Article

Journal of Research in Crime and Delinquency
2015, Vol. 52(4) 567-588

DOI: 10.1177/0022427815576576
jrc.sagepub.com

Can Policing Disorder Reduce Crime? A Systematic Review and Meta-analysis

Anthony A. Braga[1,2], Brandon C. Welsh[3,4], and Cory Schnell[1]

Abstract

Objective: Crime policy scholars and practitioners have argued for years that when police address social and physical disorder in neighborhoods they can prevent serious crime, yet evaluations of the crime control effectiveness of disorder policing strategies yield conflicting results. This article reports on the results of the first systematic review and meta-analysis of the effects of disorder policing on crime. *Methods:* Systematic review protocols and conventions of the Campbell Collaboration were followed, and meta-analytic techniques were used to assess the impact of disorder policing on crime and investigate the influence of moderating variables. *Results:* We identified 30 randomized experimental and quasi-experimental tests of disorder policing.

[1] Rutgers University, Newark, NJ, USA
[2] Harvard University, Cambridge, MA, USA
[3] Northeastern University, Boston, MA, USA
[4] Netherlands Institute for the Study of Crime and Law Enforcement, Amsterdam, The Netherlands

Corresponding Author:
Anthony A. Braga, Kennedy School of Government, Harvard University, 79 John F. Kennedy Street, Cambridge, MA 02138, USA.
Email: anthony_braga@harvard.edu

Our meta-analysis suggests that policing disorder strategies are associated with an overall statistically significant, modest crime reduction effect. The strongest program effect sizes were generated by community and problem-solving interventions designed to change social and physical disorder conditions at particular places. Conversely, aggressive order maintenance strategies that target individual disorderly behaviors do not generate significant crime reductions. *Conclusion:* The types of strategies used by police departments to control disorder seem to matter, and this holds important implications for police–community relations, justice, and crime prevention. Further research is needed to understand the key programmatic elements that maximize the capacity of these strategies to prevent crime.

Keywords
broken windows policing, disorder, systematic review, meta-analysis

Dealing with physical and social disorder, or "fixing broken windows," has become a central element of crime prevention strategies adopted by many American police departments (Kelling and Coles 1996; Sousa and Kelling 2006). The general idea of dealing with disorderly conditions to prevent crime is present in myriad police strategies. These range from "order maintenance" and "zero-tolerance" policing, where the police attempt to impose order through strict enforcement, to "community" and "problem-oriented policing," where police attempt to produce order and reduce crime through cooperation with community members and by addressing specific recurring problems (Cordner 1998; Eck and Maguire 2006; Skogan 2006). While its application can vary within and across police departments, disorder policing is now a common crime control strategy.

Most narrative reviews of the crime control effectiveness of policing disorder strategies suggest that the results are mixed (see, e.g., Harcourt and Ludwig 2006; Kelling and Sousa 2001). For instance, after reviewing a series of evaluations on the role disorder policing may have played in New York City's crime drop during the 1990s, the National Research Council's Committee to Review Police Policy and Practices concluded that these studies did not provide clear evidence of effectiveness (Skogan and Frydl 2004). Given the mixed policy evaluation findings, and the popularity of policing disorder, a systematic review of the existing empirical evidence seems warranted. In this article, we synthesize the existing published and

unpublished empirical evidence on the effects of disorder policing interventions and provide a systematic assessment of the crime reduction potential of these strategies.

Background: A Brief Focus on New York City

New York City has been center stage in policy and scholarly debates about policing disorder and the broken windows perspective (most recently, see Rosenfeld, Terry, and Chauhan 2014; Zimring 2012). Although local officials and national observers attribute the city's violent crime drop in the 1990s to the adoption of the broken windows policing strategy, many academics argue that it is difficult to credit this specific strategy with the surprising reduction in violent crime. The New York Police Department (NYPD) implemented the broken windows strategy within a larger set of organizational changes framed by the Compstat management accountability structure for allocating police resources (Silverman 1999). As such, it is difficult to disentangle the independent effects of disorder policing relative to other strategies implemented as part of the Compstat process (Weisburd et al. 2003). Other scholars suggest that a number of rival causal factors, such as the decline in the city's crack epidemic, played a more important role in the crime drop (Bowling 1999). Some academics have argued that the crime rate was already declining in the city before the implementation of police reforms and that the city's decline in homicide rates was not significantly different from declines experienced in surrounding states and in other large cities that did not implement aggressive enforcement policies during that time period (Baumer and Wolff 2014; Eck and Maguire 2006).

Since the NYPD implemented its post-1993 changes as a citywide crime control strategy, it was not possible for evaluators to utilize a rigorous evaluation design. However, a series of sophisticated statistical analyses have examined the effects of policing disorder on violent crime trends in New York City. These studies represent very careful attempts to determine whether disorder policing can be associated with the city's crime drop, by controlling statistically for rival causal factors, such as the decline in the city's crack epidemic and relevant sociodemographic, economic, and criminal justice changes over the course of the 1990s. These studies generally can be distinguished by differences in modeling techniques, dependent variables, time-series length, extensiveness of control variables included in the analysis, the functional form of control variables, and measurement levels (e.g., precincts vs. boroughs). These studies

commonly use increases in misdemeanor arrests, or combined ordinance-violation and misdemeanor arrests, as the key measures of the NYPD policing disorder strategy.

These nonexperimental analyses have generally found statistically significant associations between the NYPD policing disorder strategy and decreased violent crime, with effects ranging from modest (Cerda et al. 2009; Chauhan et al. 2011; Messner et al. 2007; Rosenfeld, Fornango, and Rengifo 2007) to large (Corman and Mocan 2005; Kelling and Sousa 2001). Harcourt and Ludwig (2006) and Greenberg (2014) report no statistically significant violence reduction impacts associated with the NYPD strategy. While this body of evidence seems to suggest that the NYPD policing disorder strategy may have generated violence reduction impacts, the magnitude of effects remains unclear. Given the uncertainties associated with determining causal effects in nonexperimental research designs, we limited our systematic review to randomized experiments and quasi-experiments that used untreated comparison groups.

