rates decreased among females and stayed about the same for males. These studies show that foot patrols can provide some benefits but overall reduction in violent crime does not appear to be one of them.

National studies of community policing routinely find that Neighborhood Watch is one of the most popular community-partnership strategies implemented by American police agencies (Maguire et al. 1997; Wycoff 1994). In a comprehensive review, Bennett (1990) notes that the most evaluations of Neighborhood Watch have been done by the police, and perhaps not surprisingly, these studies generally find it effective at reducing crime. On the other hand, studies conducted by researchers tend to conclude that "Neighborhood Watch is partly or wholly unsuccessful" (Bennett 1990, p. 45). Researchers have noted that the majority of these studies suffer from serious methodological problems (Bennett 1990; Kessler and Duncan 1996; Lurigio and Rosenbaum 1986). The most recent research in London (Bennett 1990) and Houston (Kessler and Duncan 1996) found that Neighborhood Watch was not effective at reducing reported crime.¹²

Several other community-partnership strategies have also been evaluated. One early national study found that cities with training programs in police-community relations experienced lower increases in crime than other cities (Lovrich 1978). In Baltimore, an experiment assessing the effect of foot-patrol and ombudsman policing together produced no significant effects on violent crime (Pate and Annan 1989). In Oakland and Birmingham, researchers found that beats in which police officers made door-to-door contacts with citizens experienced notable declines in reported violent crimes (Uchida, Forst, and Annan 1992). Skogan's (1994) cross-site analysis found that home visits reduced victimizations (robbery, burglary, and assault) in all three cities in which they were implemented. A number of other community-partnership strategies in six cities had no effect on victimizations.

Evidence on the effectiveness of community partnerships is thoroughly mixed. As we have noted in each section of this chapter, much of the research is flawed.¹³ Perhaps the most optimistic lesson we can derive from

this line of research is that it is possible for community partnerships, under some circumstances, to reduce violent crime. The conditions under which they serve as effective crime-prevention strategies remain unknown. Survey research continues to show that community-partnership strategies are being implemented widely in American police agencies, yet survey research does not allow us to evaluate the depth of these partnerships. Evidence from a recent national evaluation suggests that "true" community partnerships are rare (Koper et al. 1998), though the modest progress made so far represents an important breakthrough in police-community relations. Others have reviewed the efficacy of community organizing in reducing crime. These reviews are pessimistic about the ability of community organizing to reduce serious crime, particularly in the most crime-ridden neighborhoods (Hope 1995; Rosenbaum 1988; Sherman 1997a). Assembling these various research findings, we do not find compelling evidence that police-community partnerships are either prevalent enough or effective enough to be responsible for recent national reductions in violent crime.

Zero-Tolerance Policing. A third generic change that seems to be gaining momentum in police agencies includes a myriad of aggressive policing strategies, popularly known as "order maintenance," "broken windows," "quality-of-life," or "zero-tolerance" policing. In contrast to community policing, which attempts to produce order and reduce crime through cooperation with community members, zero-tolerance policing attempts to impose order through strict enforcement (Cordner 1998; Massing 1998). Much of the resurgence in this aggressive policing style can be traced to the "Broken Windows" thesis outlined by Wilson and Kelling in 1982. Wilson and Kelling used broken windows as a metaphor for neighborhood disorder, arguing that unchecked disorder is an open invitation to more serious crime. The implications for police strategy were clear: to reorient police resources toward maintaining order and preventing crime. The appearance of Wilson and Kelling's article launched a debate about the proper role of police in a democratic society, with some supporting a shift toward order-maintenance policing to clean up communities and prevent crime (Kelling 1985; Sykes 1986). Others expressed concerns about the potential of this form of policing for abuse, discrimination, and violations of civil liberties (Klockars 1985, 1986; Walker 1984).

The best-known application of the Broken Windows thesis to policing was undertaken in New York City in 1993 by former Police Commissioner William Bratton and continues today under Commissioner Howard Safir

(Harcourt, 1998). Bratton provides detailed descriptions of the changes he implemented in the New York City Police Department (NYPD) in his recent autobiography (1998). In short, he takes issue with the conventional view of many social scientists that crime is attributable to structural features of communities (e.g., poverty, inequality) that are largely outside the influence of the police. Using the Broken Windows thesis, Bratton and Mayor Rudolph Giuliani instituted a quality-of-life enforcement strategy in the NYPD that was designed to "reclaim the public spaces of New York" (Bratton 1998, p. 228). The crux of this strategy was a campaign to restore order in New York by making arrests for minor offenses such as approaching a vehicle in traffic to wash its windshield (the infamous "squeegee men"), littering, panhandling, prostitution, public intoxication, urinating in public, vandalism, and a variety of other misdemeanor public-order offenses. Many observers credit the quality-of-life initiative for New York's plummeting crime rates over the past seven years.

Evidence of the increase in proactive enforcement was dramatic. Misdemeanor arrests in the NYPD rose from 133,446 in 1993 to 205,277 in 1996, while misdemeanor complaints rose only slightly (Harcourt 1998, p. 340). In addition, due to procedural changes in the processing of arrestees, misdemeanor arrests increased in severity as well as volume (Harcourt 1998). For instance, Bratton curtailed the use of desk appearance tickets (DATs), in which people accused of minor offenses were given a court date and released: "No more DATs. If you peed in the street, you were going to jail. We were going to fix the broken windows and prevent anyone from breaking them again" (Bratton 1998, p. 229).¹⁴

The NYPD's aggressive order-maintenance strategy has inspired a rancorous debate among criminologists, journalists, police executives, and the public.¹⁵ Bratton (1998, p. 289-90) decided "to take on the academics, to challenge conventional wisdom about crime in America and prove that effective policing can make a substantial impact on social change ... we lined up their alternate reasons like ducks in a row and shot them all down." Supporters echoed his message. DiIulio (1995), arguing that aggressive police efforts to take bad guys off the street are responsible (in part) for the recent decline in crime rates, calls this explanation "Bratton's Law." DiIulio praised Bratton for challenging the "criminologically correct." O'Hara (1998, p. 14) likens him to Bruce Springsteen, concluding his review of Bratton's autobiography with unfettered praise: "It is Bratton whom I'd like to see on stage leading the band - because he wrote the music. I have seen the future of public administration, and his name is William Bratton."

Critiques of the NYPD's quality-of-life initiative focus on several different themes. First, many claim that police tactics are not solely responsible for decreases in crime. One former police chief believes that Bratton was lucky to have held office while crime in New York City decreased for reasons other than police activity (Bouza 1997). Some note that crime rates have decreased rapidly in other large cities (such as Boston, San Diego, and Washington, DC) that used very different policing strategies (Cordner 1998; Greene 1999; Massing 1998; Shapiro 1997). Others point out that crime was already decreasing in New York City prior to Bratton's arrival (Karmen 1996; Muwakkil 1997). Fagan, Zimring, and Kim (1997, p. 13), for instance, observe that many forms of interpersonal violence were declining in New York by the late 1980s. Their analysis of homicide trends in New York City from 1985 to 1996 shows that nongun homicides declined steadily during this period, while gun-related homicides began declining in 1991 (with a sharper decline beginning in 1993). Fagan and his colleagues interpret the overall decline in gun crimes as more consistent with Bratton's focused efforts to rid the streets of guns than with his "indiscriminate quality of life interventions" (we will examine gun-enforcement strategies in Part Two). Harcourt (1998) challenges the very premise of the Broken Windows thesis, that disorder and serious crime are intertwined. Re-analyzing data used in Skogan's book *Disorder and Decline* (1990), Harcourt finds evidence that there is no causal relationship between disorder and more serious crime.¹⁶ He concludes by suggesting that if Bratton's methods are responsible for reductions in crime, this is due not to the Broken Windows dynamic, but to the increased "surveillance" inherent in his strategies. That is, any reduction in crime is due to the increased concentration of police officers, not the increased police attention to quality-of-life concerns (i.e., any concentrated, aggressive enforcement campaign, regardless of the target, would be just as effective). Taylor (1998), although not addressing police tactics per se, provides additional evidence on the Broken Windows perspective, concluding that "grime" doesn't necessarily mean crime. When we examine directed patrol strategies later in this chapter, we will return to the question of whether New York's decline in homicides can be attributed to changes instituted following Bratton's appointment.