Methods

Our systematic review followed the protocols and conventions of the Campbell Collaboration.

Criteria for Inclusion of Studies

To be eligible for this review, interventions had to be considered a policing disorder strategy as described previously. Only studies that used comparison group designs involving before and after measures were eligible for the main analyses of this review. The comparison group study had to be either a randomized controlled trial or a quasi-experimental evaluation with comparison groups. The units of analysis were limited to within-city areas and could range from small places (such as hot spots comprised of clusters of street segments or addresses) to police defined areas (such as districts, precincts, sectors, or beats) to larger neighborhood units (such as census tracts or a researcher-defined area). Eligible studies had to measure the effects of the policing disorder intervention on officially recorded levels of crime at within-city areas. Appropriate crime measures included crime incident reports, citizen emergency calls for service, and arrests.

Search Strategies

Several strategies were used to perform an exhaustive search for studies meeting the eligibility criteria. First, a key word search[1] was performed on fifteen online abstract databases,[2] governmental and nonprofit organization web pages,[3] gray literature databases, and the online abstracts of articles presented at professional criminology and criminal justice conferences.[4] Second, we reviewed the bibliographies of narrative and empirical literature reviews that examined the effectiveness of police crime control programs and completed Campbell systematic reviews of police crime prevention efforts. Third, we performed forward searches for works that have cited seminal broken windows policing studies. Fourth, we performed hand searches of leading journals in the field.[5] These searches were all completed by December 2012.

After completing the abovementioned searches and reviewing the eligible studies (see subsequently), we e-mailed the list of studies meeting our eligibility criteria in July 2013 to leading criminology and criminal justice scholars knowledgeable in the area of focused deterrence strategies. These 147 scholars were defined as those who authored at least one study that appeared on our inclusion list, anyone involved with the National Research Council's review of police research (Skogan and Frydl 2004), and other leading scholars identified by the authors (available upon request). This helped us identify unpublished studies that did not appear in conventional databases or other reviews. Finally, we consulted with an information retrieval specialist at the outset of our review and at points along the way.[6]

Statistical Procedures and Conventions

Meta-analytic techniques were used to determine the size, direction, and statistical significance of the overall impact of policing disorder strategies on crime by weighting program effect sizes based on the variance of the effect size and the study sample size (Lipsey and Wilson 2001). We used the standardized mean difference effect size, also known as Cohen's *d* (see Cohen 1988), and employed Biostat's Comprehensive Meta-analysis Version 2.2 to conduct the meta-analysis. Following Weisburd et al. (2010), we analyzed the studies using three approaches. The first is conservative in the sense that it combines all reported outcomes into an overall average effect size statistic. The second represents the largest effect reported in the studies and gives an upper bound to our findings. It is important to note that in some of the studies with more than one outcome reported,

the largest outcome reflected what authors thought would be the most direct program effect. Finally, we present the smallest effect size for each study. This approach is the most conservative and likely underestimates the effect of focused deterrence on crime. We use it here primarily to provide a lower bound to our findings.

Findings

Search strategies in the systematic review process generate a large number of citations and abstracts for potentially relevant studies that must be closely screened to determine whether the studies meet the eligibility criteria. The screening process yields a much smaller pool of eligible studies for inclusion in the review. The search strategies produced 8,402 distinct abstracts. The contents of these abstracts were reviewed for any suggestion of an evaluation of policing disorder interventions. Two hundred sixty-nine distinct abstracts were selected for closer review and the full-text reports, journal articles, and books for these abstracts were acquired and carefully assessed to determine if the interventions involved policing disorder strategies and if the studies used rigorous designs. Twenty-eight eligible studies containing 30 independent tests of policing disorder interventions were identified and included in this review (see references).

Table 1 presents the basic characteristics of the 30 eligible tests. Twenty-eight of the 30 tests (93.3 percent) were conducted in the United States, with the remaining two conducted in the United Kingdom. Twelve tests (40.0 percent) were completed in large cities with more than 500,000 residents, nine tests (30.0 percent) were completed in medium-sized cities with between 200,000 and 500,000 residents, and the other nine tests (30.0 percent) were completed in smaller cities with less than 200,000 residents. Six cities were the research sites for multiple policing disorder evaluations. Jersey City (NJ) was the site for four tests, while Detroit (MI), Los Angeles (CA), Lowell (MA), Newark (NJ), and San Diego (CA) were the sites for two tests each. Seventeen of the eligible policing disorder tests were published in peer-reviewed journals (56.7 percent), four were published as chapters in edited books (13.3 percent), one was available as a published report (3.3 percent), and eight were available as unpublished reports, including doctoral dissertations and masters' theses (26.7 percent). Twenty-one tests used quasi-experimental designs (70.0 percent) and nine used randomized experimental designs.

Units of analysis included small places (such as crime hot spots and problem buildings; 46.7 percent), smaller police-defined areas (such as

Table 1. Key Characteristics of Eligible Policing Disorder Tests.

Characteristic		*N*	Percentage
Country	United States	28	93.3
	United Kingdom	2	6.7
City population	Small (<200,000 residents)	9	30.0
	Medium (200,000–500,000 residents)	9	30.0
	Large (>500,000 residents)	12	40.0
Evaluation type	Randomized controlled design	9	30.0
	Quasi-experimental design	21	70.0
Publication type	Peer-reviewed journal	17	56.7
	Unpublished technical report, dissertation/thesis	8	26.7
	Edited book chapter	4	13.3
	Published technical report	1	3.3
Unit of analysis	Small places (e.g., crime hot spots and buildings)	14	46.7
	Smaller police-defined units (e.g., beats)	8	26.7
	Neighborhoods/highway segments	4	13.3
	Larger police-defined units (e.g., precincts and divisions)	4	13.3
Intervention strategy	Community problem-solving strategy/place	20	66.7
	Aggressive order maintenance/people	10	33.3

Note. $N = 30$.

beats; 26.7 percent), neighborhoods and selected stretches of highways (13.3 percent), and larger police-defined areas (such as precincts and divisions; 13.3 percent). We also found a diversity of strategies and tactics used by police departments in these programs to address social and physical disorder problems. Our analyses suggested that there are two main types of policing disorder interventions: (1) increased use of aggressive order maintenance techniques to reduce disorderly behavior by individuals and (2) community problem-solving approaches that seek to change social and physical disorder conditions at particular places.

Table 2 provides a brief summary of the eligible studies as organized by the two main types of disorder policing. The community problem-solving programs, which accounted for 20 of the 30 tests, usually attempted to engage residents, local merchants, and others in the identification of local crime and disorder problems and the development and implementation of appropriate responses. As such, the community problem-solving programs often involved a varied set of disorder reduction strategies designed to change criminogenic dynamics generated by social and physical disorder problems in very specific places. The aggressive order maintenance

Table 2. Disorder Policing Programs by Type.

Community Problem Solving to Address Social and Physical Disorder at Places	
Study	Intervention
Boston smart policing initiative, Braga, Hureau, and Papachristos (2011)	Problem-oriented policing strategy that largely targeted social and physical disorder in violent crime hot spots
Chicago nuisance abatement, Higgins and Coldren (2000)	Police engaged building owners and managers to address gangs and illegal drug selling by dealing with physical and social disorder
Jacksonville hot spots policing, Taylor, Koper, and Woods (2011)	Problem-oriented policing strategy that largely targeted social and physical disorder in violent crime hot spots
Jersey City drug market analysis, Weisburd and Green (1995)	Problem-oriented policing strategy to control drug markets by arresting drug sellers and changing disorderly conditions
Jersey City problem-oriented policing, Braga et al. (1999)	Problem-oriented policing strategy that largely targeted social and physical disorder in violent crime hot spots
Jersey City displacement study, Weisburd et al. (2006)	Problem-oriented policing used to target high-rate offenders and disorderly conditions in drug and prostitution hot spots (two independent tests)
London safe houses, Enfield Police Department (2011)	Situational prevention measures and improvements to disorderly physical conditions to reduce repeat burglaries
Los Angeles safer cities initiative (SCI), Berk and MacDonald (2010)	Place-based policing intervention to eliminate social and physical disorder created by homeless encampments
Los Angeles SCI Baldwin, Wagers (2007)	Broken windows policing strategy, guided by community problem-solving concepts, to control crime in three areas
Los Angeles suburbs broken windows, Weisburd et al. (2012)	Broken windows policing strategy that targeted social and physical disorder at high-crime street segments in three cities
Lowell smart policing initiative, Bond and Hajjar (2013)	Community problem-solving intervention to address social and physical disorder in property crime hot spots

(continued)

Table 2. (continued)

Community Problem Solving to Address Social and Physical Disorder at Places	
Study	Intervention
Lowell problem-oriented policing, Braga and Bond (2008)	Problem-oriented policing strategy that largely targeted social and physical disorder in crime hot spots
New York community patrol officer, McElroy, Cosgrove, and Sadd (1990)	Community problem-solving officers that mostly addressed social and physical disorder problems in their beats
Newark signs of crime, Pate and Skogan (1985a)	Police collaborated with public and private agencies to reduce fear and crime by addressing social and physical disorder
Newark community policing, Pate and Skogan (1985b)	Coordinated community policing program to reduce fear and crime by addressing social and physical disorder
Oakland beat health, Green-Mazerolle, Price, and Roehl (2000)	Property owners and building managers required to address illegal drug selling by dealing with physical and social disorder
San Diego slumlords, Clarke and Bichler-Robertson (1998)	Slumlord forced to use competent apartment building managers to clean physical disorder that facilitated illegal drug dealing
San Diego place managers, Eck and Wartell (1998)	Property owners and building managers required to address illegal drug selling by dealing with physical and social disorder
Spokane public housing, McGarrell, Giacomazzi, and Thurman (1999)	Community problem-solving effort that addressed social and physical disorder problems in public housing facilities
Aggressive order maintenance targeting individual disorderly behaviors	
Study	Intervention
Dayton traffic enforcement, Weiss and Freels (1996)	Aggressive enforcement of traffic laws to reduce more serious crimes on highway segments
Detroit antigang initiative, Bynum and Varano (2003)	Traditional suppression and aggressive order maintenance actions targeting gang members in fourth and ninth precincts (two independent tests)
New Britain weed and seed, Costanza et al. (2010)	Community policing program that was more focused on arresting offenders than physical disorder problems in targeted zone

(continued)

Table 2. (continued)

Aggressive order maintenance targeting individual disorderly behaviors	
Study	Intervention
St. Louis antigang initiative, Decker and Curry (2003)	Traditional suppression and aggressive order maintenance actions targeting gang members in fifth district
Southeastern city foot patrol, Esbensen (1987)	Vagrants, prostitutes, drunkards, and parking violators targeted by foot patrol officers in downtown business area
Midwestern city disorder, Novak et al. (1999)	Aggressive enforcement crackdown on public drinking, speeding and other social disorders in 10 by 12 block area
Las Vegas order maintenance, Pace (2010)	Specialized unit dedicated to maintaining order and enforcing misdemeanor arrests laws in targeted area
Wales zero tolerance, Rogers (2002)	Zero tolerance community safety strategy designed to improve quality of life by targeting vandalism and youth disorder
Richmond weed and seed, Smith (2001)	Community policing program that was more focused on arresting offenders than physical disorder problems in targeted zone

strategies, which accounted for the other 10 tests, primarily used arrests, ordinance violation summons, and other law enforcement strategies to target disorderly individuals, usually in larger areas. While community members were sometimes engaged in the process, they were generally not involved in the aggressive order maintenance programs in any substantive way.