Other critics argue vociferously that the quality-of-life initiative created by Bratton and continued by Safir is simply "harassment policing" (Panzarella 1998). Furthermore, critics allege that minorities bear the brunt of this strategy (Harcourt 1998; Manning 1998). Minorities complain of being frequently and disproportionately subjected to arrest, stop-

and-frisk searches, disrespect, and brutality (Muwakkil 1997; Yardley 1999). A widely contested report by Human Rights Watch (1998) drew linkages between aggressive policing strategies and brutality in New York and other cities. A similar report by Amnesty International (1996) also found increases in reports of police brutality and excessive force in the NYPD. Several observers have noted the rise in civilian complaints and allegations of police brutality since 1993 (Davis and Mateu-Gelabert 1999; Greene 1999; Harcourt 1998; Manning 1998).¹⁷ Critics point to another indicator of increasing police misbehavior: the amount of money paid out in civil settlements continues to rise (Harcourt 1998). To some critics, such problems are a predictable consequence of aggressive order-maintenance policing (Panzarella 1998). In contrast, a recent report by the Vera Institute highlights two NYPD precincts in which both crime and civilian complaints are down. The authors conclude that if police managers are serious about controlling police misbehavior, citizens don't necessarily need to choose between respectful and effective policing (Davis and Mateu-Gelabert 1999).

Finally, some critics have suggested that even if aggressive quality-of-life enforcement does produce declines in crime, it is a short-term strategy with little regard for longer-term implications. Goldstein warns that if aggressive police strategies generate hostility in the community, then at some point, police departments will need "to deal with the consequences of that hostility" (Rosen 1997, p. 9). Similarly, Shapiro (1997) notes that one dire consequence of overzealous enforcement in the NYPD may be the erosion of police legitimacy. Panzarella (1998, p. 15), playing off the title of Bratton's autobiography (*Turnaround*), suggests that in the aftermath of his "harassment strategy," it may take another generation for the NYPD "to turn around again." Sherman (1997b) argues that although such strategies may reduce crime in the short-term, they may actually be planting the seeds for increases in crime in the long-term. Based on research, Sherman identifies two avenues through which this might occur. First, tagging vast numbers of misdemeanor offenders with an arrest record might limit their future ability to participate in the legitimate labor market. Second, as Sherman (1993) found in his previous research on domestic-violence recidivism, arrest may have criminogenic effects on some offenders, leading them to become more angry and defiant. Another recent study shows that domestic-violence arrestees who thought they were treated fairly by police were least likely to reoffend (Paternoster et al. 1997). Further research is needed to determine whether this finding is robust across offense types, but it suggests another

reason to be wary of police strategies that alienate substantial portions of the community.

Bratton's experience in New York is important for a number of reasons. He argues that his strategies offer a blueprint for reducing crime and disorder "that would work in any city in America – indeed, in any city in the world" (Bratton 1998, p. 309). Police agencies all over the world, in fact, are implementing similar strategies based on the New York experience, with many generating similar controversy (Burke 1998; Cordner 1998). Yet the strategy remains untested. Trying to disentangle the causal relationships responsible for the recent drop in New York's crime rate is a daunting task. Many strategies designed to lower the crime rate were implemented simultaneously, including: the quality-of-life initiative, hiring more officers, Compstat (which we will discuss shortly), and a variety of crime-specific efforts that we will discuss in Part Two. Although it is difficult to know for certain how much credit to give the quality-of-life initiative, we can say for certain that it: 1. has generated a substantial amount of criticism, and 2. has not been tested empirically.

Although there has been no evaluation of zero-tolerance policing per se, there are bits of evidence on the effectiveness of related generic order-maintenance strategies in reducing violent crime.¹⁸ For instance, Sherman (1990) reports that although an areal crackdown on disorder in one section of Washington, DC, had an effect on perceptions of safety, it had an insignificant effect on street robberies. Reiss (1985) found that when Oakland police increased arrests and citations for misdemeanor "soft crimes," there was a small (but inconsistent) decrease in robbery and rape rates in the study beats. Sampson and Cohen (1988) found that in their sample of police agencies, police aggressiveness had an inverse effect on robbery rates. Echoing the concerns voiced by critics of order-maintenance policing, Sampson and Cohen found that aggressive policing styles had a disproportionate effect on black arrest rates (as compared to whites).¹⁹ Overall, the evidence is mixed on the efficacy of generic zero-tolerance strategies in driving down rates of violent crime, though serious questions have been raised about their effects on police-community relations. In the next section, we consider crackdown strategies that focus attention on specific high crime locations and the offenders found there.

Part Two: Focusing Police on Repeat Places and People

Having found little evidence that generic changes in policing have contributed to recent drops in violent crime, we now turn to strategies that

focus police efforts on concentrations of specific crimes. These concentrations stem from combinations of three "repeats:" repeat offenders, repeat places, and repeat victims (Eck, forthcoming). Unlike English police forces, the police in the United States have placed little emphasis on repeat victimization. Repeat-offender and place strategies have longer histories.

Focusing on these "repeats" varies from the simple to the complex. At one end of this spectrum is directed patrolling, and at the other extreme is problem-oriented policing. These efforts share two common features: the concentration of police resources on small geographic areas, and the use of information to determine when and where to concentrate these resources. Police agencies have conducted directed-patrol operations based on crime analysis for more than twenty-five years (Bieck, Spelman, and Sweeney 1991). The most recent manifestations of directed patrol are based on computer-generated maps of reported crimes rather than the pin maps of yesteryear. Problem-oriented policing has a much shorter history, but requires the use of a richer diversity of information from police and nonpolice sources to identify and resolve problems at their underlying sources. Also, problem-oriented policing shares with community policing a fundamental concern with police-public partnerships. Collaboration with community groups is not a typical feature of directed-patrol operations.

In this section, we examine four forms of focused interventions: 1. directed patrolling and its most recent incarnation, Compstat; 2. gun enforcement, a variant of directed patrolling that attempts to reduce firearm deaths and injuries; 3. retail drug enforcement; and 4. problem-oriented policing. We will demonstrate that the limited evidence currently available suggests that these efforts might have had an influence on violent-crime rates, though there is not an abundance of evidence to support any single type of focused policing. A stronger argument can be made that focused policing may have contributed to the decline in crime *in combination* with other forces outside the control of the police.

Compstat. In his review of directed-patrol studies, Sherman (1997b) concludes that there is reasonably solid evidence to believe that focusing patrol efforts on very small areas with high concentrations of crime can result in less crime in these areas. He reviewed eight studies, conducted from 1971 to 1995, and found that "the more precisely patrol presence is concentrated at the 'hot spots' and 'hot times' of criminal activity, the less crime there will be in those places and times" (pp. 8–14). The most rigorous test of this strategy was conducted in Minneapolis. One hundred ten

very small geographic areas with disproportionately large numbers of crime and disorder – hot spots – were randomly divided between two groups. One group of fifty-five hot spots, the control sites, received the same form of police attention they would normally receive. The second group received intensive patrolling roughly 2.5 times greater than the control sites. The comparison of the crime changes in these two groups revealed a significant drop in serious crime in the hot spots that received the intensive patrolling (Sherman and Weisburd 1995).

Probably the best-known implementation of directed patrolling is the NYPD's Compstat process. Implemented in 1994, Compstat blends directed patrol, geographic accountability of precinct commanders, and the use of information and mapping technology. Under Compstat, police headquarters maintains statistical profiles for each precinct, including arrests, complaints, shooting incidents, and other information. Precinct commanders are expected to be vigilant about responding to shifting patterns of crime in their jurisdictions (Safir 1998). They are held accountable through frequent debriefings at police headquarters, where they are "grilled" about crime-reduction strategies and resource-allocation decisions. Commanders who don't measure up are reassigned to less-demanding tasks. Compstat won an Innovations in Government Award in 1996. Many claim that Compstat is responsible for the precipitous drop in New York's violent-crime rate, with particular attention paid to the drop in homicides. For instance, Dodenhoff (1996) wonders, "who could argue with a process that has driven murder rates down by more than 50 percent in a few short years, and has made similarly sharp cuts in other major crimes?" (p. 5). Based on its well-known success in New York, Compstat is now being implemented in other cities throughout the United States.²⁰

Could the Compstat process be responsible for the reductions in homicides in New York City? Compstat was implemented along with a number of other changes in the NYPD, including zero-tolerance policing (discussed earlier), gun enforcement (discussed later), and a variety of other changes, including a dramatic increase in the number of officers. Consequently, it is difficult to attribute any reductions in crime to specific police changes. Nevertheless, Compstat is often considered the linchpin strategy that binds these other changes together (Silverman and O'Connell 1997). Further, as mentioned, many police agencies are adopting Compstat-like approaches. Could widespread adoption of Compstat have made a major contribution to the national reduction in homicides?