Meta-analysis

Using the mean effect criterion for all eligible studies, Figure 1 summarizes the results of the 30 independent tests (from 28 studies) in a forest plot. This shows the standardized mean difference (d) effect size for crime outcomes in each study plus its 95 percent confidence interval (CI). Because the studies vary in their contexts and approaches, which is indicated by a significant Q-statistic ($Q = 426.119$, $df = 29$, $p < .05$), we used a random effects model to estimate the overall mean effect size. The meta-analysis of effect sizes

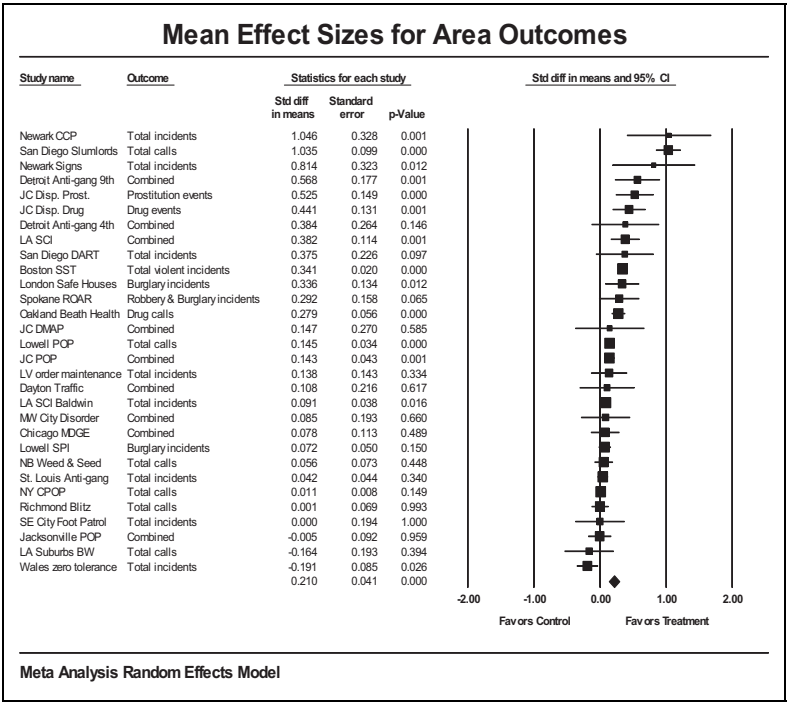

Figure 1. Overall effects of disorder policing on crime.

suggests a statistically significant effect in favor of policing disorder strategies. The overall effect size for these studies was $d = .210$ ($p < .05$), suggesting a modest but meaningful impact on crime (see Cohen 1988). As described earlier, we conducted additional meta-analyses of the largest and smallest effect sizes reported for each study. For the largest effect size meta-analysis, the overall $d = .307$ ($p < .05$) and is considered moderate (Cohen 1988). For the smallest effect size meta-analysis, the overall $d = .148$ ($p < .05$) and is considered small in magnitude.

Table 3 presents the results of random effects models showing the impact of policing disorder programs on specific area-level crime outcome types. The models revealed that policing disorder strategies were associated with modest, statistically significant reductions in all crime categories. The effect sizes were $d = .227$ ($p < .05$) for violent crime outcomes, $d = .187$ ($p < .05$) for property crime outcomes, and $d = .266$ ($p < .05$) for disorder and drug offense outcomes. This suggests that policing

Table 3. Effects of Disorder Policing by Crime Type.

Crime Type	*N*	*d*	*SE*	*p*
Violent	15	.227	.071	.001
Property	16	.187	.053	.000
Disorder/Drug	9	.266	.050	.000
Total	30	.210	.041	.000

Note. *SE* = standard error. Random effects models used.

disorder programs can generate noteworthy crime control gains across a variety of crime types.

Program Type and Research Design as Effect Size Moderators

Figure 2 presents a random effects model examining the mean effect sizes for the two different types of disorder policing. It is important to note that the *Q*-statistic associated with the between-group variation was large and statistically significant ($Q = 21.539$, $df = 1$, $p < .05$), suggesting that program type was influential in determining effect sizes. The meta-analysis indicates that community problem-solving programs produced a significant overall mean effect size ($d = .271$, $p < .000$), which was much larger than the nonsignificant overall mean effect size ($d = .058$) produced by the aggressive order maintenance programs. When program type was included as a moderator, the meta-analysis estimated a more modest overall effect size ($d = .162$, $p < .05$).

Given the important distinction in methodological quality between experimental and quasi-experimental designs, we also examined research design as a moderator variable. It is important to note that the *Q*-statistic associated with the between-group variation was statistically significant ($Q = 6.039$, $df = 1$, $p < .05$), suggesting that research design was influential on effect sizes. Consistent with prior research suggesting that weaker designs are more likely to report stronger effects in crime and justice studies (Weisburd, Lum, and Petrosino 2001; Welsh et al. 2011), the quasi-experimental designs were associated with a somewhat larger within-group mean effect size ($d = .239$, $p < .05$) relative to the experimental designs ($d = .149$, $p < .05$). When research design type was included as a moderator, the meta-analysis estimated a more modest overall effect size ($d = .185$, $p < .05$).

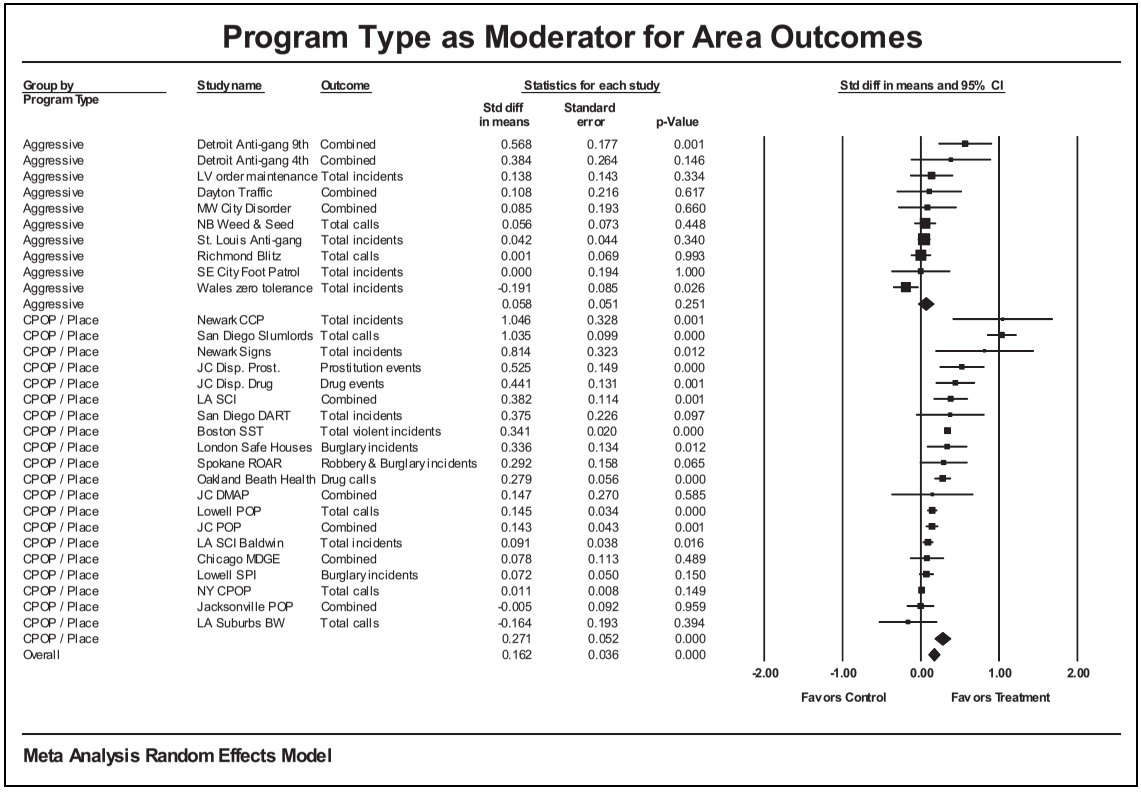

Figure 2. Effects of disorder policing by program type.

Publication Bias

Publication bias presents a strong challenge to any review of evaluation studies (Rothstein 2008). The trim-and-fill procedure (Duval and Tweedie 2000) was used to estimate the effect of potential data censoring, such as publication bias, on the results of the meta-analyses. The diagnostic funnel plot is based on the idea that, in the absence of bias, the plot of study effect sizes should be symmetrical about the mean effect size. If there is asymmetry, the trim-and-fill procedure imputes the missing studies, adds them to the analysis, and then recomputes the mean effect size.

The resulting funnel plot (not shown, but available on request) indicates very minor asymmetry, with one study added to create symmetry. This altered marginally the overall mean effect size, from $d = .210$ (95 percent CI [0.129, 0.289]) to $d = .199$ (95 percent CI [0.120, 0.279]). Indeed, the 95 percent CIs overlap substantially, suggesting that the mean effect sizes approximate one another and, importantly, publication bias is not present in our analyses.

Discussion and Conclusions

More than 30 years of evaluation research on the impact of disorder policing strategies on crime has produced a large body of studies characterized by an array of positive, null, and negative effects. Unfortunately, scholars and policy analysts have not attempted to synthesize the findings of these empirical studies in a systematic way. Prior narrative reviews of this body of research privileged the findings of particular studies over others and, as a result, produced divergent conclusions on the crime control efficacy of disorder policing. For instance, in a published debate, University of Chicago law professor Bernard Harcourt concluded that there was "no good evidence that broken windows policing reduces serious crime," while University of Michigan public policy professor David Thacher suggested that there were some indications that disorder policing may positively impact crime rates (Harcourt and Thacher 2005:15). In contrast to narrative reviews, systematic reviews and meta-analyses provide rigorous methodologies and statistical procedures to summarize, integrate, and interpret the overall findings of a well-defined set of scholarly works.

The results of our systematic review and meta-analysis suggest that disorder policing strategies generate noteworthy crime control gains. Importantly, these strategies yielded consistent crime reduction effects across a variety of violent, property, drug, and disorder outcome measures. These

findings provide support for police paying attention to social and physical disorder when seeking to reduce more serious crimes in neighborhoods. Indeed, beyond broken windows policing, these general ideas support key strategies and tactics employed by a wide range of recent police innovations, such as community policing, problem-oriented policing, third-party policing, and hot spots policing (see Weisburd and Braga 2006). Police departments should continue to engage policing disorder tactics as part of their portfolio of strategies to reduce crime.

Perhaps of greatest interest to police leaders and policymakers alike is that the types of strategies used by police departments to control disorder seem to matter. Aggressive order maintenance strategies that target individual disorderly behaviors do not generate significant crime reductions. In contrast, community problem-solving approaches that seek to change social and physical disorder conditions at particular places produce significant crime reductions. These findings suggest that, when considering a policing disorder approach, police departments should adopt a ''community coproduction model'' rather than drift toward a zero-tolerance policing model, which focuses on a subset of social incivilities, such as drunken people, rowdy teens, and street vagrants, and seeks to remove them from the street via arrest (Taylor 2001). In devising and implementing appropriate strategies to deal with a full range of disorder problems, police must rely on citizens, city agencies, and others in numerous ways. As Taylor (2001) suggests, incivility reduction is rooted in a tradition of stable relationships with the community and responsiveness to local concerns. A sole commitment to increasing misdemeanor arrests stands a good chance to undermine relationships in low income, urban communities of color, where coproduction is most needed and distrust between the police and citizens is most profound (Skogan and Frydl 2004).