Four types of evidence are necessary to demonstrate convincingly that Compstat was a major contributor to the reduction in homicides. First, we

would need a plausible theory linking the Compstat process to crime reductions in general, and homicide in particular. Because there is a consistent body of evidence that directed patrolling can reduce crimes in small areas and places with very high numbers of crimes, the basic notion behind Compstat is plausible. We do not know, however, whether this reduction is produced through general deterrence of all those who frequent hot spots, through specific deterrence of hot-spot offenders who come under closer scrutiny of the police, or through the incapacitation of repeat offenders following their arrest at these hot spots. So, there is an array of possible mechanisms through which directed patrol could reduce crime at hot spots.

In addition to a description of how Compstat would influence crime, we would need a statistical association between the implementation of Compstat and reductions in crime. A central feature of Compstat is accountability: precinct commanders are held accountable for crimes in their areas. This increases the possibility that reported crimes could be manipulated. Homicide counts are less likely to change based on either citizen reporting or police recording practices, so we will use homicide as an indicator of crime. To control for changes in the number of people at risk, we will use homicides per 100,000 population. Homicide rates have declined significantly from 1994 through 1997, following the implementation of Compstat. But a plausible explanation and a drop in homicides following implementation are not, by themselves, sufficient to demonstrate a causal connection between the drop in homicides and Compstat.

The third piece of evidence we would need is data showing that the drop in homicides came after the establishment of Compstat. If homicides per capita were stable or increasing in New York before 1994, then the decline after 1994 could be due to Compstat. However, if homicides per capita were declining prior to Compstat's introduction, then either other social processes caused the reduction, or changes in policing prior to the implementation of Compstat were responsible for the decline. Figure 7.1 shows homicides per 100,000 New Yorkers for the years 1986 through 1998. These data indicate that three years before the implementation of Compstat (or zero-tolerance policing) in 1994 homicides per capita had already peaked and had begun their decline. This does not support a claim that Compstat was the cause of the decline.

Could Compstat have accelerated the decline? If this occurred, then the speed of the decline in homicides per capita should be steeper after 1994. Table 7.3 shows the proportional change in the homicide rate for the three years before and after Compstat was instituted.²¹ Following Compstat's

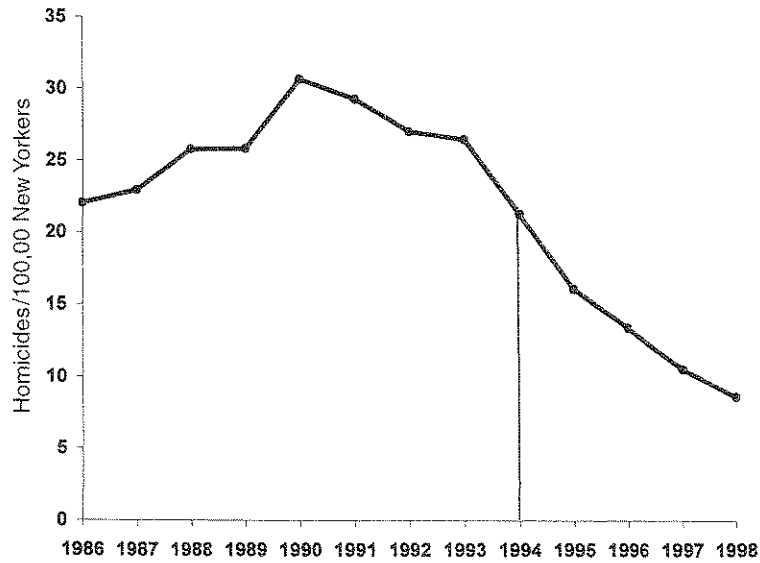


Figure 7.1. New York City homicides per 100,000 population from 1986-1998. Source FBI Uniform Crime Reports 1986 through 1998.

implementation, homicides per capita fell faster than they had been falling prior to Compstat. If this acceleration in the decline in homicides per capita were due to Compstat, then this acceleration would be unique to New York City. The table also shows changes in homicides per capita for the surrounding states. All these jurisdictions showed greater declines for the three years after 1993 than for the three years before Compstat. After Compstat, the rates of decline in Connecticut and New York (outside of New York City) were greater than the decline within New York City. New Jersey and Pennsylvania, and the United States as a whole, also showed greater declines in the second three-year period than in the first three years, though not as great as those shown in New York City. Overall, the claim that the decline in homicides accelerated due to Compstat, or other changes in New York policing implemented in 1994, is not supported by these findings.

The final piece of evidence we would need to support the claim that Compstat contributed to the decline in homicides is to eliminate rival explanations for the decline in homicides in New York City. If Compstat had been implemented as part of a randomized experiment, we might

Table 7.3. Average Yearly Changes in Homicides per Capita for New York City, Surrounding States, and the U.S. 1991-1996

	Before (1991-93)	After (1994-96)	After-Before
NY City	-.047	-.152	-.105
NY State (excluding NYC)	-.094	-.057	-.151
New Jersey	-.016	-.052	-.035
Connecticut	.086	-.051	-.137
Pennsylvania	.007	-.042	-.048
United States	.004	-.060	-.064

Source: FBI, Uniform Crime Reports 1991 through 1996.

have had strong evidence that it was the most likely cause of the decline. Although we cannot produce such strong evidence, we can examine some weaker evidence. We have already seen that changes in homicides per capita were not isolated to New York. This suggests that something other than Compstat was influencing homicides in New York City and surrounding jurisdictions. Further, evidence undermining the claim that Compstat created the decline in homicides can be seen if we look at other large cities. If Compstat was a major contributor to the decline in homicides in New York City, then the trend in homicides per capita for New York should be different from other large cities. Such a finding would indicate that there is something unique about New York City, such as Compstat, that caused the difference. Figure 7.2 shows trends in homicides per capita for the ten largest cities of the United States. Again, declines appeared in or before 1994 in all cities except Philadelphia. Further, the city with the highest murder rate, Detroit, shows obvious declines throughout the period of 1986-98. The same trend is evident in the city with the lowest murder rate, San Diego. Most of these cities have their peak homicide rate in 1990 or 1991. Further, the New York trend is almost indistinguishable from the cities in the middle of the chart. Clearly, we cannot eliminate rival explanations for the decline in New York's homicide rate.

On balance, these data do not support a strong argument for Compstat causing, contributing to, or accelerating the decline in homicides in New York City or elsewhere. Social forces other than Compstat were driving the homicide trend in New York City, and these forces were not peculiar to this one city. Around the same time that Compstat was implemented in New