The effect size difference noted by our analysis of the program type moderator variable should be regarded as a new hypothesis to be subjected to further testing rather than an established conclusion. Disorder problems, and the police programs designed to ameliorate disorderly conditions, are highly contextualized to local conditions. Moderator variables cannot be assumed to capture statistically independent conditions and, as such, great care must be taken when interpreting the relationship between moderator variables and effect sizes in meta-analysis (Lipsey 2003). Our broad categorization of disorder policing programs into ''community problem solving'' and ''aggressive order maintenance'' interventions could be limited in two ways. First, the line between these two categories of disorder policing programs can be blurred. For instance, order maintenance tactics can

be implemented as the result of a problem-oriented policing process and community concerns over disorderly social behaviors in public spaces. Second, the strategies within each of these broad categories can differ greatly depending on the targeted crime and disorder problem. An aggressive order maintenance program focused on the disorderly behaviors of violent gang members could include tactics that differ from those used in a program to control more general disorderly behavior of citizens. Future research testing the impacts of different disorder policing strategies on crime should do so with high-quality research designs.

It is important to note that our systematic review was not designed to test the key theoretical propositions of the broken windows perspective on the links among disorder, fear, informal social control, and more serious crime in neighborhoods (Wilson and Kelling 1982). Indeed, many of the effective policing disorder strategies reviewed here concentrate police action in crime hot spots. Deterrence and opportunity theories are usually applied to understand the crime control gains generated by hot spots policing (Braga and Weisburd 2010; Nagin 2013). From the standpoint of crime control and prevention, of course, the distinctions among deterrence, opportunity reduction, and broken windows are irrelevant—it only matters whether an intervention "works" by increasing public safety (for an argument to this effect, see Miles and Ludwig 2007). From the standpoint of theory, on the other hand, these distinctions are of paramount importance and the time is ripe to develop a rigorous body of evaluation evidence to understand the mechanisms associated with successful disorder policing programs (see Weisburd et al. 2015).

It is also noteworthy that the results of this systematic review and meta-analysis lend some credibility to the NYPD's claim that disorder policing was influential in reducing crime in New York City over the course of the 1990s. But explaining the city's crime drop over the last two decades remains a puzzling challenge to social scientists. As Rosenfeld et al. (2014) suggest, social scientists who study crime trends have not been satisfied by existing research that seeks to explain this phenomenon. Indeed, it is this lack of satisfaction that keeps the cottage industry of nonexperimental analyses of New York City crime trends alive. Given the complexities involved in modeling crime trends, we believe that no multivariate analysis will adequately settle this ongoing debate. However, the return of William Bratton as NYPD Commissioner in January 2014, with George Kelling as one of his advisors, presents an important opportunity to conduct controlled evaluations of policing disorder interventions in New York City. While new experiments will not alone solve the city's crime drop puzzle, these tests

could go a long way in settling the related debates on the crime control efficacy of policing disorder programs.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. The following search terms were used: broken windows AND police, disorder AND police, incivilities AND police, disorder policing, order maintenance policing, zero tolerance policing, quality of life policing, misdemeanor arrest policing, and signal crimes.
2. The following 15 databases were searched: Criminal Justice Periodical Index, Sociological Abstracts, Social Science Abstracts (SocialSciAbs), Social Science Citation Index, Arts and Humanities Search (AHSearch), Criminal Justice Abstracts, National Criminal Justice Reference Service (NCJRS) Abstracts, Educational Resources Information Clearinghouse (ERIC), Legal Resource Index, Dissertation Abstracts, Government Publications Office, Monthly Catalog (GPO Monthly), Google Scholar, Online Computer Library Center (OCLC) SearchFirst, CINCH data search, and Academic Search Premier.
3. These web pages included the Center for Problem-Oriented Policing, Institute for Law and Justice, U.S. Office of Community Oriented Policing Services, Police Executive Research Forum, Police Foundation, Rand Corporation, Vera Institute of Justice, U.K. Home Office, U.K. National Policing Improvement Agency, Netherlands Institute for the Study of Crime and Law Enforcement, and Australian Institute of Criminology.
4. These conferences included the annual meetings of the American Society of Criminology, Academy of Criminal Justice Sciences, International Society of Criminology, and the U.S. National Institute of Justice Research and Evaluation Conference.
5. These journals were as follows: *Criminology, Criminology & Public Policy, Justice Quarterly, Journal of Research in Crime and Delinquency, Journal of Experimental Criminology, Journal of Criminal Justice, Police Quarterly, Policing, Police Practice and Research, British Journal of Criminology, Journal of Quantitative Criminology, Crime & Delinquency, Journal of Criminal Law and*

Criminology, and *Policing and Society.* Hand searches covered 1982 through 2012.

6. Ms. Phyllis Schultze of the Gottfredson Library at the Rutgers University School of Criminal Justice executed the initial abstract search and was consulted throughout on our search strategies.

References

Studies with asterisks were included in the Systematic Review

Baumer, E. and K. Wolff. 2014. "Evaluating Contemporary Crime Drop(s) in America, New York City, and Many Other Places." *Justice Quarterly* 31:5-38.

*Berk, R. and J. MacDonald. 2010. "Policing the Homeless." *Criminology & Public Policy* 9:813-40.

*Bond, B. and L. Hajjar. 2013. "Measuring Congruence between Property Crime Problems and Response Strategies." *Police Quarterly* 16:323-38.

Bowling, B. 1999. "The Rise and Fall of New York Murder: Zero Tolerance or Crack's Decline?" *British Journal of Criminology* 39:531-54.

*Braga, A. and B. Bond. 2008. "Policing Crime and Disorder Hot Spots: A Randomized Controlled Trial." *Criminology* 46:577-607.

*Braga, A., D. Hureau, and A. Papachristos. 2011. "An Ex-post-facto Evaluation Framework for Place-based Police Interventions." *Evaluation Review* 35: 592-626.

Braga, A. and D. Weisburd. 2010. *Policing Problem Places: Crime Hot Spots and Effective Prevention*. New York: Oxford University Press.