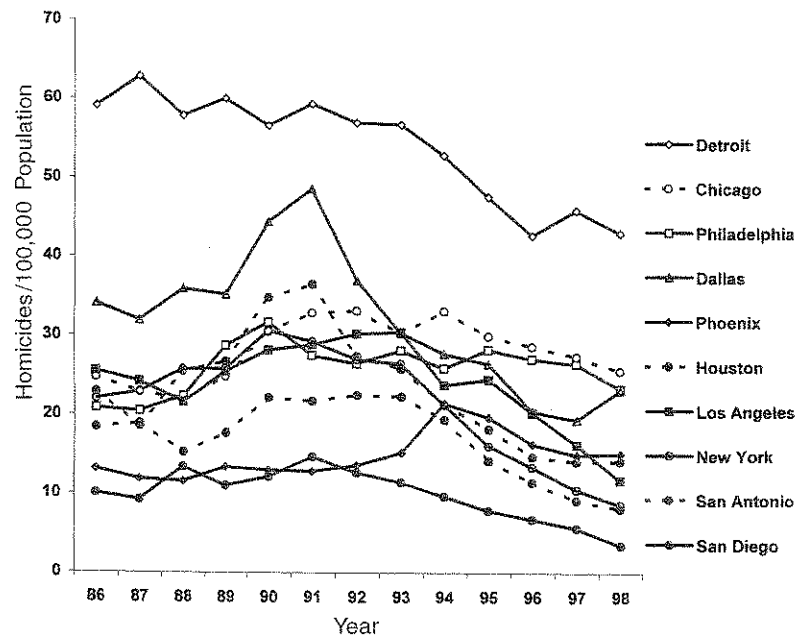


Figure 7.2. Homicides per 100,000 population for 10 largest cities from 1986–1998. Source FBI Uniform Crime Reports 1986 through 1998. Philadelphia homicide and population figures were not reported in the Uniform Crime Reports in 1997. The Pennsylvania homicide and population figures, which included Philadelphia numbers, were reported. The proportion of the state's homicides coming from Philadelphia has been relatively constant since 1986. To estimate the number of homicides for Philadelphia in 1997 we used the average proportion of Pennsylvania homicides that were from Philadelphia (.572) for the previous 11 years. Philadelphia's proportion of the state's population declined from 1986 through 1995 but increased from 1995 through 1996. So we used the average of the 1995 and 1996 proportions of the state's population that lived in Philadelphia to estimate the 1997 Philadelphia population.

York, the same downward trend in homicide was also occurring in the surrounding states and in other large cities.

This leads us to two conclusions. First, the implementation of Compstat in New York in 1994 cannot be credited independently with the decline in homicides in that city. Second, for the same reasons as the first conclusion, the other changes in New York City's policing practices implemented around the same time as Compstat (e.g., zero-tolerance

policing) cannot be given credit for the decline in homicides in New York City. Third, the diffusion of the Compstat process to other cities throughout the United States came too late to have produced the national decline in homicides.

We do not wish to overstate these conclusions. Our analysis does not show that Compstat is ineffective. This exploration cannot be interpreted as a rigorous evaluation of Compstat. The narrow question we are addressing is whether Compstat may have had an impact on homicides in the United States. The data we have examined suggest that it did not. But Compstat was developed to address more than homicides. We add this cautionary note so that our findings do not become as exaggerated as some of the claims in favor of Compstat. It is possible, given the complexity of homicide patterns, that the Compstat process had a subtle and meaningful but difficult-to-detect effect on violent crime in New York. If this is the case, then the most plausible impact would be as an interaction of policing with other government and social changes. The data we have examined here are not sufficient to test this explanation.

Though there is little evidence to support the assertion that Compstat caused the decline in homicides, Compstat is only one manifestation of focused policing in general and directed patrolling in particular. If the NYPD and other departments around the country adopted directed patrolling and focused policing prior to 1991, then it is possible that these policing strategies did contribute to the decline in homicides and other violent crimes.

Gun Interdiction Patrols. In late 1992 and early 1993, the Kansas City, Missouri, Police Department experimented with gun-detection patrols. Police officers, working overtime, patrolled a small geographic area with many gun crimes, looking for people who they reasonably suspected to be carrying firearms. Offenses with firearms dropped by 49 percent after the patrols were begun, while in the comparison area, where no gun patrols were instituted, gun offenses increased slightly (Sherman and Rogan 1995b).

The findings from Kansas City have received support from a recent report on two gun-patrol efforts in another midwestern city, Indianapolis. McGarrell, Chermak, and Weiss (1999) report that in the two geographic areas with patrols directed at firearms (north and east), homicides declined. However, in only one of these areas (the north area) was the decline in other firearms-related crime significant. The authors speculate that the differences may be due to the manner in which the patrols were

implemented. The north-area patrols were directed at potential offenders who might be carrying firearms and therefore constituted a form of special deterrence or incapacitation. The east-area patrols involved increasing the number of vehicle stops, a form of general deterrence.

The gun patrols in Kansas City have received a great deal of attention, but it is not clear how widely they have been implemented in other cities or whether they have been applied with the same rigor as in the original test sites. If they have been widely adopted with the same or greater levels of intensity than in Kansas City, then it is possible that this form of patrolling could have contributed to the decline in violence. Because gun patrols are a simple variant of directed patrols, it is not surprising that this tactic has been incorporated into many directed-patrol operations, including Compstat (Safir 1998). Because the national decline in homicides began at about the same time as the Kansas City gun experiment, it is tempting to give much of the credit for the drop to the widespread adoption of this strategy. Unfortunately, the only evidence of widespread adoption is sporadic news reports and occasional mentions by scholars. The Kansas City gun-patrol experiment expressly targeted areas with high volumes of gun crime and used specially trained officers. The variation in the Indianapolis results suggests that how one implements this type of patrol can make a difference in the outcomes. This implies that if other agencies adopted the idea of targeting firearms, but did not adopt the specific procedures used in Kansas City, then we cannot be sure that these other agencies achieved the same results as Kansas City.

This raises the question of the mechanism by which gun patrols reduce crime. Sherman and Rogan (1995b) suggest three plausible mechanisms. First, gun patrols could increase the chances that people carrying guns illegally in high gun-crime neighborhoods will be arrested and have their guns taken by the police. In response, they leave their firearms at home. This makes these firearms less available when disputes arise, so disputes (outside the home) are less likely to result in gunfire, injury, and death. This would explain why a small number of gun seizures (twenty-nine in the Kansas City neighborhood studied) could result in a large decline in gun related crimes (eighty-three fewer gun crimes in this neighborhood).

The second hypothesis suggested by Sherman and Rogan is that the arrest and incapacitation of people who might be high-rate gun users – seventeen repeat offenders, in the case of Kansas City – might be the causal mechanism. Gun removal, in other words, might have only a spurious relationship with the reduction in gun crime. If this hypothesis is correct, then would any police effort designed to focus attention on people with histories of violent behavior be fruitful, even if illegal firearms were not the targets?

Their third hypothesis is that the intensive patrolling of the area had a deterrent effect on people most likely to engage in gun crimes. The small number of gun seizures is dwarfed by the “1,434 traffic and pedestrian stops (and) the total of 3,186 arrests, traffic citations, and other police encounters” (Sherman and Rogan 1995b, p. 690). If this is the mechanism, then simple directed patrolling of small areas with high numbers of gun crimes is the appropriate strategy. Again, there is no need for guns to occupy the central focus of such patrols.

Neither the Kansas City nor the Indianapolis study provides sufficient information to select among these three alternative mechanisms. The Indianapolis study does suggest that the more the directed patrols focus on potential offenders (rather than on people driving poorly or with equipment damage to their automobiles), the fewer the vehicle stops required and the greater the impact on firearms crimes.

There have been a number of variations on the strategy to reduce gun-carrying by offenders. Recently, Richmond (Virginia), Philadelphia, and Rochester (New York) have adopted “Project Exile,” a National Rifle Association endorsed program that couples long federal prison sentences for offenders caught with firearms with publicity warning offenders not to be caught carrying guns. Richmond police assert that the drop in homicides from 1997 to 1998 in their city is due to this effort and the public ad campaign surrounding it (Janofsky 1999). Again, it not clear if the reported decline in violent crime was due to the focus on guns, to the effect on repeat offenders, or to the effect on both guns and repeat offenders.

In Boston, a problem-solving effort to address homicides targeted gangs and their use of firearms (Kennedy 1997; Kennedy, Braga, and Piehl 1997). A direct message was sent to gangs in Boston that if they were caught carrying firearms, they would receive stiff prison sentences. Police collaborated with probation authorities to closely scrutinize known offenders already within the control of the criminal justice system. Boston officials claim that the dramatic decline in juvenile homicides was due to these efforts. Since attention to firearms was coupled with attention to individuals who had a history of involvement in violent crime, it is impossible to determine if illegal gun enforcement is effective, relative to close scrutiny of high-rate offenders in high-risk places and small areas.

The Boston and Richmond gun-enforcement efforts sound promising, but we must reserve judgment about their validity. In the absence of published scientific evaluations of their effectiveness our confidence in the claims for these efforts must be restrained. Homicides, even in moderate-size cities, can fluctuate considerably because they are relatively rare events, as compared to other crimes such as burglary. When examining a

subset of homicides, such as juvenile killings (as was the case in Boston), these fluctuations are even greater. This means that it is extremely difficult to attribute short-term (e.g., year to year) changes in homicides to a single factor. Slight variations in many possible social processes could account for changes in homicides and many of these factors are not within the control of the police. After a number of years have passed, statistical analysis can be used to rule out random fluctuations and other possible explanations. The decline in Richmond is too recent to permit such analysis. However, an unpublished report on the Boston experience provides data that suggests that gun enforcement may have contributed to this decline (Braga et al. 1999a). Nevertheless, homicides have been declining in many large cities across the United States during this same time period, and most of this decline was due to reductions in youth killings involving firearms (see Chapter 1). Therefore, it is possible that the declines in Boston and Richmond would have occurred without the interventions discussed or that the publicized interventions in these two cities, though effective, were not substantively different from less well known police interventions occurring throughout the United States.

This leaves us in a quandary. The question is whether firearms enforcement is a plausible reason for the decline in homicides throughout the United States, but little is known about how widely such enforcement strategies have been implemented. There is also no evidence that these strategies began early enough in the decade to have caused the decline in homicides. Two studies strongly suggest a link between firearms patrols and reductions in crime, but the authors of these studies are uncertain whether the effect was due to gun enforcement or directed patrolling. Finally, there is evidence that drops in violent crime have followed implementation of some form of gun enforcement, but we do not know if reported declines in homicides are significantly greater than those experienced by other jurisdictions. In a period of declining homicides, almost any intervention can appear successful, even if it is irrelevant. Like directed patrol in general, there is just enough evidence to suggest that gun-enforcement strategies contributed to the decline in homicides, but not enough evidence to be confident about such claims.

Retail Drug Enforcement. Police have made considerable changes in their tactics to combat drug dealing. Prior to the crack epidemic, drug enforcement was the special domain of plainclothes investigators in the drug squads of police agencies. The scale of the crack epidemic forced police agencies to consider a variety of other tactics, including enforce-

ment by uniformed officers either as part of their patrol activities or as members of special tactical units (see Weisel 1996). Unlike the focused policing efforts we have examined to this point, drug enforcement clearly pre-dates the national decline in homicides and has been widely used throughout the United States. Consequently, there is more reason to believe drug enforcement may have contributed to the decline in violent crime than the other police strategies examined so far. Further, there is reasonable empirical support for the argument that the decline in crack markets is in large part responsible for the decline in homicides (Lattimore et al. 1997; Chapters 2 and 6). If police drug enforcement contributed to the decline in drug markets, then police antidrug efforts probably contributed to the decline in criminal violence.

Evidence for the effectiveness of police enforcement against drug markets is mixed, often depending on the police tactic being applied and the methods used to evaluate the tactics. Evaluations of police crackdowns on drug markets suggest that they sometimes suppress retail drug markets. This is not always the result (Sherman 1997b), and the effects of drug raids may be small and limited in duration (Sherman and Rogan 1995a; Weisburd and Green 1995). At first glance, these results suggest that police drug enforcement may have had only a minor impact on the collapse of the crack cocaine market. Nevertheless, there are two other possible mechanisms that might link police drug enforcement to the decline in retail drug markets: accelerating the "wearing down" of active drug-market participants, and denying drug-market participants access to places where they can conduct their business.

Tactical Drug Enforcement As a Hassle. Although the short-term effect of drug raids and other enforcement may be slight, the long-term impact of persistent drug enforcement may have contributed to the wearing down of drug-market participants. Drug dealing and using, even in the absence of police enforcement, is arduous (see Chapter 6 or Simon and Burns 1997). It is not difficult to conceive of drug epidemics as being self-limiting. Stepped-up street drug enforcement might contribute significantly to the fatiguing of drug-market participants, thus making these markets collapse earlier than they would have collapsed otherwise, and thereby reducing violence.

Although this argument is plausible, there are at least three counterarguments. First, there is no evidence to support it. It may be true, or it may be false: we just do not know. Second, some have argued that jailed drug users get an enforced break from the stresses of hustling, which prolongs their careers on the street (Simon and Burns 1997). According to this

argument, even a miserable ninety days in jail is healthier for drug users than spending the same time on the street. If this is true, then a policy of arrest and short-term incarceration might have prolonged crack markets. Strong evidence for this effect is also lacking. Finally, enforcement that disrupts drug markets might create violence. Violence could increase as several dealers move onto the same turf, either to avoid the police or to fill market opportunities made available by the removal of other dealers. If this hypothesis is correct, then some of the violence that occurred in the latter half of the 1980s and early 1990s may have been an indirect result of police actions. According to this line of reasoning, police tactics wear down drug-market participants, but rather than reduce violence this increases violence (see Chapter 6). If this argument is correct, then not only was the increase in violence partially attributable to the police, but a decline in police enforcement of crack markets might reduce violence. Though there is anecdotal evidence that drug enforcement increases violence, systematic evidence is lacking.

Denying Places for Drug Dealing. The second way police actions may have contributed to the decline in crack markets pertains to the management of places. Drug dealing, especially retail dealing to strangers, requires dealers to find locations where property owners will not interfere with their behaviors. Such places are highly concentrated in economically depressed neighborhoods, where property owners have less incentive to maintain their properties. In extremely depressed neighborhoods, many landlords have defaulted on bank loans or on their local taxes. In these cases, lenders and cities hold property but they do very little to regulate the behavior of those who use or occupy these places, except, perhaps, to board up buildings. When such places are located on arterial routes or near concentrations of other activities, they become ideal for drug dealing (Eck 1995).

Police enforcement, coupled with civil action against landlords, appears to have a powerful impact on drug dealing (Green 1996; Mazerolle, Kadleck, and Roehl 1998; Eck 1997). The effectiveness of such "nuisance abatement" strategies as a threat to compel landlords to remove drug dealers from their property may hinge on the value of the property (Eck 1995; Eck and Wartell 1998). In neighborhoods where property values and the returns on landlords' property investments are high, police don't need to spend as much time encouraging landlords to maintain their properties. Landlords in these areas already have strong economic incentives to address drug problems (see, for example, Curtis 1998, p. 1248). At the other extreme, if landlords are on the verge of abandoning their properties, the threat of nuisance abatement is negligible because they have no

incentive to make changes. Nuisance abatement may work the best between these two extremes.

This hypothesis suggests that the booming national economy since the early 1990s may have increased the effectiveness of focused police efforts to address drug problems in specific places. If the surge in the economy provided even small inducements to property owners in marginal neighborhoods to improve management of their places, then police threats of civil action might have had greater leverage. Nuisance abatement has been discussed in law enforcement circles since the early 1990s and has spread throughout the United States, along with police-sponsored courses for landlords on how to handle drug dealing on their properties. The extent to which these tactics have been implemented is unknown, however. Nevertheless, it seems plausible that the increased emphasis on place managers by the police, coupled with increased incentives for place managers to move against drug dealers, might have hastened the demise of drug dealing in many cities.

But place-based efforts by the police, some have argued, only displace drug dealers to other locations. The problem with this assertion is the "only." The evidence supporting this claim is limited at best (see Cornish and Clarke 1987; Eck 1993; Hesselting 1995). The most-cited and best-conducted study of drug enforcement and displacement is the Vera Institute's examination of New York City's Tactical Narcotics Teams (Sviridoff et al. 1992). Though this evaluation found some reduction in street dealing, it noted that dealers moved from the curbside to inside foyers of apartment buildings. Johnson, Golub, and Dunlap (Chapter 6) report that this has occurred throughout drug-dealing areas in New York City. This type of displacement would be a serious blow to the effectiveness of drug enforcement if drug dealers could maintain the same volume of trade from their new positions inside buildings as they enjoyed at the curb. Displacement would also be an extreme limitation on the reduction in violence through drug enforcement, if inside dealers have the same risk of being robbed or having violent encounters with rivals as curbside dealers.

The evidence for such displacement effects is limited. The Vera study did find displacement but did not measure its magnitude. Consequently, we know how some dealers were displaced but we do not know how many were displaced, the volume of their sales after their move, or their risks of violent encounters after displacement. If the dealers had to work harder to sell drugs from the new location, then the enforcement added to the difficulties dealers faced thus eroding the drug market. If dealers were safer

inside buildings, this reduction in their risk might have translated into a small but meaningful decline in drug-related violence.