*Braga, A. A., D. L. Weisburd, E. J. Waring, L. Green-Mazerolle, W. Spelman, and F. Gajewski. 1999. "Problem-oriented Policing in Violent Crime Places: A Randomized Controlled Experiment." *Criminology* 37:541-80.

*Bynum, T. and S. Varano. 2003. "The Anti-gang Initiative in Detroit: An Aggressive Enforcement Approach to Gangs." Pp. 214-38 in *Policing Gangs and Youth Violence*, edited by S. Decker. Belmont, CA: Wadsworth.

Cerda, M., M. Tracy, S. Messner, D. Vlahov, K. Tardiff, and S. Galea. 2009. "Misdemeanor Policing, Physical Disorder and Homicide: A Spatial Analytic Test of 'Broken Windows' Theory." *Epidemiology* 20:533-41.

Chauhan, P., M. Cerda, S. Messner, M. Tracy, K. Tardiff, and S. Galea. 2011. "Race/Ethnic-specific Homicide Rates in New York City: Evaluating the Impact of Broken Windows Policing and Crack Cocaine Markets." *Homicide Studies* 15:268-90.

*Clarke, R. and G. Bichler-Robertson. 1998. "Place Managers, Slumlords and Crime in Low Rent Apartment Buildings." *Security Journal* 11:11-19.

Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum.

Cordner, G. 1998. "Problem-oriented Policing vs. Zero Tolerance." Pp. 303-14 in *Problem-oriented Policing: Crime-Specific Problems, Critical Issues, and Making POP Work*, edited by T. Shelly and A. Grant. Washington, DC: Police Executive Research Forum.

Corman, H. and N. Mocan. 2005. "Carrots, Sticks, and Broken Windows." *Journal of Law and Economics* 48:235-62.

*Costanza, S. E., R. Helms, S. Ratansi, J. Kilburn, and J. Harmon. 2010. "Boom to Bust or Bust to Boom? Following the Effects of Weed and Seed Zoning in New Britain, Connecticut, from 1995 to 2000." *Police Quarterly* 13:49-72.

*Decker, S. and G. D. Curry. 2003. "Suppression without Prevention, Prevention without Suppression." Pp. 191-213 in *Policing Gangs and Youth Violence*, edited by S. Decker. Belmont, CA: Wadsworth.

Duval, S. and R. Tweedie. 2000. "A Nonparametric 'Trim and Fill' Method of Accounting for Publication Bias in Meta-analysis." *Journal of the American Statistical Association* 95:89-98.

Eck, J. and E. Maguire. 2006. "Have Changes in Policing Reduced Violent Crime? An Assessment of the Evidence." Pp. 207-65 in *The Crime Drop in America*, 2nd ed., edited by A. Blumstein and J. Wallman. New York: Cambridge University Press.

*Eck, J. and J. Wartell. 1998. "Reducing Crime and Drug Dealing by Improving Place Management: A Randomized Experiment." *Crime Prevention Studies* 9: 161-85.

*Enfield Police Department. 2011. *Operation Safe as Houses*. Submission for Tilley Award. Madison, WI: Center for Problem-Oriented Policing.

*Esbensen, F. A. 1987. "Foot Patrols: Of What Value?" *American Journal of Police* 6:45-65.

Greenberg, D. 2014. "Studying New York City's Crime Decline: Methodological Issues." *Justice Quarterly* 31:154-88.

*Green-Mazerolle, L., J. Price, and J. Roehl. 2000. "Civil Remedies and Drug Control: A Randomized Field Trial in Oakland, California." *Evaluation Review* 24: 212-41.

Harcourt, B. and J. Ludwig. 2006. "Broken Windows: New Evidence from New York City and a Five-city Experiment." *University of Chicago Law Review* 73:271-320.

Harcourt, B. and D. Thacher. 2005. "Is Broken Windows Policing Broken?" *Legal Affairs*, October 17-21:1-18. Retrieved December 4, 2014 (http://www.legalaffairs.org/webexclusive/debateclub_brokenwindows1005.msp).

*Higgins, D. and J. Coldren. 2000. *Evaluating Gang and Drug House Abatement in Chicago*. Washington, DC: Office of Community Oriented Policing Services.

Kelling, G. and C. Coles. 1996. *Fixing Broken Windows*. New York: Free Press.

Kelling, G. and W. Sousa. 2001. *Do Police Matter? An Analysis of the Impact of New York City's Police Reforms*. Civic Report No. 22. New York: Manhattan Institute.

Lipsey, M. 2003. "Those Confounded Moderators in Meta-analysis." *Annals of the American Academy of Political and Social Science* 587:69-83.

Lipsey, M. and D. B. Wilson. 2001. *Practical Meta-analysis*. Thousand Oaks, CA: Sage.

*McElroy, J., C. Cosgrove, and S. Sadd. 1990. *CPOP: An Evaluative Study of the New York City Community Patrol Officer Program*. New York: Vera Institute of Justice.

*McGarrell, E. F., A. Giacomazzi, and Q. Thurman. 1999. "Reducing Disorder, Fear, and Crime in Public Housing." *Justice Research and Policy* 1:61-87.

Messner, S., S. Galea, K. Tardiff, M. Tracy, A. Bucciarelli, T. Markhan Piper, V. Frye, and D. Vlahov. 2007. "Policing, Drugs, and the Homicide Decline in New York City in the 1990s." *Criminology* 45:385-414.

Miles, T. and J. Ludwig. 2007. "The Silence of the Lambdas: Deterring Incapacitation Research." *Journal of Quantitative Criminology* 23:287-301.

Nagin, D. 2013. "Deterrence in the Twenty-first Century." Pp 1-42 in *Crime and Justice: A Review of Research*, Vol. 42, edited by Michael Tonry. Chicago, IL: University of Chicago Press.

*Novak, K., J. Hartman, A. Holsinger, and M. Turner. 1999. "The Effects of Aggressive Policing of Disorder on Serious Crime." *Policing* 22:171-90.