There is reason to believe that the dealers' level of activity probably declined, or that the effort needed to maintain a fixed level of dealing increased. Being inside offers distinct advantages over outside dealing: it is dry in wet weather, it is out of sight of passing police cars, and it offers some protection from rip-offs. If dealing from inside buildings were as lucrative as selling from the curbside, dealers would probably have preferred it; the fact that they didn't suggests that working outside is more profitable. This in turn suggests that displacing dealers inside locations reduces drug sales.

Moving drug dealers inside might also decrease their risk of violent encounters (there is no empirical research on this issue, unfortunately). Outside, someone interested in attacking a dealer can approach from a number of directions. Inside, the number of approaches is limited and more easily watched. Inside dealing may also decrease the likelihood of accidental but dangerous jostling and chance encounters between rivals, which could lead to violence.

The number of alternative dealing locations is severely limited for drug sellers who want to market to strangers (Eck 1994). The best locations will be on busy streets in poor neighborhoods and at places where the owner is not attentive, customers have easy access, and building features offer the dealer some form of security. If persistent police actions over several years slowly reduced the viable dealing locations, dealers would be likely to restrict their selling either to people they knew or to people who were vetted by people they knew or to take other actions to reduce their exposure to police tactics. These are forms of displacement, of course, but they are forms of displacement that come at the price of reduced drug sales and profits, and could result in less violence (Eck 1995).

To summarize, if antidrug enforcement directed at retail markets was somewhat effective (and we do not have to assume it was extremely effective), it may have contributed to the decline in crack markets. As mentioned, police efforts to curb crack markets pre-date 1991, so we do not have the problem here that attends analysis of other police efforts, in which the downward trend in homicides (and other violent crimes) started before the police actions. Police attention to crack markets was widespread, so it could have had a nationwide impact. In short, persistent police efforts against retail drug markets, in combination with other factors outside the control of the police (such as the natural wearing down of drug-market participants, an aging offender population, and increases in

property values), may have had an important influence on the decline of such markets. The decline of these markets, in turn, may have had a substantial role in reducing homicides and other associated forms of violent crime. Any claim that police helped to reduce homicides through their attack on retail drug markets rests on the assumption that declining street drug markets led to a reduction in violent crime. In the absence of a link between the decline of retail drug markets and the decline in violence the conjecture that police drug enforcement helped reduce violence cannot be sustained.

Problem-Oriented Policing. None of the police strategies described so far was implemented alone. Police agencies often adopted several strategies simultaneously or through sequential experimentation. In addition to forms of directed patrolling, gun enforcement, and street-level drug enforcement, police agencies since the late 1980s have increasingly adopted aspects of problem-oriented policing, frequently to address problems of violence, public disorder, firearms, or drugs.

Problem-oriented policing is one of the most important innovations in policing this century (Goldstein 1990). Problem-oriented policing focuses police attention on the problems faced by the community rather than on the administration of the police agency. Problem-oriented policing puts considerable emphasis on analyzing the nature of problems, searching through a wide range of potential solutions, and implementing responses to problems in collaboration with others outside of policing. Problem-solving efforts have been directed against a host of persistent concerns, from loitering youths to homicides. Though it is often confused with community policing or implemented along with community policing, it is distinguished from community policing by its emphasis on the ends of policing rather than on the means of policing (Eck and Spelman 1987a; Goldstein 1990). Simply put, in community policing the goal is to build a strong positive relationship between the public and the police. Addressing problems is secondary. Whereas in problem-oriented policing the goal is to reduce problems of concern to the public. Close community partnerships are often important elements in addressing problems, but they are not the final objective.

There have been a large number of attempts to apply problem-oriented policing to violent crime, though most of these efforts have not been thoroughly evaluated. In 1985, the Newport News, Virginia, Police Department used a problem-oriented approach to reduce prostitution-related robberies and domestic violence. The first of these efforts was thoroughly eval-

uated. Eck and Spelman, using an interrupted time-series design, reported a 43 percent decline in robberies in the target area as a result of the prevention measures that were implemented (1987b, p. 80). The domestic-violence effort was not evaluated, though police department data showed that domestic-violence deaths had declined substantially (Eck and Spelman 1987b). The Boston effort, described earlier, was an outgrowth of a problem-solving effort (Braga et al. 1999a), and so was the attempt to reduce homicides in Richmond, California (Fyfe, Goldkamp, and White 1997). To their credit, authors of the report on the Richmond (California) problem-solving effort did not make claims that the effort reduced homicides, despite declines in killings following implementation. The absence of published impact evaluations provides no sound basis for assessing whether such efforts work. Finally, an experiment in the Jersey City Police Department found significant reductions in reported robberies and calls about street fighting due to problem solving.²² This study is particularly notable since it was conducted using a randomized treatment design (Braga et al. 1999b).

Claims that problem-oriented policing contributed substantially to the reduction in violent crime confront some of the same difficulties we have seen with other strategies. Chronological precedence is not one of them. Problem-oriented policing was first implemented in the United States around 1984 in Baltimore County (Maryland) and Newport News. By 1988, it was becoming established in the San Diego Police Department; by 1990 it was frequently combined with community policing. Thus, it precedes the fall in violent crime.

Two other issues, though, need to be answered before problem-oriented policing can be credited with a significant contribution to the decline in criminal violence. The first is how widely problem-oriented policing had been implemented before homicides began to decline. Some aspects of this strategy were built into New York City's Community Police Officer Program in the early 1990s. The Office of Community Oriented Policing Services, part of the U.S. Department of Justice, attempted to institutionalize problem solving in their community-policing efforts starting in late 1994 (Maguire et al. 1997; Office of Community Oriented Policing Services [COPS], 1998).²³ It is possible, therefore, that problem-oriented policing reached enough police agencies in the beginning of the 1990s that it contributed to the decline in violence. By 1997, a national survey found that 55 percent of large local law enforcement agencies reported that they actively encouraged patrol officers to participate in problem-solving projects on their beats (Reaves and Goldberg 1999). The second

issue is more difficult to resolve: Was problem-oriented policing implemented with sufficient rigor in enough departments that it could have had an appreciable effect on violent crime? There is little evidence for a positive answer; in fact, some scholars have pointed to the weak application of problem-oriented policing (Buerger 1994; Capowich, Roehl, and Andrews 1995; Eck and Spelman 1987b). In summary, there is little evidence to suggest that problem-oriented policing reduced serious violent crime throughout the United States. It may have had an impact, but we simply do not know.

Each of the focused policing strategies we have discussed – directed patrolling, gun patrols, retail drug enforcement, and problem-oriented policing – has generated some solid evaluation evidence that it works, at least on a limited scale. With one exception, we lack convincing evidence that police agencies implemented the strategy on a wide scale and prior to the time homicides began to decline. Policing is replete with superficial adoption of carefully crafted programs, so simply counting the number of agencies that claim to be using strategy X is a poor indicator of the diffusion of the innovation. The possible exception to this pessimistic conclusion is drug enforcement. It was both widely used and deployed before the crime drop commenced.

Part Three: Lessons for Policing

American police agencies are growing, adopting new strategies, and experimenting with new techniques for reducing violent crime. Throughout this chapter, we have assessed the research evidence on whether these changes are responsible for recent drops in violent crime. We have explored a number of popular hypotheses about the role of the police in producing these reductions. Table 7.4 provides a brief summary of our findings. In general, there is little evidence that generic changes in policing are responsible for reducing violent crime. There is greater evidence for focused policing strategies contributing to the drop in violent crime, though there is still a great deal of uncertainty about these strategies' effectiveness. Overall, police agencies might have had an impact on violent crime – there is too much supportive evidence to assert that the effect of police on crime is a myth. Nevertheless, most of the claims about the police contribution overstate the available evidence. Some of the policing strategies that have received the most attention (for example, Compstat and zero-tolerance policing) are the least plausible candidates for contributing to the reduction in violent crime. Much remains to be learned about the impact of the

Table 7.4. *The Effect of the Police on Violent Crime. A Summary of Findings*

Strategy	Empirical Support	Implemented Before or Around 1991	Evidence for National Implementation	Other Comments	Conclusions
Increase in Number of Police Officers	Mixed, with most studies finding either no effect on crime or an association with increases in crime.	Police agencies have been steadily growing, but major federal funding for police hiring began after the decline in violent crime began.	Nationwide.		Probably had no influence on national rates of violent crime.
Community Policing	Weak to no evidence.	Community policing emerged well before 1990s, but the strength of implementation is unknown.	Nationwide.	May be too vague a concept to draw a conclusion.	Probably had no influence on national rates of violent crime.
Zero-Tolerance Policing	Has not been evaluated.	Began after violent crime began dropping in New York and the rest of the nation.	Probably not.	May be restricted to New York. Implemented together with other changes in policing in NYC, so its efficacy is difficult to determine.	Little evidence of an effect on violent crime in New York and no evidence nationwide.
Directed Patrols in Hot Spots	Reasonably strong experimental and quasi-experimental support.	Compstat version emerged after the drop in violent crime. Other versions might pre-date the beginning of the national drop in crime.	Uncertain. Possibility that it was widely used.		Plausible hypothesis in general, but implausible for Compstat specifically.
Firearms Enforcement	Moderate quasi-experimental evidence.	Unknown.	Unknown.	Not clear whether crime reductions were due to targeting of illegal firearms or of repeat offenders.	Though a plausible hypothesis, the evidence is weak due to uncertainty over what types of gun enforcement work well and how widely these tactics were applied.
Retail Drug Market Enforcement	Moderate evidence, particularly when coupled with the threat of civil action against drug property owners.	Concentrated enforcement against retail drug markets began long before national crime drop began.	Retail drug enforcement was implemented nationally.	This strategy's effectiveness may be dependent on other trends affecting drug markets and crime.	A plausible explanation, if the decline in crack markets was a principle reason for the decline in violent crime.
Problem-Oriented Policing (POP)	Some empirical evidence that this strategy can reduce violent crime.	Some agencies implemented POP well before the national drop in crime, but there is little evidence of widespread adoption until the drop was well underway.	Now implemented throughout the United States, often as part of community policing.	There is uncertainty about the rigor of implementation and scale of application to violent crime. This strategy is often coupled with other strategies listed above.	Though a plausible hypothesis, the evidence is weak due to an absence of information about widespread rigorous adoption.

police on violent crime, the conditions under which the impact is greater or lesser and how much of an impact it is realistic to expect.

What can we learn from these findings? Since the late 1970s, police agencies in the United States have experimented with methods of focusing their activities where they can have the greatest impact. We have seen that this has taken a number of paths. Most of these innovations preceded the crack epidemic of the 1980s and the decline in violence beginning in the early 1990s. Directed patrolling, attention to disorderly situations, problem-oriented policing, and crackdowns on drug markets had been underway for some time before homicide rates began to drop and had been attempted in a wide variety of police agencies throughout the United States. These may have contributed to the decline in violent crime.

We are not claiming that the entire reduction in violent crime is due to the diffusion of focused policing across the largest cities. We are not even claiming that most of the reduction is due to these changes. Rather, the limited evidence available suggests that it is possible that focused attention on small areas with very high numbers of crimes contributed to the overall reduction in violent crime. The most plausible hypothesis is that these police actions interacted with other criminal justice policies (such as imprisonment, see Chapter 4) and social forces (such as the aging of the population, see Chapter 9; or the decline of outside retail drug markets, see Chapter 6). Interactions between external processes and police reforms may have initiated the decline in violent crime, or changes in policing may have hastened an existing downward trend. However this interaction occurred, some form of interaction is more plausible than a claim that changes in policing were the sole or greatest contributor to the drop in violent crime.

Let us return to the patterns of change in homicides per capita in the United States, but rather than looking back a decade, we will look back to 1960. The line in Figure 7.3 shows changes in the number of homicides per 100,000 population. The bars show proportionate rates of change from one year to the next. Rising bars represent year-to-year increases, and falling bars show year-to-year declines in homicides per capita. The longer the bar, the bigger the increase or decrease. Beginning in 1964, we see more than a decade of rising homicide rates. After 1976, the bars cluster in groups of three or four upward years or three or four downward years. Between spurts of upward or downward changes, there are often one or two years in which no change takes place or the change is unstable.

Is the downward trend we currently observe like the downward trend in the early 1980s? Will we see an upturn in homicides after two or three years

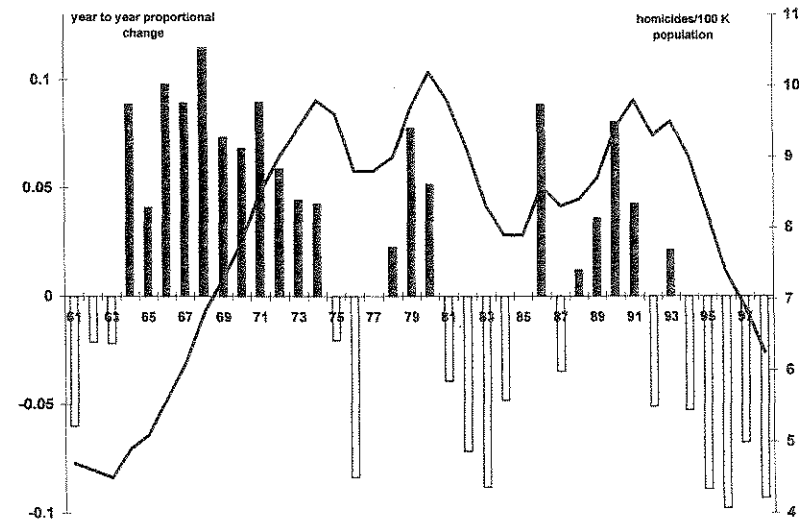


Figure 7.3. National trends and changes in homicides per 100,000 population from 1961–1998. Source FBI Uniform Crime Reports 1961 through 1998.

of instability? Or, are we seeing a descent from the plateau to which the United States climbed from 1964 through 1974? If we are seeing the downside of a short-term oscillation, then we must be extremely cautious about any claim that some specific change in policing in the last decade explains the recent decrease in violent crime (as measured by homicides). Downturns of nearly this magnitude have occurred before, and before any of the recent developments in policing. The oscillations since 1976 appear to suggest that we should consider the police contributions to crime increases as well. But there is no obvious reason to expect that there is symmetry between crime increases and decreases, i.e., that the factors we seek to explain one trend are the same factors we seek to explain the other (Liebersohn 1985; Uggen and Piliavin 1998). The fluctuations in crime trends do suggest that we should consider the police influence on crime in a larger context.

There is one thing that is a myth: The police have a substantial, broad, and *independent* impact on the nation's crime rate. Rather than thinking of the police as an isolated institution that has a distinctive impact on crime, perhaps we should think of the police as part of a network of institutions, some of them formal (e.g., courts and schools) and some of them informal

(e.g., families and churches), that respond to crime. When violent crime grows into a serious social concern, it is not just the police that focus more attention on the problem. Schools, community groups, businesses, health officials, and many other organizations and individuals also respond to crime.²⁴ Such a response might be likened to a regional reaction to a natural disaster, except it would be spread out over a longer period. The public response to AIDS also shows that, faced with a new medical threat, it was not just medical institutions that responded – education, criminal justice, business, and other organizations also developed responses. In fact, new institutions sprung out of the response to AIDS, just as there are government, private, and nonprofit institutions involved in crime prevention that were not present two decades ago. In summary, as the police mobilize to address crime more effectively, so do many other institutions.

When considered in isolation, the effectiveness of any one element of this diverse array of people and organizations may be slight. But collectively, the response might be more dramatic. Because it takes time to mobilize a diverse group of institutions, their collective impact will lag behind rising crime rates. Over time, however, the cumulative effect of these forces becomes more apparent. When crime ceases to be a major concern, all of these institutions, including the police, reallocate their scarce resources to other concerns. This reallocation is seldom coordinated; rather, each institution focuses on other pressing matters – literacy, traffic congestion, welfare, and infrastructure development – that may have been neglected while crime was the primary focus. If there is any truth to this speculation, then this change in focus and reallocation of resources away from violent crime might set the stage for another surge in crime.