*Pace, S. 2010. "Assessing the Impact of Police Order Maintenance Units on Crime." Unpublished M. A. Thesis, University of Nevada, Las Vegas.

*Pate, A. M. and W. G. Skogan. 1985a. "Reducing the 'Signs of Crime': The Newark Experience." Technical Report, the Police Foundation, Washington, DC.

*Pate, A. M. and W. G. Skogan. 1985b. "Coordinated Community Policing: The Newark Experience." Technical Report, the Police Foundation, Washington, DC.

*Rogers, C. 2002. "Community Safety and Zero Tolerance." Unpublished PhD dissertation, University of Glamorgan, South Wales, UK.

Rosenfeld, R., R. Fornango, and A. Rengifo. 2007. "The Impact of Order-maintenance Policing on New York City Homicide and Robbery Rates: 1988-2001." *Criminology* 45:355-84.

Rosenfeld, R., K. Terry, and P. Chauhan. 2014. "New York's Crime Drop Puzzle." *Justice Quarterly* 31:1-4.

Rothstein, H. R. 2008. "Publication Bias as a Threat to the Validity of Meta-analytic Results." *Journal of Experimental Criminology* 4:61-81.

Silverman, E. 1999. *NYPD Battles Crime*. Boston, MA: Northeastern University Press.

Skogan, W. 2006. *Police and Community in Chicago*. New York: Oxford University Press.

Skogan, W. and K. Frydl, eds. 2004. *Fairness and Effectiveness in Policing: The Evidence*. Washington, DC: The National Academies Press.

*Smith, M. 2001. "Police-led Crackdowns and Cleanups." *Crime & Delinquency* 47:60-83.

Sousa, W. and G. Kelling. 2006. "Of 'Broken Windows,' Criminology, and Criminal Justice." Pp 77-97 in *Police Innovation: Contrasting Perspectives*, edited by D. Weisburd and A. Braga. New York: Cambridge University Press.

Taylor, R. 2001. *Breaking away from Broken Windows*. Boulder, CO: Westview Press.

*Taylor, B., C. Koper, and D. Woods. 2011. "A Randomized Controlled Trial of Different Policing Strategies at Hot Spots of Violent Crime." *Journal of Experimental Criminology* 7:149-81.

*Wagers, M. 2007. "Broken Windows Policing: The LAPD Experience." PhD dissertation, Rutgers University. Ann Arbor, MI: University Microfilms International.

Weisburd, D. and A. Braga. 2006. "Understanding Police Innovation." Pp 1-26 in *Police Innovation: Contrasting Perspectives*, edited by D. Weisburd and A. Braga. New York: Cambridge University Press.

*Weisburd, D. and L. Green. 1995. "Policing Drug Hot Spots: The Jersey City Drug Market Analysis Experiment." *Justice Quarterly* 12:711-35.

Weisburd, D., J. Hinkle, A. Braga, and A. Wooditch. 2015. "Understanding the Mechanisms Underlying Broken Windows Policing: The Need for Evaluation Evidence." *Journal of Research in Crime and Delinquency* 52:589-608.

*Weisburd, D., J. Hinkle, C. Famega, and J. Ready. 2012. *Legitimacy, Fear and Collective Efficacy in Crime Hot Spots*. Washington, DC: National Institute of Justice.

Weisburd, D., C. Lum, and A. Petrosino. 2001. "Does Research Design Affect Study Outcomes in Criminal Justice?" *The Annals of the American Academy of Social and Political Sciences* 578:50-70.

Weisburd, D., S. Mastrofski, A. McNally, R. Greenspan, and J. Willis. 2003. "Reforming to Preserve: Compstat and Strategic Problem Solving in American Policing." *Criminology & Public Policy* 2:421-57.

Weisburd, D., C. Telep, J. Hinkle, and J. Eck. 2010. "Is Problem Oriented Policing Effective in Reducing Crime and Disorder?" *Criminology and Public Policy* 9: 139-72.

*Weisburd, D., L. Wyckoff, J. Ready, J. Eck, J. Hinkle, and F. Gajewski. 2006. "Does Crime Just Move around the Corner? A Controlled Study of Spatial Displacement and Diffusion of Crime Control Benefits." *Criminology* 44: 549-92.

*Weiss, A. and S. Freels. 1996. "The Effects of Aggressive Policing: The Dayton Traffic Enforcement Experiment." *American Journal of Police* 15:45-64.

Welsh, B. C., M. E. Peel, D. P. Farrington, H. Elffers, and A. A. Braga. 2011. "Research Design Influence on Study Outcomes in Crime and Justice: A Partial Replication with Public Area Surveillance." *Journal of Experimental Criminology* 7:183-98.

Wilson, J. Q. and G. L. Kelling. 1982. "Broken Windows: The Police and Neighborhood Safety." *Atlantic Monthly* 249:29-38.

Zimring, F. E. 2012. *The City That Became Safe: New York's Lessons for Urban Crime and Its Control*. New York: Oxford University Press.

Author Biographies

Anthony A. Braga, PhD, is the Don M. Gottfredson Professor of Evidence-Based Criminology in the School of Criminal Justice at Rutgers University and a Senior Research Fellow in the Program in Criminal Justice Policy and Management at Harvard University. His research involves collaborating with criminal justice, social service, and community-based organizations to address illegal access to firearms, reduce gang and group-involved violence, and control crime hot spots.

Brandon C. Welsh, PhD, is a Professor in the School of Criminology and Criminal Justice at Northeastern University and Royal Netherlands Academy of Arts and Sciences Visiting Professor and Senior Research Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement in Amsterdam. His latest book is *Experimental Criminology: Prospects for Advancing Science and Public Policy* (Cambridge University Press, 2013, with Anthony Braga and Gerben Bruinsma).

Cory Schnell is a PhD student in the School of Criminal Justice at Rutgers University. His research interests are in the crime control effectiveness of the police and police innovation.