Each surge in crime may have separate causes. The most recent increase in homicide may have been due to the onset of crack cocaine. Before that, it might have been something else, and in the next cycle, it may be something else again. Each time, the police and other institutions mobilize in response to the surge. It takes time to spread the word, figure out what to do, and put in place various strategies to suppress the surge. In each crime surge, the institutions involved, including the police, will find a portfolio of strategies that seem to address the peculiarities of the current crime wave.²⁵ And, while they are doing this, other social needs will be neglected and new ones will emerge.

In hindsight, we can speculate about plausible causes of any increase or decrease in crime. These may not be the same causes important to the previous increase or decrease, and they may not be the same causes that produce the next oscillation. In fact, the lessons that such short-term explana-

tions provide may not be all that helpful. Not only might the next surge in violent crime have a different cause, the decision makers who address it will be different from those who addressed the prior crisis. If any lessons were learned from the prior surge, they are likely to have been forgotten.

On the other hand, perhaps the recent decline in violence is not like that of the early 1980s. Perhaps it is the undoing of the increase from the mid-1960s to the mid-1970s and the United States is recovering from a three-decade epidemic of killings. In this context it might be worth examining the history of changes in policing over the last third of this century. If the explanations for rising crime trends are symmetrical with explanations for declining crime trends, we need to ask whether changes in policing during the 1960s and 1970s allowed crime to rise during that period.

If police became less effective in the 1960s and 1970s, it may have been in response to public perceptions that police leaders and elected officials encouraged officers to abuse their authority, particularly against racial minorities. If this is true, then whatever contribution the police have made to reductions in crime over the last few years may be in jeopardy. Recent public protests against police use of force in New York City, Los Angeles, and other cities could be the beginning of the end of police effectiveness, unless police agencies find methods of being effective that are perceived to be fair and constitutional by all segments of society. This will be a much more difficult undertaking than intensively patrolling hot spots of crime and stopping suspicious young men in these areas. It will require the police, and criminologists, to carefully examine these hot spots, and the troublesome behaviors that occur within these areas, to find minimally coercive methods for addressing these problems. If the police continue to apply generic coercive measures, we may continue to oscillate between unfair but marginally effective police practices, and marginally fair but ineffective policing. Rather than looking for a single strategy that reduces crime, wherever and whenever it is applied, we should attempt to craft crime-reduction tactics that are effective and yet do not rely heavily on the application of force.

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Hassell, who read and carefully edited several earlier drafts. We alone are responsible for any deficiencies in this paper.

Notes

1. Problems in estimating the number of police officers stem from at least three major sources. First, many police agencies are tiny, employing only one or two officers (sometimes only part-time). These agencies float in and out of existence based on local economic and political issues. Second, the proliferation of special police agencies sometimes makes it difficult to define a police officer. Third, sheriffs' agencies employ officers to guard jails and courts or serve civil process. Some efforts to enumerate American police count these employees as police officers, and others do not.
2. The term "police strength" has been used frequently in this line of research. As we will discuss later, it is an imprecise term that has been used to refer to the number of police officers, the number of police employees (including civilians), the amount of police expenditures, or all three.
3. The structure of this table was adapted from Marvell and Moody (1996). Unlike their review, ours includes only those studies that assess the effect of police on violent crime. This excludes studies that examine the effect of police on property crime and studies that examine the effect of crime on police. In addition, this table includes nine studies not covered by Marvell and Moody.
4. Although economists frequently classify robbery as a property crime because it produces economic benefits, we treat it here as a violent crime even when the original researchers did not.
5. More specifically, when weak instruments are used, parameter estimates will be inconsistent (and frequently biased).
6. Recent federal funding opportunities have provided grants to start new police agencies. However, as of July 1, 1996, the Office of Community Oriented Policing Services had only provided funding to eighty-four startup agencies (COPS Management System, 1999).
7. The most frequent reason cited for the death of a police organization is consolidation with other agencies to take advantage of the cost savings associated with economies of scale.
8. Maguire and colleagues (1998) criticized several official methods of counting cops for either overcounting or undercounting, thus making it difficult to adjust estimates.
9. A great deal of the research on community policing is cross-sectional, which limits our ability to draw inferences about change. Longitudinal studies of community-policing trends across the nation are fairly rare.
10. In fact, there is evidence that some types of partnership activities may increase the perceived amount of crime. Lavrakas (1986) found that Houston residents perceived more local crime after receiving an anticrime newsletter listing neighborhood offenses by time, date, and location.
11. Cordner (1995) points out that foot patrols can also be implemented without a focus on community- or problem-oriented policing.
12. Houston's BOND program (Neighborhood Watch augmented with several other community-partnership strategies) had no effect on reported serious crimes in one area and increased the number of reported serious crimes in another area.
13. Comprehensive critiques of evaluation research on community crime prevention and community policing can be found in Greene and Taylor (1988) and Lurigio and Rosenbaum (1986).
14. Commissioner Safir announced another procedural change, in which "anyone arrested for even minor offenses, such as fare beating or drinking in public, must now remain in police custody until a computerized fingerprint check can verify the person's identity" (Kocieniewski and Cooper, 1998).
15. In fact, it is difficult to find published opinions in which the author has mixed feelings: most appear to be either loyal fans or staunch foes of Bratton and his approaches.
16. Harcourt's (1998) analysis is not entirely convincing. After removing several neighbor-

hoods from Skogan's sample, he finds that the relationship between disorder and crime disappears. Information presented in his article suggests, however, that if had he removed other neighborhoods from the sample, the relationship would have been strengthened. What this indicates, however, is that Skogan's results are extremely sensitive to outliers and therefore do not provide a sound basis for policy. Rather, they suggest possible relationships that deserve further inquiry.

17. However, as Walker (1998) points out, police-complaint data are notoriously unreliable. In some instances, a rise in citizen complaints may be a signal of a healthy police organization with fair and open complaint procedures.
18. Because our interest is violent crime, this section excludes a number of studies that examine the effect of aggressive order-maintenance strategies on property crimes or visible nonviolent offenses that are thought to be more "suppressible" by police (e.g., Boydston 1975).
19. Sampson and Cohen measured police aggressiveness by computing the number of DUI and disorderly conduct arrests per officer. We included this study here because disorderly conduct arrests are related to the notion of aggressive order-maintenance policing. For the same reason, we excluded other well-known studies in which the measure of police aggressiveness is the number of traffic citations issued (Wilson and Boland 1978).
20. Compstat is a comprehensive reform strategy with elements that are appropriate for discussion in several sections of this chapter. Elements of Compstat are related to organizational change, retail drug enforcement, and gun enforcement. However, we chose to discuss it in one place rather than breaking it up into components and discussing each separately.
21. The proportional change was calculated by subtracting the homicides per capita for a given year from the homicides per capita for the previous year, and then dividing the difference by the homicides per capita from the previous year.
22. The robbery results are a bit ambiguous. Two types of robbery data were reported. The first was based on incident reports completed by police officers responding to calls from the public (the original call may or may not have mentioned a robbery). These robbery reports declined significantly in the treatment areas relative to the control areas. The second measure of robbery was based on the calls to the Jersey City Police Department in which the caller asserted a robbery had taken place (though a subsequent investigation may not have substantiated the claim). Though there was a decline in robbery calls in the treatment areas compared to the control areas, the decline was not significant. The authors of this study suggest the discrepancy may have been due to the police encouraging reporting of violence as part of problem-solving efforts (Braga et al. 1999b).
23. More intensive efforts by COPS to institutionalize problem solving in American police agencies were not initiated until 1996, long after violent crime rates began dropping.
24. Interestingly, there is no body of theory or research on the relationship between police responses to crime and the responses of other institutions. Though it appears quite plausible that public and private institutions would join the police in a response to crime, this has been given little attention. Among the useful questions that need to be answered are: Do the police react to crime along with other institutions? With which institutions are the police most closely associated? Do the police respond first or do they lag behind other institutions? And to what degree are these responses coordinated, uncoordinated, or contradictory?
25. Much of what the police and other institutions do in response to a crime surge may be ineffective, irrelevant, and occasionally counterproductive. The efficiency of the mobilization may be low. Still, the collective response involving the police may be effective over time.

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